

# THE 4TH EUROPEAN CONFERENCE ON HEALTH PROMOTING SCHOOLS Equity, Education and Health

7–9 October 2013, Odense, Denmark







**Abstracts** 

#### **Preface**

This publication contains the abstracts and the programme for the 4th European Conference on Health Promoting Schools titled "Equity Education and Health". The conference is co-funded by the European Commission the EU Public Health Programme 2008 – 2013.

Building on the previous three European Conferences on Health Promoting Schools, Greece in 1997, the Netherlands in 2002, and Lithuania in 2009 the conference seeks to demonstrate the state of the art and stimulate innovation in the development of health promotion in schools. Further, the purpose of the conference is to strengthen the sustainability of the shared European platform which prioritizes the investment in equity in health through school-based health promotion in Europe, by creating synergies through common actions on national, regional and local levels.

In Europe the "health-promoting schools" approach has been in use for more than 30 years. It emerged in the early 1980s and was further elaborated at the WHO Health Promoting Schools Symposium in Scotland in 1986. The European Network of Health Promoting Schools (ENHPS) was established in 1991, drawing on the five principles of the Ottawa Charter. The health-promoting school is defined as an educational setting that attempts to constantly develop its capacity for healthy learning, working and living (WHO, 1993; 1998). The whole school environment is seen as an important arena for action if a school is to promote health.

The current work on school health promotion in Europe is supported by the Schools for Health in Europe (SHE) Network with 43 participating countries represented by a national coordinator. The SHE network is coordinated by CBO as a WHO Collaborating Centre for School Health Promotion and supported by the International SHE Planning Committee. The SHE Network endorses five core values (equity, sustainability, inclusion, empowerment and action competence, and democracy) and five pillars (whole school approach to health, participation, school quality, evidence, schools and communities) as a common basis of the SHE approach to school health promotion. Members of the SHE Planning Committee have participated in the International Steering Committee for the conference.

A consortium of more than 70 researchers and research institutions from 27 European countries is closely linked to the SHE Network, and organized as a SHE Research Group, coordinated by the Department of Education, Aarhus University, Denmark, in collaboration with CBO. Members of this network have acted as an International Scientific Committee for this conference and have reviewed the submissions for the conference.

The conference is organized by University College South Denmark in collaboration with the Department of Education, Aarhus University, CBO Netherlands (SHE Network), South Denmark European Office in Brussels and WHO Europe.

As befits an international conference, contributions have been received from a broad array of countries, and for many contributors, English is not their first language. While certain revisions have been made to abstracts for the sake of clarity, editorial interference has been kept to an absolute minimum.

On behalf of the conference organizers I would like to express our gratitude to all the contributors, funders and supporters of the conference.

Copenhagen, Denmark, August 2013

Venka Simovska, professor, chair of the International Scientific Committee Aarhus University, Department of Education (DPU)

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### Link to the conference website

http://schools4health.dk/conference/

### **Conference PROGRAMME**





### **Education, Equity and Health**

### 4<sup>th</sup> European Conference on Health Promoting Schools

### **Conference Programme**

| Sunday, 6 <sup>th</sup> October |   |  |
|---------------------------------|---|--|
| 18:00                           | Welcome Reception, Odense Town Hall Meeting point: Conference venue, (Room K2)  |  |
|                                 | Monday, 7 <sup>th</sup> October   |  |
| 08:00                           | Registration  |  |
| 09:00 – 10:30                   | <ul> <li>Opening: (Room K2)</li> <li>Christine Antorini, Minister, Danish Ministry for Children and Education</li> <li>Gauden GALEA, Director, Division of Noncommunicable Diseases and Life-Course, WHO Regional Office for Europe TBC</li> <li>Clive Needle, Conference Facilitator, About the Programme</li> </ul>   |  |
| 10:30 – 11:00                   | Coffee, tea and fruit   |  |
| 11:00 – 12:30                   | <ul> <li>Plenary Session I: Innovative School-based Health Promotion (Room: K2)</li> <li>Comparing policies and public spending for children across OECD countries: lessons and challenges for health promotion in schools. Dominic Richardson, OECD, Paris, France</li> <li>Mindfulness in Schools and for the Young – Present and Future Perspectives. Katherine Weare, Professor of Education, University of Southampton, England</li> <li>Inequality in health among children and adolescents. Bjørn Holstein, Professor, National Institute of Public Health, Copenhagen, Denmark</li> </ul> |  |
| 12:30 – 13:30                   | Lunch   |  |
| 13:30 – 15:00                   | Parallel Session I: National, Regional and Local Approaches to Health Promotion in Schools: Beyond Best Practice  |  |
| 15:00 – 15:30                   | Break   |  |



| 15:30 – 17:00 | Parallel Session II: Participation, Collaboration and Policy  |
|---------------|---|
| 17:00 – 18:00 | Meet with Authors (Room K3) Jörgen Svedbom, Heinz Witteriede & Kevin Dadaczynski, and Margit Nørgård-<br>Edmund |
| 18:30         | Social programme  |

### Tuesday, 8<sup>th</sup> October

| 08:00         | Networking: Have a look at the Posters  |
|---------------|---|
| 09:00 – 10:30 | <ul> <li>Plenary Session II: Equity and School Health Promotion         (Room K2)         <ul> <li>How can Schools contribute to Equity in Health? Odrunn Samdal,</li></ul></li></ul> |
|               | Coffee, tea and fruit   |
| 11:00 – 12:30 | Parallel Session III: Health Promotion, Equity and Implementation in Preschool and School Settings  |
| 12:30 – 13:30 | Lunch   |
| 13:30 – 15:00 | Parallel Session IV: Specific Health Issues and Health Promotion in Schools   |
| 15:00 – 15:30 | Break   |
| 15:30 – 17:00 | Parallel Session V: Promotion of Mental and Emotional Health and Wellbeing  |
| 17:00 – 18:00 | Meet with Authors (Room K3) Odrunn Samdal, Didier Jourdan and Glen Laverack   |
| 19:30         | Conference Dinner   |



### Wednesday, 9<sup>th</sup> October

| 08:00         | Networking: Exhibitions and Posters   |
|---------------|---|
| 09:00 – 10:30 | Plenary Session III: Sustainable Change in School-based Health Promotion (Room K2)  |
|               | Implementing Mental Health Promoting Schools. Margaret Barry, Professor,<br>National University of Ireland, Galway  |
|               | Strategies for Linking Education and Health: Lessons from European<br>Experience. Allan Dyson, Professor, University of Manchester, UK                          |
|               | Planning Sustainable School Health Promotion Programmes: An     Intervention Mapping Approach. Gerjo Kok, Professor, Maastricht University,     the Netherlands |
| 10:30 – 11:00 | Coffee, tea and fruit   |
| 11:00 – 12:30 | Parallel Session VI: From Specific Interventions to Sustainable Health Promotion in Schools   |
| 12:30 – 13:30 | Lunch   |
| 13:30 – 15:00 | <ul> <li>Plenary Session IV: Health Promoting Schools: Ways Forward</li> <li>Adopting the Conference Statement</li> <li>Summary</li> <li>Closing</li> </ul>     |
| 15:00 – 15:30 | Informal final networking   |
| 15:30 – 17:00 | Self-organized meetings   |



## Parallel Session I - National, Regional and Local Approaches to Health Promotion in Schools: Beyond Best Practice Monday 7<sup>th</sup> October 13:30-15:00

## 1A: Experiences from Iceland, Lithuania, Estonia and Italy Chair: David Pattison (room 3)

| Ingibjørg<br>Gudmundsdottir                     | Support for the Health Promoting School Projects in Iceland: A New National Curriculum for All School Levels                            |
|---|---|
| Rita Sketerskiene                               | Health in Education System: Lithuanian Experience   |
| Tiia Pertel                                     | Support System for Health and Wellbeing Promotion in Estonian Educational Settings  |
| Anna Gatti (interpreter<br>Cristina Gambalonga) | "Welcome". A project of Social Inclusion and Community Development in a Health Promoting School Located in a Multi-ethnic Neighbourhood |
|   |   |

## 1B: Challenges Related to Assessment, Accountability and Dissemination Chair: Goof Buijs (room 1)

| Irina Rapoport    | Russian Health Schools: Problem Areas and Prospects of Development |
|-------------------|--|
| Mary Macdonald    | Results Based Accountability                                       |
| Sue Bowker        | Assessing Schools as Health Promoting                              |
| Daiva Zeromskiene | The Health Promoting School Ideas Wave Through Lithuania           |

## 1C: Whole-school Approaches: Potentials and Barriers Chair: Olaf Moens (room 5)

| Suzanne Hargreaves                   | Health and Wellbeing; Responsibility of All  |
|--------------------------------------|--|
| Finn Bruncke                         | School Health in Municipality of Sønderborg, Denmark - a Whole School Approach   |
| Liliana Coppola and<br>Danilo Cereda | Health Promoting Schools Network in Lombardia Region (Italy) – Innovative Approaches to School-based Health Promotion                                    |
| Maria Vezzoni                        | A Local Network to Support the Health Promoting Schools in Italy in a Period of Crisis, Through the Sharing of an Action Model, of Ideas and Experiences |



| 1D: Round Table 1<br>(room 9)   |   |  |
|---|---|--|
| Vladislav Kuchma  | Current Developments within School-based Health Promotion in Russia   |  |
| 1E: Symposium 1: Wellbeing, Health and Body Movement: Pathways to Better Learning Chair and Discussant: Nina Grieg Viig (room K4) |   |  |
| Elise Sijthoff  | Motivating Children to Move, both as Individuals and Groups: Identifying Strategic Partners at the Macro and Micro Levels |  |
| Ian Macrae Young  | Can Physical Activity Improve the Educational Attainment of Children?   |  |
| Shanti George   | Moving Moments for Children, Schools and Parents: Critical Lessons from a Case of Resource Innovation in the Netherlands  |  |
| 1F Workshop<br>(room K3)  |   |  |
| Venka Simovska and Kathrine Weare   | Writing for Publishing  |  |



### Parallel Session II – Participation, Collaboration and Policy Monday 7<sup>th</sup> October 15:30-17:00

## 2A: Children's and Parents' Views and Participation Chair: Jeanette Magne Jensen (room 3)

| Dina Danielsen              | Mapping Health Related Messages in Virtual Spaces - a Means to School Health Education             |
|-----------------------------|--|
| Lee Yee Cheong-Lim          | Health Promotion Club: Cultivating Youth Health Ambassadors  |
| Yetunde O. John-<br>Akinola | Children's Participation in Health Promoting Schools: Children's Views and extent of Participation |
| Yetunde O. John-<br>Akinola | Assessing Parental Involvement in Schools: The Similarity of Views of Parents and Children         |

## 2B: Intersectoral and Interdisciplinary Collaboration for School based Health Promotion Chair: Vivian Barnekow (room 1)

| Katharina K. Pucher         | Evaluation of Intersectoral Collaboration Between Health Authorities, Schools and Prevention Partners in Coordinated School Health Promotion in the Netherlands by Utilization of the Diagnosis of Sustainable Collaboration (DISC-) Model |
|-----------------------------|--|
| Signe Dalsgaard,<br>Thomsen | Interdisciplinary Collaboration for Health Promotion in Danish Primary Schools   |
| Maria Vezzoni               | "La Scuola va in piazza." The School goes to the Streets: How to Achieve Community Participation in a Health Promoting School  |
| Elena Kjosevska             | National Policy on Sexual and Reproductive Health (SRH) Education and Healthy Lifestyle Promotion in the Republic of Macedonia   |
|                             |  |

## 2C: School Policies for Healthy Eating and Physical Activity Chair: Peter Paulus (room 5)

| Kevin Dadaczynski     | Healthy Eating and Physical Activity in Schools: Reliability of the HEPS Quality Checklist |
|-----------------------|--|
| Barbara Woynarowska   | Health Promoting Schools made a Difference to the School - Healthy Eating Policy in Poland |
| Saoirse, Nic Gabhiann | Healthy Eating: School Policy, Food Environment and Student Eating Behaviors               |
| Rikke Vingaard Thrane | LOMA Nymarkskolen - The Development Project  |



| 2D: Addressing Health Inequalities Among Children and Youth Chair: Monica Carlsson (room K3) |  |
|--|--|
| Marjorita Sormunen   | Russian and Finnish Schoolchildren's Health Learning at Home and at School: Key Findings from Baseline Study in AHIC-Project         |
| Kerttu Tossavainen   | Addressing Challenging Health Inequalities of Children and Youth Between two Karelias  |
| Annamari Aura  | Multicultural Comparative Longitudinal Study - The Challenge of Adolescents' Health Behavior and Health Inequalities in two Karelias |
| Jörgen Svedbom   | Socioeconomic Equity, Learning and Health  |
| 2E: Round Table 2 (room 9)   |  |
| Torben Schmidt   | Health and Language integrated Gaming Online (HeaLinGo) as an Innovative Approach in School Health Promotion                         |



### Parallel Session III – Health Promotion, Equity and implementation in Preschool and School Settings Tuesday 8th October 11:00-12:30

## 3A: Health Promoting Pre-school Settings Chair: Maria Teresa Vilaca (room 1)

| K .Vijaya                    | CHERISH Junior Award: Health Promoting Pre-schools in Singapore   |
|------------------------------|---|
| Tanja Thinggaard<br>Andersen | "Movement for Meaning". A Cultural Historical Perspective on Health-Promoting Movement Activities in Early Childhood Education in Denmark |
| Braulio Rocha                | Ready, Set - Play: Education Programme for Kindergarten Educators   |
| Anette Schulz                | Social Inclusion in Preschool   |

### 3B: Highlights from Health Promotion in Schools in Russia Chair: Aldona Jociute (room 3)

| Olga Popova       | The security of the Educational Activities of Children and Adolescents in Terms of Museum Environment |
|-------------------|---|
| Evgeniya Laponova | Opportunities for Gender Approach in Education  |
| Zhanetta Gorelova | Russian Programmes "School Milk" and "Fruits and Vegetables at School"                                |

### 3C: Health Promoting Schools and Equity Chair: Henriette Hansen (room 5)

| Felix Hofmann         | Effects of School Health Promotion on Social Inequalities: A Systematic Review                |
|-----------------------|---|
| Therese Evelyn Smith  | HPS: Accelerating Equity  |
| Jeanette Magne Jensen | New Approach to Health Education reduces Health Inequalities among Disadvantaged Young People |
| Heidi Mattle          | Health 25   |



| 3D: The Challenges of Implementation of Health-promoting Schools: Theory and Practice Chair: Bjarne Bruun Jensen (room K3) |   |  |
|--|---|--|
| Beishekan Kalieva  | Implementing the Healthy Schools Project in Kyrgyzstan  |  |
| Wolfgang Dür   | Applying Modern System Theory to Health Promoting Schools and Implementation Processes of Health Promotion Programmes                   |  |
| Valentina Marcassa   | Experience Democracy when you're a Child: The Way to Gain Self-esteem, Practice Life Skills and Develop a Democratic Setting in Schools |  |
| Sandrine Broussouloux  | Feeling Better to Work Better   |  |
| 3E: Physical Activity and Health Promotion Chair: Hannele Turunen (room K4)  |   |  |
| Stephan Schiemann  | Effects of Physical Activity on cognition and Academic Achievement in Children and Adolescents  |  |
| Evgeniya Georgievna<br>Alekseeva   | Impact Assessment of the Dance4life Programme in Russian Schools  |  |
| Jan Jansen   | Educational Agenda Sport, Exercise and Healthy Living; a Dutch nationwide   |  |
| Jan Jansen   | Case  |  |



### Parallel Session IV – Specific Health Issues and Health Promotion in Schools Tuesday 8th October 13:30-15:00

## 4A: Children with Special Health and Education Needs: What can the Whole School approach offer? Chair: Sue Bowker (room 1)

| Ane Høstgaard Bonde   | Motivational Interviewing by School Nurses: Spirit, Techniques, and Dilemmas in the Prevention of Child Obesity |
|-----------------------|---|
| Barbara Woynarovska   | Problems in School Functioning in the Opinion of Students with Chronic Conditions and their Parents             |
| Peter Khramtsov       | Medical Monitoring of Children involved in Physical Culture   |
| Maria Miranda Velasco | School Organization and Teachers Competencies for Health Promotion and Inclusion of Students with Diabetes      |

### 4B: Posture, Learning and Health Chair: Vivian Barnekow (room 3)

| Cristina Melo and<br>Sandra Silva | The Influence of the Book "The Kids with perfect Spines" on Children's Health Behaviors related to Schoolbags      |
|-----------------------------------|--|
| Tania Velho                       | Back-care Education in Schoolchildren: A Systematic Review   |
| Cristina Mesquita                 | Postural Education and Physical Activity in Early Childhood – An Evaluation Instrument for Primary School Children |

## 4C: Sexuality Education within the Health Promotion Paradigm Chair: Patricia McNamarra (room K3)

| Line Anne Roien     | Sexuality Education: Implementation of a Critical Pedagogical Approach  |
|---------------------|---|
| Maria Teresa Vilaca | A Multiple Case Study on Action-oriented Sexuality Education in the School Community                            |
| Judith Roberts      | 'Growing Up' Interactive Resources for Delivering Sex and Relationships<br>Education of Students age 5-12 years |
| Karen Wistoft       | Evaluation of the 'Doll Programme' and Parental and Sex Education in Greenland                                  |



| 4D: Potentials and Barriers of the Whole-school Approach to Health Promotion Chair: Olaf Moens (room 5) |  |  |
|---|--|--|
| Linda Faber   | How to create Teacher Support for the Implementation of The Healthy School   |  |
| Malene K. Nelausen  | Whole School Approach: Promising Idea, but Difficult to Implement?   |  |
| Maria Scatigna  | Physical Activity in the Context of Health Promoting School: Ecological Analysis in a Regional Sample of Italian Secondary Schools |  |
| Pernille Bendtsen   | School Climate, Parental Support and Adolescent Alcohol use: A Multilevel Approach   |  |
|   |  |  |
| 4E: Symposium 2: Schools for Health and Sustainability Chair and Discussant: Ian Young (room K4)        |  |  |
| Venka Simovska  | Health Promoting Schools and Education for Sustainable Development: Worlds apart or of Like Minds?                                 |  |
| Katrine Dahl Madsen   | Transformations and translations. Policy analysis of health promotion and sustainability in schools                                |  |
| Lone Lindegaard Nordin  | Implementation of health promoting projects in primary schools. Teacher's perspectives   |  |



### Parallel Session V – Promotion of Mental and Emotional Health and Wellbeing Tuesday 8th October 15:30-17:00

## 5A: Mental and Emotional Health and Wellbeing of School-aged Children Chair: Kevin Dadaczynski (room 3)

| Charlotte Meilstrup | Compositional and Contextual Predictors for Emotional Problems among Adolescents             |
|---------------------|--|
| Galina Goncharova   | Schoolchildren's Mental Health monitoring as Prevention of Emotional and Behavioral Broblems |
| Dietmar Goelitz     | How big are Differences in Children's Mental Health for Primary Schools?                     |
| Line Nielsen        | Socioeconomic inequality in Positive Mental Health among School Children                     |
|                     |  |

### 5B: Health and Fitness Chair: Børge Koch (room 1)

| Jens Troelsen              | SPACE - A School intervention Study to Promote Adolescents' Physical Activity                               |
|----------------------------|---|
| Lars Breum<br>Christiansen | Should Physical Activity Interventions to Improve Aerobic Fitness target all Students or the most Inactive? |
| Maria Holmstrøm            | Ready, Set - Husum: Sports Campaign for Students  |

### 5C: Round Table 3 (room 9)

Morag MacKay Child Safety Action Indicators – Measuring an Aspect of Safety in Europe

## 5D: Symposium 3: Health and Wellbeing of Teachers and School Staff Chair and Discussant: Peter Paulus (room K3)

| Magdalena<br>Woynarowska-Soldan   | Health Promotion for School Staff  |
|-----------------------------------|--|
| Terhi Saaranen and<br>Tiia Pertel | Process Evaluation of the Schools Interventions in the Promotion of Occupational Well-being in Finland and Estonia / Development among School Community Staff - a Case Study |
| Denis Francesconi                 | Wellbeing in Teacher Education: Embodiment and Mindfulness   |



### Parallel Session VI – From Specific Interventions to Sustainable Health Promotion at School Wednesday 9<sup>th</sup> October 11:00-12:30

## 6A: Professional Development for Health Promotion Chair: Didier Jourdan (room 3)

| Monica Carlsson    | Professional Competences within School Health Promotion   |
|--------------------|---|
| Rita Sketerskiene  | The Need of Health Knowledge of Teachers working in Lithuanian Schools of General Education       |
| Kerttu Tossavainen | Teachers' Views of Adolescents' Health Promotion at Vocational School                             |
| Isabel Chagas      | Impacts of an Online Problem-based Course in future Teachers' Ideas about School Health Education |

### 6B: Sustainability of Health Promoting Changes in School Chair: Nina Grieg Viig (room 5)

| Kevin Dadaczynski | Predictors of Principals' Engagement in School Health Promotion. Results of an online Survey            |
|-------------------|---|
| Aldona Jociute    | Strategic planning for Health Promotion Sustainability at local level: Lithuanian Case                  |
| Sue Bowker        | Health Promoting Educational Settings - planning for Sustainable Change                                 |
| Sharon Moynihan   | Fostering Reciprocity in Pre-service Teachers' Health Education- the Potential of Reflective Journaling |

## 6C: Healthy Eating and Sustainable Health Promotion in Schools Chair: Anette Schulz (room 1)

| Minna Mikkola     | Developing Disposition for Sustainability: Linking Food System Communication to School Meals  |  |
|-------------------|---|--|
| Graca S. Carvalho | Students' food Consumption in a School Canteen: Analysis of what they choose from the Canteen Gallery and what they discard, by Gender and Age    |  |
| Margarida Vieira  | Using the Food Records to follow Adolescents' Eating Behaviour during the Implementation of the Educational Programme 'Planning Health in School' |  |
| Karen Wistoft     | The Desire to Learn. Gardening, Cooking and Passion in Outdoor Education  |  |



| 6D: Round Table 4<br>(room 9)   |   |  |
|---|---|--|
| Gwendolijn Boonekamp  | Physical Activity and Sense of Coherence, the role of physical education in Schools   |  |
|   |   |  |
| 6E: Symposium 4: Active Role of Children and Youth in Health Promoting Schools - Implications for School and Community Cooperation Chair and Discussant: Goof Buijs (room K3) |   |  |
| José A. (Tony) Torralba<br>& Bárbara Atie Guidalli  | A Conceptual Framework for Understanding Children Foodscapes In & Out of School: Implications for School Food Reform                        |  |
| Bent Mikkelsen  | FRIDA The Learning Preschool Foodscape – how Food Environments can help Promote healthier Eating  |  |
| Dorte Ruge  | How can Students play an active role in a Health Promoting Foodscape? Preliminary Results from a PhD Study                                  |  |
| Pierre-Antoine Ullmo  | Reducing the increase in Child Obesity: Assessment of a school-based Intervention in Eating Habits and Physical Activity in School children |  |



|                              | POSTERS   |
|------------------------------|---|
| Maria Vezzoni                | Individual Interviews with Students on Advantages of a Healthy Diet   |
| Marina Diakovich             | Social and Psychological Aspects of Health relative Quality of life of Students   |
| Lyudmila Sukhareva           | Health of Moscow Schoolchildren   |
| Goof Buijs                   | HEPCOM: Learning Platform to prevent Obesity in local Communities   |
| Krystiine Liiv               | Developing the Support systems for Children with type 1 diabetes in Educational settings in Estonia   |
| Peter Khramtsov              | Posture and Physical Education of Students  |
| Maria Holmstrøm              | Ready, Set - Husum: On The Job Training for Physical Education Teachers   |
| Ruslan Romanyshin            | Your Health in your Hands Programme   |
| Peter Khramtsov              | Interaction of Health Schools and Educational Institutions in implementing Network Projects on protection and strengthening Students' Health                  |
| Irina Aleksandrova           | Optimizing the Timetable as a way of preventing fatigue in Schoolchildren   |
| Lyudmila Sukhareva           | Relationships among School Students   |
| Zinaida Sazanyuk             | Strengthening the Health of Children and Adolescents in full-time School  |
| Ellis Vyth                   | Spending money in the school canteen or bringing food from home? Food purchasing behavior of lower educated adolescents in the Netherlands during school time |
| Merete Spangsberg<br>Nielsen | Promoting Health and Learning Environment on Danish production and Vocational Schools   |
| Natalya Garkusha             | Health Culture Education of School Children as a Key Direction of Healthy Schools Development   |



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## COMPARING POLICIES AND PUBLIC SPENDING FOR CHILDREN ACROSS OECD COUNTRIES: LESSONS AND CHALLENGES FOR HEALTH PROMOTION IN SCHOOLS

#### **Dominic RICHARDSON**

Policy Analyst, OECD, Paris Dominic.RICHARDSON@oecd.org

Using evidence from recent work on the timing and type of public expenditure on children, child policies across OECD countries, and child well-being outcomes, this presentation will highlight broad policy lessons and challenges for health promotion in schools in the context of public investment on children across the lifecycle. Drawing on the similarities and differences between governance and policy structures in OECD countries, the potential for the successful policy transfer of good practises in this field will also be briefly discussed.

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### MINDFULNESS IN SCHOOLS AND FOR THE YOUNG – PRESENT AND FUTURE PERSPECTIVES

#### **Katherine WEARE**

Emeritus Professor at the University of Exeter and Southampton. skw@soton.ac.uk

Mindfulness for young people is still young, but is developing rapidly across the world, with a flourishing and exciting range of programmes, conferences and meetings. Mindfulness refers to the ability to be in the here and now, to direct the attention to experience as it unfolds, moment by moment, with open-minded curiosity and acceptance rather than judgment or commentary (Kabat-Zinn, 1996). The ability to do this reliably and in a sustained way can be learnt gradually through simple practices, which some might term meditations. Regular practice rewires the brain in favour of greater calm, rationality and kindness and away from stress, anxiety and hostility. It has been shown to be profoundly helpful for mental and physical health, wellbeing, stress reduction, learning, focus and concentration. With its grounded and experiential approach, based in the body and the moment, mindfulness can provide the 'missing key' to success in more cerebral approaches in education, including and particularly in social and emotional learning. Young people, and their teachers benefit from mindfulness to help them cope with the stresses, distractions and challenges of the modern world, and it fits into a wide range of educational and policy contexts.

This plenary will give an overview of mindfulness in schools and for children and young people. It will provide a thumbnail sketch of the fairly robust evidence based for work with adults, and the growing and promising work with the young, explore the state of programme development across the world, and suggest some of the key areas for future development. It will suggest that, in attempting to develop mindfulness in schools there is much to learn from work in more established areas such as SEL which, together with learning from empirical studies of mindfulness in schools are suggesting some key principles for successful implementation. They include balancing universal and targeted approaches, developing the mindfulness of school staff, teaching skills and attitudes in ways that start where young people are by making learning lively, fun and immediate, and taking a long term approach which integrates mindfulness with mainstream educational processes and the core curriculum. In so far as time allows, the session will be experiential, and illustrated with some lively and fun practices that particularly appeal to the young.

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### **INEQUALITY IN HEALTH AMONG CHILDREN AND ADOLESCENTS**

#### **Bjørn HOLSTEIN**

Professor, National Institute of Public Health, Denmark bho@si-folkesundhed.332dk

Social inequality in health is a well-known phenomenon, also among school-children. The big question is why? What are the processes which produce social inequality in health among school-children? This lecture presents some of the evidence about the role of schools in producing or reducing social inequality in health.

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#### HOW CAN SCHOOLS CONTRIBUTE TO EQUITY IN HEALTH?

#### **Oddrun SAMDAL**

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As almost all children attend school and through them it is also possible to reach their parents many countries have in national policies identified school as a core setting to achieve equity in health. Evaluation of school-based health interventions do however show that although some interventions are able to improve behaviour or student perception of their intervention focus, such as healthy eating, physical activity or mental health, they typically have better effects among students from families with high socioeconomic status compared to students from low socio-economic status. To meet the objective of better equity in health interventions should make more systematic use of educational competence in providing differentiated approaches to meet the needs of different socio-economic groups. Further, to achieve long-term change it is recommended that interventions should be embedded in organizational school change strategies building on the principles of health promoting schools rather than being introduced as single-topic approaches. This way schools are more likely to give the topic areas priority as the principal thinking of health promoting schools is to merge strategies that simultaneously promote both health and learning.

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## SCHOOL-CENTERED APPROACH IN ENSURING EQUITY IN HEALTH AND EDUCATION IN SOCIALLY VULNERABLE RURAL AREAS OF ARMENIA

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Children of Armenia Fund (COAF) works towards eradicating poverty and ensuring rural development in socially vulnerable rural areas of Armenia. It employs a holistic approach with its various health, education, economic, infrastructure revitalization and psychosocial programmes, ensuring synergistic effects for sustainable rural development.

Specific case studies will be discussed during the presentation. The role of the school in ensuring equity in health and education in economically disadvantaged rural settings will also be touched upon. Prior to COAF's presence in these communities, local schools were dilapidated with unsafe conditions. This posed major health risks for children in addition to the fact that there were no indoor toilets, no running water, diesel-run heaters, broken furniture and rundown buildings. The new renovated schools feature modern and innovative solutions that are drastically different from the houses where children live and other structures located in the villages.

Examples of modern solutions will also be cited during the presentation. COAF offers multiple opportunities and extracurricular activities aimed at motivating children to spend most of their day at their local school. Healthy habits and lifestyles are promoted with a school-centered approach in mind, and focuses on extensive health education and prevention activities throughout the academic year and during summer camps (details of school health interventions to be presented). Bringing about safe conditions and improved sanitation in the schools also allows for the implementation of preventive interventions for all children regardless of their economic status (examples –brushodromes and school nutrition).

Since 2012, five COAF-sponsored schools have joined the SHE network, allowing them access to a wide array of evidence-based resources and opportunities for school health promotion. SHE's whole school approach falls in line with COAF's holistic approach for school health promotion.

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### **EMPOWERMENT, HEALTH PROMOTION AND SCHOOLS**

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Health promoting schools are characterized as constantly strengthening their capacity as a healthy setting for living, learning and working. But how empowering are the approaches that we use in a school setting? As health promoters, are we really concerned with giving students more control over their lives, health and its determinants or simply changing their behaviours? The presentation will challenge some of our assumptions about empowerment and health promotion in the school environment.

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#### IMPLEMENTING MENTAL HEALTH PROMOTING SCHOOLS

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This presentation examines the promotion of positive mental health within the health promoting schools framework and explores the factors that influence the implementation of sustainable change at a whole school level. The impact of social and emotional wellbeing interventions on educational and health equity objectives are examined. Recent research findings are used to consider the complex interaction of contextual factors that influence the quality of implementation in promoting children's emotional, social and mental wellbeing within a health promoting schools approach.

The presentation calls for a clearer focus on implementation processes and structures in order to ensure the quality of implementation necessary for positive outcomes to be produced and sustained.

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### STRATEGIES FOR LINKING EDUCATION AND HEALTH: LESSONS FROM EUROPEAN EXPERIENCE

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This presentation draws on the work of the Early Years, Childhood and Education Task Group for the WHO European Region's recent review of social determinants of health and the health divide. The Task Group surveyed promising approaches from a wide range of European countries and distilled these into a set of key principles to be followed by policy makers and practitioners.

These include: the importance of securing political will; the need for multi-strand, multi-level approaches; the need for vertical and horizontal integration of policy and practice; and the key role of data.

The presentation will set out these principles and illustrates how they are being implemented in a range of European contexts. It will argue that the role of schools in health promotion needs to be underpinned by principles of this kind. In particular, it will suggest that area-based approaches can offer powerful strategies for embedding the work of schools in wider strategies for tackling health (and other) inequalities.

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### PLANNING SUSTAINABLE SCHOOL HEALTH PROMOTION PROGRAMMES: AN INTERVENTION MAPPING APPROACH

### Gerjo KOK

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Intervention Mapping (IM) is a planning protocol that describes a step-by-step process for developing theory-based and evidence-based health promotion programmes. IM distinguishes six steps: conduct the needs assessment, define proximal programme objectives, select theoretical methods and practical strategies, design the programme, anticipate adoption and implementation, and anticipate process and effect evaluation. Planning is an iterative process: two steps forward and one step back. IM provides three core processes, tools for the professional health promoter for applying theories and research: searching the literature for empirical findings, accessing and using theory, and collecting and using new data. Research has shown that theory- and evidence-based programmes have more chance for success; we will give examples. New insights show that health promotion effects may be generalized over topics. Finally, sustainable programmes are the result of careful implementation planning (again following IM), often directed at organizational change.



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# "MOVEMENT FOR MEANING" A CULTURAL HISTORICAL PERSPECTIVE ON HEALTH-PROMOTING MOVEMENT ACTIVITIES IN EARLY CHILDHOOD EDUCATION IN DENMARK

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**Keywords:** Preschool, movement, internalization/externalization.

#### Introduction/background

Today it is common knowledge that sports and movement activities are important health-promoting factors not only for adults but also for children. An increased number of preschools in Denmark working with a special focus on movement and physical activities can be seen as a consequence of this knowledge.

Due to this new field of interest in the preschool practice, the subject in my master thesis (Andersen, 2012) related to my study in Educational Psychology, is to look into what kind of ideas and promoted actions related to the processes of bodily learning are reflected in this special kind of preschool practice. The ideas and actions are analyzed with the purpose of understanding the dynamic relationship between the movement environment created by the preschool teachers, and the process by which the children create personal embodied meanings, when participating in the movement activities.

The approach of the project is to contribute with a cultural-historical perspective on health- promoting strategies and methods related to movement activities, not only in a preschool context, but across different institutional practices, from preschool to school. The point is not to develop initiatives with the goal to promote a quantitative concept of 'more' movement and physical activities, but to create a research strategy focusing on developing the concept of meanings in relation to movement activities in different institutional practices.

#### Theoretical/analytical framework

The theoretical framework is based on a cultural-historical perspective and the idea of learning and development as processes based on actions in social contexts (Hedegaard, 2004, 2008; Valsiner, 1997, 1998; Vygotsky, 1978). The concepts of ideas and actions as stated in the introduction refers to the process where cultural material is brought inward from outside, and the opposite process where inner material is taken outward in actions. This approach to learning and development forms the center of the theoretical perspective and the basis for the main strategy of the analyses. Through J. Valsiner's internalization/externalization model (Valsiner, 1997, p. 305) it is seen how the concept of meanings in a bodily perspective is internalized into the personal system of meanings. In addition to this it is on the other hand seen, by studying movement activities, how the internalized systems of (bodily) meanings are externalized and acted out.

To work out a theoretical perspective that can incorporate the concept of the body and its linkage to learningand developmental processes, a secondary perspective 'phenomenology of the body', with inspiration from M. Merleau-Ponty, is brought into position and incorporated in the cultural- historical main frame. With this approach it is possible to focus on how the body from a 'lived' (Merleau-Ponty, 1945/2009) and subjective perspective interacts with, and becomes the basis for learning- and developmental processes.

#### Methodology/methods

To gain knowledge about interactions between ideas and actions related to the body, two kinds of qualitative research strategies are used in the study. First video observation of movement activities structured by the preschool teachers is used as an empirical tool to gain information about bodily actions at an externalized level.



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Secondly interviews with the preschool teachers and with the manager are used as a methodological tool to gain insight into how ideas and conceptions related to the body exist in the systems of meanings at an internalized level. During the interview sessions with the preschool teachers, I play small clips from the video observation.

#### **Key Results**

The empirical and theoretical analysis will show that from the preschool teacher's point of view there are generally two different kinds of meaning-systems related to the body, embedded in the organizing practice. Firstly a semiotic system, where the body appears as an object- and linguistically orientated tool, secondly a system where the body in a 'lived' kind of way emerges as a narrative phenomenon, related to a state of being in itself.

From the children's point of view the analysis shows that movement activity primarily structured from an object-oriented perspective is creating a limited learning environment - seen from a cultural - historical perspective. The limitation related to learning and development appears when the activities seem to be 'too structured', due to many requirements and expectations from the surrounding environment. This major focus on structure is reflected in the activities as a focus on verbal instructions instead of bodily 'lived' participation as guiding tools.

Furthermore the analysis shows that activities that contain a 'lived' kind of space open up a possibility for the children to create personally embodied meanings in relation to the activities. This lived kind of space in the activities appears e.g. when activities are created from an improvised and narrative perspective. Especially imagination is seen as a tool with an extraordinary 'lived' ability to open up a space, where the children can create personally embodied meanings.

#### **Conclusions**

A main conclusion related to the analysis of how ideas and actions are expressed in a movement practice is how two systems of meanings related to the body are reflected in practice. The systems that I uncover are a semiotic, object- oriented system and a 'lived' system which are reflected both as inner internalized ideas among preschool teachers, as well as reflected in the movement activities at an externalized level. A further point to be emphasized is about how the semiotic, object-oriented system emerges as a dominating perspective because it is on an implicit level, in the material, linked with the concepts of learning and development - concepts which appear as highly recognized and reflected in the preschool practice. On the other hand the analysis shows that the 'lived' system of meanings when viewed from a cultural- historical perspective displays a great learning potential. Despite this potential, the lived system is related with conditions which occur randomly, and it appears as a system which is not incorporated on an explicit level in movement practice.

#### **Implications**

On the basis of the conclusions I will underline the importance of working with promoting a 'lived' approach to the body, focusing on how the concept of meanings is related to learning and developmental processes. The point is to gain awareness not only of potentials related to the objected-oriented perspective, but also to gain awareness of the potentials related to a 'lived' bodily perspective. In the latter, the main focus is about movement and physical activities in a perspective focusing on potentials related to the concept of personally embodied meanings and its interactions with the concept of health. From this point of view it is possible to raise questions for further research, about how the concept of meanings can expand the concept of health. This must be done in order to support the creating of a health- promoting environment where learning and development appears as cultural mediated processes, where material is brought inward from the outside, and at the same time taken outward - and expressed in (health- promoting) actions.

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## MULTICULTURAL COMPARATIVE LONGITUDINAL STUDY – THE CHALLENGE OF ADOLESCENTS' HEALTH BEHAVIOR AND HEALTH INEQUALITIES IN TWO KARELIAS

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**Keywords:** Adolescent, health behavior, health inequality.

#### Introduction/background

Previous studies have indicated that health behaviors begin to develop in childhood and continue during adolescence. It has been pointed out that there are needs to equalize socio-ecologic differences in adolescents' behavioral outcomes. Adolescents' health challenges have become increasingly complicated and are closely linked to adolescents' lifestyles and health behavior and, therefore, health tendencies change rapidly as they are influenced by society and culture. The most challenging threats include sedentary lifestyle, weight-gain, and nutritional problems, but, in particular, adolescents' intoxication-oriented alcohol use and increased cigarette smoking.

The study is a part of a more extensive project "Addressing challenging health inequalities of children and youth between two Karelias (AHIC)", which is administered by the University of Eastern Finland and received funding from the Karelia ENPI CBC programme. The information is needed for developing interventions with clearer targets due to the growing inequality of health behaviors. This study aims to investigate and recognize 15-year-old adolescents' health behavior and health inequalities in two Karelias, in the Finnish region of North Karelia and in the Republic of Karelia, Russia. Thorough knowledge of possible changes in health behavior in the cross-border region is needed for ensuring the correct and most effective preventive programmes.

### Theoretical/analytical framework

Adolescence is a period of major development with biological, behavioral, and social relationship-related changes. Immediate surroundings, social relations, and personal development, including different roles, form complex and multiple relationship systems that affect health and health behavior in many ways. These reciprocal and bidirectional relations between environment and adolescents include functioning behavior, attitudes, thinking, and personality. This sensitive period plays a crucial role for health behavior and later health. The strongest determinants are influenced by structural factors which have a powerful impact on weakening resources of families, schools, and communities' circumstances. Current structural changes, unstable family structures, and social exclusion contribute to decreasing family and school resources and social capital causes steep social inequalities.



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Adolescents' unhealthy behavior, such as substance use, infrequent dietary habits, and physical inactivity, are shaped by social and environmental circumstances. Particularly smoking and alcohol use are deeply interconnected and these have far-reaching consequences to later life and health. Therefore, the unfavorable choices seem to accumulate for the same social groups, and this will increase inequalities across the populations.

#### Methodology/methods

The study consists of two cross-sectional survey's data from North Karelia and Republic of Karelia, Pitkyaranta region from years 1995 and 2013. The latest data were collected in April 2013 by means of the standardized self-administrative questionnaire concerning health behavior. The participants were ninth graders (n=571) in 8 schools in Finland and eighth and ninth graders (n=323) in 8 schools in Russia. The adolescents fulfilled the questionnaire anonymously in classrooms according to standard instructions by a researcher. Data from 2013 will be analyzed in early autumn 2013. Analyses will be consisting of health behavior trend changes between 1995 and 2013.

#### **Key Results**

In an earlier survey conducted in 1995, we already knew that adolescents' smoking was common, except in the case of the girls in Pitkyaranta, and, therefore, our interest is to reveal if this trend has changed. The presumption is that the possible increase of adolescents', particularly girls, unhealthy behavior and substance abuse could be explained by changes in immediate social and material resources, and particularly the westernized lifestyle. Moreover, we already know that closest friends' substance use and problems with social relationships predict smoking and alcohol abuse, and our interest is to find out if these relationships have changed. Furthermore, our interest lays on socio-ecologic circumstances that affect adolescents' health behavior and whether there are different social groups with increased risk of unhealthy behavior and if these groups have different profiles in Russia and Finland.

#### **Conclusions**

Health choices are closely linked to adolescents' social relationships and might increase health inequality and predict unequal health outcomes. Therefore, it is possible to influence health behaviors and to prevent unhealthy behavior by certain activities that aim to improve quality of life.

### **Implications**

To reduce inequality in health and unhealthy choices, it is important to influence structural inequalities, family members, school policies, school culture, marketing, and adolescents' self-efficacy and attitudes. The new knowledge ensures the development of correct interventions and most effective preventive programmes with a clear focus in these closely situated, but ecologically diverse cross-border regions. Moreover, social and structural determinants should be taken into account when preventing actions focused on preventing deeper inequalities and a heritage of social inequalities.

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## SCHOOL CLIMATE, PARENTAL SUPPORT AND ADOLESCENT ALCOHOL USE: A MULTILEVEL APPROACH

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Keywords: School climate, adolescence, alcohol use

### Introduction/background

Excessive alcohol use causes illness and death worldwide and is a public health problem among adolescents (1-2). Risk factors for adolescent alcohol use are typically conceptualized as individual and interpersonal factors; however, these factors do not fully explain adolescent drinking behaviour (3). In addition to individual factors such as perceptions, drinking motives and beliefs a second level of influence is found in the school and family context (4-6). Relationships to school and family are associated with adolescent risk behaviour but few studies have examined the combined influences of school and family on adolescent alcohol use.

The present study aimed: (1) to explore the relationship between parental support, school-class climate, and adolescent alcohol use (2) to analyse the combined effect of parental support and school-class climate on adolescent alcohol use.

### Theoretical/analytical framework

The theoretical approach relates to the study of context and is inspired by the framework developed by Macintyre et al. (7). They focus on the importance of the shared norms, behaviours, and traditions in the study of context and health. Bronfenbrenner (8) viewed development from an ecological perspective where human development takes place through processes of progressively more complex reciprocal interactions between the developing person and their environment. His conception (about microsystem, mesosystem, exo, and macrosystem) led to renewed interest in the role of social context, including the family and peer groups but also schools and workplaces in which development takes place. In line with this our study focuses on the contextual influence of school climate and how the drinking behavior among adolescents is influenced by different contexts such as the family and school.

### Methodology/methods

We used the Danish 2006 data from the international research project Health Behaviour in School-Aged Children (HBSC), a WHO collaborative study (9). The cross-sectional nationwide survey data included 10,801 schoolchildren (mean age = 13.6) nested in 116 schools and were used to conduct multilevel logistic regression analyses. The outcome measure adolescent drunkenness was defined as being drunk once or more.

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### **Key Results**

Overall, 33% of the students have been drunk once or more. We found a statistically significant relationship between school-class climate and adolescent drunkenness (OR = 1.52 (CI: 1.27-1.82)) across all age and gender groups. High parental support was protective against adolescent drunkenness, with adolescents having less supporting parents drinking the most (OR = 1.95 (CI: 1.64-2.31)). Surprisingly, a positive school climate did not seem to influence the relationship between lack of parental support and drunkenness.

#### **Conclusions**

Our findings suggest that school- and family related factors play a considerable role in the development of different drinking behaviours among youth. Further, our results suggest that improvement of school climate may result in less alcohol use among adolescents.

### **Implications**

These findings make school and families important units to investigate in studies of adolescents' alcohol use and calls for intervention that addresses the broader context of adolescent life. Increasing the level of school satisfaction might not only have beneficial effects on student's wellbeing but may also help to lower the level of drunkenness. This approach is supported by the evidence from a systematic review which concluded that modifying the school social environment can significantly reduce substance use, and may be an effective complement to existing interventions addressing individual knowledge, norms and skills (10).

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### MOTIVATIONAL INTERVIEWING BY SCHOOL NURSES: SPIRIT, TECHNIQUES, AND DILEMMAS IN THE PREVENTION OF CHILD OBESITY

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**Keywords:** School nurse, obesity prevention, motivational interviewing.

### Introduction/background

School nurses play a central role in school-based, preventive health services in Denmark (National Board of Health, 2011), and they may play an important role in obesity prevention as well (Kubik et al., 2008). The City of Copenhagen has monitored the growth of school children for many years and has observed an increasing prevalence of overweight and obesity (Pearson et al., 2010). In response to this, The Child and Youth Department of Copenhagen chose a prevention strategy targeting children with a high risk of obesity with an intervention conducted by school nurses using motivational interviewing.

Motivational interviewing is a counselling method to bring about behavioural change (Miller and Rollnick 1995). Effect has been documented for a range of problem behaviours related to lifestyle diseases in adults (Rubak et al. 2005; Söderlund et al. 2011). The use of motivational interviewing by school nurses for the prevention of child obesity in a family intervention is still new, and evidence on the potentials and problems is scarce (Resnicow, Davis and Rollnick, 2006; Morrison-Sandberg et al., 2011). Thus, the objective of this study is to investigate the experiences, practices and perceptions of school nurses when applying motivational interviewing to overweight children and their parents.

### Theoretical/analytical framework

The study is based on the theory of motivational interviewing presented by its originators, Miller and Rollnick, in three conceptual papers (Miller & Rollnick, 1995; Emmons & Rollnick, 2001; Miller & Rose, 2009). The specific description of motivational interviewing varies slightly among the papers; however, a constant feature is that the techniques of the method are subordinated the spirit: 'Motivational interviewing without this underlying spirit is no longer motivational interviewing' (Miller & Rose, 2009:535). From the three papers, we derived the keywords that characterize the spirit and the techniques of motivational interviewing to be used as a framework in the analysis.

### Methodology/methods

The study was planned and carried out according to recommended stages of qualitative research interviewing (Kvale & Brinkmann, 2009). We conducted semi-structured, in-depth interviews with a purposive sample of twelve school nurses from twelve schools. The nurses were asked to bring three to four child records as cases for stimulated recall during the interview. The interviews lasted approximately one and a half hour and were audio recorded and transcribed verbatim. The interview material was coded and analysed in two steps: First openly for



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what data told about motivational interviewing. Next specifically according to the keywords of the motivational interviewing spirit and techniques.

### **Key Results**

The study showed that the motivational interviewing spirit and techniques are integrated, inseparable, and adapted by the school nurses. An example is to use the BMI-curve as a tool to inform about the overweight, and to use it with the spirit of motivational interviewing for evoking the child's own concern, as illustrated in the following quote: 'I show the BMI-curve and the dot where the child is placed on the curve. The goal is to make the child talk. Often they have noticed the overweight themselves and are concerned'.

The study revealed three dilemmas with motivational interviewing for obesity prevention in children: when the parents did not perceive the child's overweight as a problem, when the child and the parents were at different stages of motivation to change, and when applying an individualizing approach as motivational interviewing to a complex societal problem such as obesity. In the last case, with the risk of increasing social inequality in health, which is inherent in individualized prevention strategies.

### **Conclusions**

Motivational interviewing as a counselling method with its techniques and underlying spirit was adapted by the school nurses and integrated in their practice. Three dilemmas were revealed with motivational interviewing for obesity prevention in children, which call for attention by researchers, managers, and practitioners of school health services.

### **Implications**

Motivational interviewing spirit and techniques seem to be adaptable and useful for school nurses in counselling children and parents. However, further research and development should address the issues of adjusting the method to counselling families and children of different ages. When used for child obesity prevention, motivational interviewing was connected with dilemmas which should not be left to the individual nurse but be handled in practice by the school health service management. It is suggested to distinguish carefully between obesity prevention and obesity treatment. Further, it should be considered to use motivational interviewing for obesity treatment only. For obesity prevention it is suggested to prioritize carefully between a school-based strategy and a strategy of targeting individual high risk children. The role of the school health nurse in obesity treatment and obesity prevention should be analyzed to assess where her efforts may have greatest impact - at child level or at school level.

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## PHYSICAL ACTIVITY AND SENSE OF COHERENCE, THE ROLE OF PHYSICAL EDUCATION IN SCHOOLS

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Keywords: Sense of Coherence, Salutogenesis exercise.

### Introduction/background

HAN Sports and Exercise (HAN S&E) is part of the HAN University of Applied Sciences where young people are educated to become professionals in sports and health and management. Their future work settings are for example: schools (primary and secondary and special education), neighbourhoods, local governments, and municipal health services. Many of these professionals will work with children using sports and physical activity as a means to enhance the quality of life of their pupils and clients. Therefore, HAN S&E has developed a research area in which we investigate the relationship between quality of life and physical activity, focusing on Sense of Coherence. The aims of this research area are multiple:

- · teach students to do research in this area.
- assist schools in making an inventory of the current state of the art with regard to the level of physical activity and SOC of their pupils.
- make future Physical Education professionals more aware of the role they can play in improving quality of life of their pupils by improving their SOC and stimulating physical activity.
- · with the final aim to integrate this in the curriculum of HAN PE students and level of physical activity.

### Theoretical/analytical framework

Koelen and Lindström have described the possibility that the salutogenic approach focusing on generating health (as opposed to pathogenic approach that focuses on disease generation), could be used as a theoretical framework for empowerment (1). There is substantial evidence of the positive relationship between empowerment and sense of coherence (1). There is also evidence that physical activity increases the positive affect (stated in Öztekin and Tezer as 'referring to a state of high energy, full concentration and pleasurable engagement whereas the low negative affect is a state of calmness and serenity' (2). Furthermore there is evidence that physical activity can regulate emotions (2) and is related to the strength of the SOC (3) and, very importantly, that sense of coherence is a personality construct that can be learned (4).

### Methodology/methods

A cross-sectional study was carried out based on the 29 items Sense of Coherence questionnaire which had been translated to Dutch and slightly adapted to the target group being young adolescents of a school of preparatory secondary vocational education. The second part of the research focused on exercise behavior, based on the IPAQ questionnaire (5). The population consisted of young adolescents between 12-16 years of age who were approached in the school setting mentioned before. The data was statistically analysed to find out the relationship between sense of coherence and physical activity.

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### **Key Results**

The study is actually being carried out at the time of writing of this abstract.

### **Conclusions**

The study is actually being carried out at the time of writing of this abstract.

### **Implications**

If we find a relation between SOC and physical activity in these young adolescents, further research will be carried out to study this relationship. The results could have an impact on the content of physical education teaching programmes and the on the way in which children are approached and coached during these physical education teaching hours in schools of preparatory secondary vocational education.

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### FEELING BETTER TO WORK BETTER

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**Keywords:** Health promoting schools, implementation, school climate.

### Introduction/background

The context is the implementation of a health promoting school programme in the French education system. We built a health promoting school programme based on the work of the health promoting schools network since 1990, and we adapted this to the French context. The programme's name is "feeling better to work better".

The main research question is to study the impact of the implementation of a health promoting school programme on the pupils' grades. We analyze the link between the grades and the stage of implementation of the programme in the school.

- Our first hypothesis is: the health promoting programme improves pupils' grades.
- Our second hypothesis is: increasing grades is linked to the quality of the implementation of the health promoting programme in the school.
- Our third hypothesis is: implementing a health promoting school programme improves school climate.

### Theoretical/analytical framework

The survey is situated within socio-cultural theory. This means that the school team must build their own programme with the tools we give them. The preventive action is based on the way that the school manages the relationship between the pupils and the teachers, based on the school way of life style. The prevention action is not based on a risk approach.

The task of the "feeling better to work better" programme is to get the school to achieve different actions: action on the management level, action on teaching level providing information on health as a subject, ensuring links with the rest of the school curriculum.

Furthermore, these actions must be linked to the following matters: time schedule, environmental planning, relationship, communication, psychosocial competences, partnership.

### Methodology/methods

A mixed method is used, both qualitative and quantitative. Three sets of data are collected. Set one is about grades (school's result), set two is about the implementation of the programme, while the third set is about the school climate.

The collection of data is done through multiple choice tests, interviews, and document analysis.

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### **Key Results**

When the programme is implemented in its different aspects, pupils' grades improve, the school climate becomes more peaceful, and, in some schools, staff turnover is reduced.

#### **Conclusions**

The programme is useful for the schools. The programme's strength is: it is built with the schools from their needs. It is not a top/down programme. Moreover, the programme doesn't need a specific financial plan. It is implemented within the national education system.

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## HEPCOM: LEARNING PLATFORM TO PREVENT OBESITY IN LOCAL COMMUNITIES

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**Keywords:** Promoting healthy eating, physical activity, local communities.

### Introduction/background

The long term aim of HEPCOM is to contribute to preventing overweight and obesity among children and young people in the EU. Local communities need to be involved in a more structured and strategic way in order to be more active and competent in this area. Therefore it is important to raise awareness and provide easy access to good practice on how to promote healthy eating and physical activity. The overall objective is to increase the quality and level of local community and school interventions across Europe, by up scaling good practice and results from several European projects through the development of a sustainable web based learning platform.

### Theoretical/analytical framework

The strategic relevance of HEPCOM is that it will network a broad range of former and existing PHP and other European projects, proposing a structured and common way of gathering and disseminating valuable learning and good practice tools from these projects. The High Level Group on Nutrition and Physical Activity and the Platform for Action on diet, Physical Activity and Health will benefit from the project and the web based learning platform, as it will give easy and structured access to good practice results, and will at the same time serve as a good information channel towards local communities and schools. In the future the web based learning platform will be a valuable and sustainable tool to reach regional authorities and local communities with good practice tools.

### Methodology/methods

HEPCOM starts with a needs analysis to get an overview of local communities. A mapping exercise will be carried out through a systematic gathering of good practices. A GAP analysis will demonstrate missing links. Next, the first version of the learning platform will be developed, containing good practice tools for interventions on preventing obesity for children and young people in local communities. The platform will be piloted in 45 local communities in 13 European countries. The final version of the learning platform will be developed and launched through national seminars and a final European conference.

### **Key Results**

The online webbased learning platform will be the final outcome of the HEPCOM project. No results can be reported at this stage.

### Conclusions

No conclusions can be reported at this stage.

### **Implications**

The dissemination activities and campaigns in HEPCOM towards local and regional policy makers and professional practitioners around Europe will ensure sustainability and a continuing uptake, up scaling and increase in local community based interventions beyond the project period. On a long term perspective the project will contribute to increase the quality of health promoting activities around Europe that help reducing health inequality among children and young people in Europe.

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## PROFESSIONAL COMPETENCES WITHIN SCHOOL HEALTH PROMOTION

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**Keywords:** Professional competences, school health promotion.

### Introduction/background

Health promotion policy seems to be in the process of foregrounding bureaucratic and marketplace accountabilities and downplaying political aspects: capacity building (instead of empowerment); change management (instead of catalysing change); effective leadership (instead of individuals and groups participating in change processes); and quality assurance and monitoring (instead of trust in professional judgment).

The purpose of this paper is to critically explore the formulations of competences and standards in the European project 'Developing Competencies and Professional Standards for Health Promotion Capacity Building in Europe', in short the CompHP project (Dempsey et al. 2011, Speller et al. 2012), and to discuss them in relation to school health promotion. The following questions guide the analysis: Which values and approaches are included and emphasized in the competencies and standards? Are the formulations of the competencies and standards responsive to essential values and approaches in school health promotion?

The CompHP project's aim of developing competency-based standards can be seen in the context of the EU Commission's agreement to develop flexible governance "soft law" tools; i.e., not legally binding, but based on reflexivity and persuasion, and intended to provoke institutions into reflection and self-criticism of their own practice (Moos 2009), filling the gaps between legal regulations, and professional norms and actions.

### Theoretical/analytical framework

Criticism of 'a competency and standards approach' in education argues that it is based on an engineering (or a mechanistic) model of education, with a tendency to undervalue professional judgment and experience, and disregard educational values and principles (see e.g. Elliot 2004). This paper is driven by an interest to elucidate this critique by exploring ruptures and matches between the formulations of the competencies and standards in the CompHP project, and the values and approaches prevalent in school health promotion.

The analysis of the CompHP formulations is based on two sets of discursive positions: The first position is 'a logic of production vis-à-vis a logic of development', juxtaposing economic and democratic values (Ellström 2006, 2009). The second position is 'systems-centered health promotion vis-à-vis people-centered health promotion' (Green and Tones 2010). Systems-centered health promotion is foregrounding policy and functions, and organizational development and leadership as key strategies. People-centered health promotion is foregrounding individuals, groups and communities as political actors and subjects in health promotion, and the need for strategies and methods that can handle diversity and plurality (see e.g. Raeburn and Rootman 1989).

### Methodology/methods

The analysis of the CompHP formulations is based on document-analysis of the project reports (Dempsey et al. 2011, Speller et al. 2012), inspired by a critical discourse analysis approach to qualitative inquiry (Cheek 2004). The second question will be addressed by identifying ruptures and matches between the formulations of the competencies and standards in the CompHP project, and essential values and approaches in school health promotion. The identification and discussion of school health promotion values and approaches is based on an analysis of policy documents and research within school health promotion (SHE 2007; Dooris 2009; Cooke et al 2010; Carlsson and Simovska 2012).

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### **Key Results**

References to both democratic values (e.g. respect for diversity, addressing inequalities and social injustice) and economic values (e.g. efficiency, accountability) are made in the value base of the competencies framework. The standards are mainly related to systems-centered health promotion concerns, the few people-centered formulations narrow the scope of changes at individual level to behavioral change, and the potential of education and learning in health promotion change is underemphasized.

The democratic value discourse in the introduction to the value-base of the CompHP competency framework matches the values underpinning the health promoting schools approach in Europe, and references to collaborative and participatory strategies are made. The standards mainly refer to systems-centered health promotion concerns (e.g. effective leadership, financial resource management), and therefore differ from the health promoting school eco-holistic models, underlining sustainability and interdependency between different agents, perspectives and interests. By downplaying empowerment and related discourses such as critical action and critical thinking, and by formulating people-centred change strategies in terms of behavioral change techniques, the formulations in the CompHP framework and standards don't provide a good match with transformative health education approaches.

### **Conclusions**

The positive aspects of a competency- and standards based approach described in the CompHP review includes the usefulness of a shared vocabulary for defining boundaries for competencies in professional practices and in curriculum development. With the emphasis of participatory, collaborative and settings approaches in school health promotion, and the intention to integrate health promotion policies as part of school development, a shared vocabulary and communication between professional practices in school health promotion are most certainly of value.

The usefulness of the CompHP standard formulations in professional practices within school health promotion is impaired by the overemphasis on systems-centered health promotion work descriptors. By downplaying professional judgment, values and approaches linked to people-centred health promotion; the potential of education and learning; and by reducing changes at individual and group level to behavioral change, the CompHP formulations cannot be considered responsive to the essential values and approaches in school health promotion.

### **Implications**

If the standards are used as a guiding tool, they will not hinder processes of reflexivity, learning, and adjustments of competencies formulations and standards, or impede or interfere with professional judgment in health promotion. If they are implemented as an accreditation tool within health promotion education and practice, it will be interesting to explore how they are operationalized and used in different fields of health promotion, and follow the transformation processes at different levels. The lack of interest for learning in the competency framework and standards is, however, of general concern: Knowledge about learning approaches, processes and outcomes, and about contextual factors and mechanisms that influence these outcomes and processes, should be prioritized in competency-based standards within health promotion.

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# STUDENTS' FOOD CONSUMPTION IN A SCHOOL CANTEEN: ANALYSIS OF WHAT THEY CHOOSE FROM THE CANTEEN GALLERY AND WHAT THEY DISCARD, BY GENDER AND AGE

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**Keywords:** School canteen, Eating behaviour, Healthy food, Young people.

### Introduction/background

Recently, many countries, including Portugal, have implemented strategies for promoting young people's healthy lifestyles, and school canteens are seen as appropriate places to encourage healthy eating (Aracenta-Bartrina et al., 2008). In addition to educating and empowering students to make healthy choices, canteens are also seen as socialization spaces where the pleasure for healthy meals must also be promoted (Atie-Guidalli, 2012). This work intended to evaluate not only the quality of the canteen food provided in a school (in the Southern region of Portugal, Alentejo) but also the students' food choices and opinions about the canteen service, in order to assess the efficiency of the national canteen programme in this school. The aim was to find evidence of good practices as well as needs for improvement. Therefore, the objectives of this study were (i) to characterise the school canteen conditions, both the food service provided and the students' perceptions about it; (ii) to observe the students' food choices and preferences; (iii) to analyse students' food consumption, i.e. what they actually eat from the complete meal and what they discard; (iv) to find significant statistical differences between gender and between school level groups; (v) and, if pertinent, to formulate recommendations to improve the canteen service and the students' healthier behaviour.

### Theoretical/analytical framework

Healthy diet influences the growth and development of children and young people as well as their quality of life, helping to prevent the occurrence of health problems such as obesity and some related cancers (Aracenta-Bartrina et al., 2008). Thus, it is important to encourage the acquisition of a balanced diet during childhood and adolescence, aiming at enduring for the lifetime. Children's and young people's food choices usually do not take into account their nutritional needs, they are rather influenced by their family habits, culture and socio-economic situation (Loureiro, 2004). As children grow up, the family's impact on their food choices tends to decrease whereas the peers' influence tends to increase, so that helping adolescents to make their personal decisions becomes a priority and, naturally, the school plays an important role in their health education (Currie et al., 2012; WHO, 2006). In this sense, school canteens are one of the important factors in promoting children's and young people's healthy habits and so national legislation can be an important strategy (Aracenta-Bartrina et al., 2008) if put in place correctly. In addition to the relevance of policy regulations contributing to provide a correct offer of balanced food in school canteens, there is also a need for students' nutritional education in order to empower them to make healthy food choices. This study considered both perspectives: the delivered canteen food and the students' food consumption.

### Methodology/methods

The sample included the 5 canteen employees and 484 students: 252 of 2nd cycle (10-12 years old; 46% girls) and 232 of 3rd cycle (13-17 years; 49% girls). Data collection combined qualitative and quantitative methods:



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- · Content analysis of international and national rules for healthy food canteens and daily menus;
- Semi-structured interviews with the canteen employees about food acquisition, storing and canteen delivering;
- Application of the national canteen evaluation scale SPARE (2009);
- Students' questionnaire about what they eat in the canteen and their opinions about it;
- Systematic observation of what students select into their trays, what they leave behind and what they
  consume.

### **Key Results**

- The school menus did not show all information required by national rules and 35.5% of them did not match the supplied meals.
- According to the SPARE (2009) scale, the meals were quantitatively and qualitatively 'Acceptable' and hypocaloric: lipids and especially carbohydrates were under the recommended level but proteins were at correct level.
- The school canteen was more frequented by 2nd Cycle students, by those who lived far away from the school and by those receiving a free lunch ticket (for socio-economic reasons).
- Only 12.2% of students consumed full meals: soup and vegetables were the most despised foods whereas
  the main dish (fish or meat), accompanying carbohydrates and fruits were the most preferred choices.
  Vegetable consumption was clearly insufficient.
- Students discarded about 15% of the meal as they left part of it in the dish, especially the girls.
- Girls consumed more soup and vegetables (p<0.05) while boys ate more bread and fruit (p<0.05). The 2nd Cycle students tended to make healthier food choices than those of the 3rd Cycle, consuming more fish, accompanying vegetables and fruits.
- Most of the younger students (77.2%) considered the food service 'Good' or 'Very good' while most of the older students (64.4%) considered it 'Acceptable' or 'Unacceptable'.
- Students were more satisfied with the staff treatment and the dining room and more dissatisfied with the delivered food.

### **Conclusions**

In general, the school canteen was able to provide an adequate service according to international and national rules and the delivered meals were hypocaloric and quantitatively and qualitatively 'Acceptable' according to the SPARE (2009) scale. However, the nutritional intake varied with the students' choices and preferences. Most students discarded food and so had incomplete meals, soup and accompanying vegetables being the most neglected portions of the meal. The main dish (meat or fish) and the accompanying carbohydrates were widely preferred.

Gender and age (10-12 years old students in 2nd Cycle; 13-17 years old students in 3rd Cycle) determined students' eating behaviours and their satisfaction with school food service: girls consumed more soup and vegetables while boys ate more bread and fruits; the younger students (2nd Cycle) had higher fish consumption complemented with vegetables and fruits rather than the older ones (3rd Cycle). The latter were more critical and demanding about the food school service.

### **Implications**

Although it is important to study the quantity and quality of the food delivered in school canteens following policy regulations, this study highlighted the relevance of analysing the actual students' food consumption by looking not



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only at what they choose from the canteen gallery but also at what they discard from their dishes. The study also showed that gender and age are determinants in children's and young people's eating choices and behaviours.

Therefore, the present study points out the need for taking into consideration the students' gender and age for the planning and implementation of intervention programmes in school healthy eating in order to empower students to make healthy food choices. In addition, appropriate school interventions can ensure positive changes by enhancing school canteens' role as models of healthy eating for students' families to learn about and be able to improve their home meals and their diet lifestyle. To be effective, such programmes must create strong interactions between the school and the students' families.

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## IMPACTS OF AN ONLINE PROBLEM-BASED COURSE IN FUTURE TEACHERS' IDEAS ABOUT SCHOOL HEALTH EDUCATION

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**Keywords:** Health education, online problem-based teacher preparation.

### Introduction/background

Health education in present K-12 Portuguese curriculum integrates the Education for Citizenship programme that requires a transversal approach in subject areas, disciplines, school activities and projects (MEC, 2012). Beyond curriculum, consistent and systematic students' experiences of the school and its context are expected. Therefore every teacher should have specific training in order to overcome the challenges that an integrated, transversal health education programme demands.

Portugal has been a member of the European Network of Health Promoting Schools since 1994 (Rocha et al, 2011). Initially implemented in few schools, health promotion has been extended to an increasing number of schools developing innovative projects with an impact on students' experiences regarding health issues. However, successive changes in the organization of schools, namely the amount of time dedicated to project work, have worsened the conditions for health education. Jourdan, Samdal, Diagne and Carvalho (2008) report that schools in different countries give low priority to health promotion and teachers in general are not aware of their role in health promotion.

With the purpose to contribute to future teachers' preparation on health education, an optional course was offered in a second cycle Bologna-based initial teacher training programme. The following research question was stated: what are the impacts of an online problem-based course in future teachers' ideas about school health education?

### Theoretical/analytical framework

Change is inherent to contemporary society and a factor for present curriculum demands on problem solving, critical thinking, and self-regulating skills as well as on interdisciplinary, transversal approaches to knowledge. Student centered teaching and learning dynamics require teachers professionally adjusted to authentic, flexible contexts in which theory and practice, everyday knowledge and scientific knowledge become closer.

Approaches to health education are intrinsically innovative demanding new roles for students and teachers. As Tones (2005) points out: 'In short, a democratic empowering strategy involving radical-political activities should be the main concern of the health promoting school.' (p. 39). It was assumed that online Problem-Based Learning (PBL) is an adequate framework for such demands. Referring to students' interactions in an online PBL course Chagas et al (2012) emphasize the method to promote students' (future teachers) autonomy and participation. Moreover, the online format increases students' access, enabling differentiated approaches to different learning styles, knowledge background and skills, assuring flexibility and equity.

Several PBL models coexist presently. The 'seven jumps' enhances cooperation in tutorial groups (Visschers-Pleijers et al., 2005). It unfolds according to seven steps: terms clarification; problem(s) definition; problem(s) analysis; structuring ideas; learning objectives; individual research; report and evaluation.

### Methodology/methods

Participants were forty future teachers for 7 to 12 school levels in different subjects: science, mathematics, informatics, philosophy, and languages. They demonstrated good digital skills. Some were highly skillful in computer use representing a new generation of future teachers who grew up with computers, knowing a lot about these



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technologies but unaware about how to use them as resources for teaching. None of them had any experience in PBL. Students' participations in online forums throughout the processes of solving the problems were analyzed as well as group and individual reports. Students' concept maps drawn at the beginning and the end of the course were also analyzed.

### **Key Results**

The two sessions (years 2012 and 2013) of the three credit course were offered in the second semester and was organized according to a blended learning modality with 3 in-presence sessions of two and a half hours: the first session of the course, at the end of the first module, and the last session of the course. Three structuring modules were designed in accordance with the school health education curriculum: (1) basic concepts; (2) environmental sustainability as a health education dimension; (3) health education promotion in school contexts.

Each module was organized around a problem situation (a trigger). Tutorial groups of four to six students were formed working according to the seven-jumps PBL model. At the end of each module students presented a group report depicting a solution, and an individual report with a personal reflection about the experience.

Results showed great variability in the degree of participation of each member in a group. Analysis of reports revealed students' perspectives, experiences, and attitudes towards problem-based learning and e-learning evidencing positive and negative aspects and guidelines for the course improvement in future editions. Lack of time was the limitation most referred.

In general, concept maps presented at the end of the course included a higher number of pertinent concepts then the concept maps presented at the beginning as well as more acceptable relationships between concepts.

### **Conclusions**

Results indicate that the online problem-based course had impact on students' knowledge acquisition, on their attitude towards health education, a theme that most of them didn't know, and online problem-based learning. The remarkably good quality of the group reports was the basis for a discussion about the potentialities of the online problem-based framework that was generated for the promotion of creativity, critical thinking, problem solving, collaboration, and digital literacy among students, competencies that are of the most importance for their future professional performance as teachers. Some students recognized that they could have a role in the health education programme of their schools in the future, emphasizing the relevance of health education for the development of competencies, values and assertive attitudes in school students.

### **Implications**

Students commented that problem-situations or triggers were interesting challenges, however required more time than the time they had to solve them. Some students showed frustration because they were unable to accomplish each problem-situation the way they wanted because of lack of time. Further research will center on the development of problem-situations as digital learning objects feasible within the time constraints of the course.

The variability in students' participation suggests the need for differentiated, more accurate support of the tutor. Future research will center on this issue looking for a set of indicators for the tutor performance providing aid to the students through different technological tools either in real time, such as chats, web conferences or deferred ones such as discussion forums.

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## PREVENTION OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD): A UNIVERSAL PRE-SCHOOL PROGRAMME

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**Keywords:** Universal, Prevention, Pre-School, Behavior Modification.

### Introduction/background

Attention Deficit/Hyperactivity Disorder (ADHD) is one of the most common disorders in childhood and adolescence. There are basically no programmes for the prevention of ADHD. But with respect to frequency, onset, course of the disorder, development of co-morbid disorders, and long-term impairment, ADHD prevention is a necessary and most promising target for interventions.

### Theoretical/analytical framework

We developed a universal preventive ADHD programme for play-school teachers of children aged three to six targeting ADHD risk factors, namely externalizing problem behavior, and reduced attention skills.

### Methodology/methods

A total of 413 play-school children (EG = 193; CG = 220), and 44 play-school teachers participated in this quasi-experimental three group-design study. Children in the EG were randomized to two conditions: Behavior Modification (BM = 99) and BM+ Attention Training (BM+AT = 94) to evaluate effects of a universal intervention vs. additional ADHD specific elements. Children's ADHD symptom scores were assessed before (t0), during (t1), and after the intervention (t2).

### **Key Results**

Children in all three groups did not differ significantly at baseline in all relevant variables and none of the children had a diagnosis of ADHD. After the training children in the BM only group showed significantly less problem behavior compared to children in the CG. Children in the BM+AT group showed significantly more problem behavior after the introduction of AT than children in the BM and CG groups. Overall, high risk children showed significantly more improvement than low risk children. Both younger and older children, and boys and girls showed less problem behavior over time, indicating that there was a parallel shift in symptom ratings for those groups.

### **Conclusions**

Since universal programmes target all children with most of them being highly unlikely impaired in a clinical sense, only small effects, if any at all, can be expected. In this study, BM resulted in significant symptom reduction, establishing a significant prevention effect.

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### **Implications**

General behavior modification techniques are easily taught and implemented and proved to be effective in reducing behavior linked with ADHD symptoms in play-school children.

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## SHOULD PHYSICAL ACTIVITY INTERVENTIONS TO IMPROVE AEROBIC FITNESS TARGET ALL STUDENTS OR THE MOST INACTIVE?

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**Keywords:** Physical activity interventions, target group, adolescence.

### Introduction/background

School physical activity interventions can roughly be divided into (1) mandatory programmes targeting all students by increasing for example PE lessons, (2) targeted programme incorporating training and education to students at risk, or (3) improving the physical environment and organizational environment of schools to increase the opportunities for PA based primarily on voluntary participation. Mandatory programmes for all students have proven effective in improving aerobic fitness, but are expensive and time consuming. Targeted programmes are also effective, but the approach increases the risk of stigmatization of the involved students. Improving the physical environment and organizational environment is promising in theory, and potentially can have an impact on all students. The effort is sustainable, and will impact school physical activity in generations with a low maintenance cost. But the question is: are these types of interventions just giving better opportunities for the most active students, leaving the inactive students unaffected?

### Theoretical/analytical framework

Rothschild argues that health behavior is determined by an interaction of motivation, abilities and opportunities. Increasing the opportunities might increase the motivation, or could be targeted students with lower abilities. But there is also a risk of new opportunities just making the most motivated and the ones with the highest abilities more active. For research purpose the fact that a relatively large proportion of the students already are sufficiently active and have a good physical fitness; and that the students with the greatest potential for improvement are limited, gives intervention targeting all students another challenge, as a ceiling effect is possible.

### Methodology/methods

The SPACE-study used a cluster randomized controlled study design with 7 intervention schools and 7 comparison schools. Baseline measurements were obtained in spring 2010 during the 5-6th grade year, and follow-up measurements occurred in spring 2012 during the 7-8th grade year. Aerobic fitness was assessed with the Andersen shuttle run test, and a web-based questionnaire was used to obtain knowledge of the physical activity during recess and in leisure time. The multicomponent intervention was comprised of 11 components that included a combination of physical environment changes and supportive organizational changes.

### **Key Results**

At baseline 71% and 75% of the students at the comparison schools and intervention schools, respectively, reported they engaged in sport outside school and were characterized as "the most active". At the intervention schools the proportion of students who reported good possibilities for outdoor physical activity increased from



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75% to 77% for the most active and from 58% to 70% for the least active. On the comparison schools the same proportion decreased from 88% to 67% for the most active, and from 83% to 66% for the least active. The proportion of students reporting to be active daily in recess decreased for all groups. At the intervention schools it decreased from 90% to 66% for the most active and from 83% to 48% for the least active. At the comparison schools it decreased from 86% to 50% for the most active and from 74% to 45% for the least active. On average for all 14 schools, the two year follow-up time resulted in running 32 meters longer, and 65% covered a longer distance. The most active students ran 67 meter longer at baseline and 76 meter longer at follow-up compared to the least active students. There was no intervention effect.

#### **Conclusions**

The intervention produced considerable changes to the environment of all seven intervention schools, but was not effective in improving aerobic fitness of the adolescents compared to the comparison group. More students at the intervention school agreed on good possibilities for outdoor physical activities after the intervention, and more students reported daily physical activity during recess. Even though more of the least active students in the intervention group agreed on good outdoor physical activity possibilities, the proportion of students active daily during recess decreased to the same level as in the comparison group.

### **Implications**

This knowledge will be valuable to those designing interventions aimed at improving the aerobic fitness of adolescents through use of the organizational and physical environment. Furthermore, future interventions should be designed to focus on activities of higher intensity and targeted at students with lower levels of physical fitness and PA. If the intervention relies on non-curricular activities and voluntary participation, it would in addition be advisable to focus on raising motivation and engagement at all levels. The high activity level increases the risk for a dilution of the intervention effect. So no matter how commendable 'nudging' PA by increasing the opportunities for all students is, it is not without challenges for research and concerns for effect in the group most at risk.

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## HEALTHY EATING AND PHYSCIAL ACTIVITY IN SCHOOLS: RELIABILITY OF THE HEPS QUALITY CHECKLIST

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Keywords: Healthy eating, physical activity, quality, reliability.

### Introduction/background

Overweight and obesity pose serious public health problems for European children and adolescents. Schools as primary living environments have been identified as a key setting where in the past a number of programmes and initiatives have been developed and implemented. With increasing variety schools often face the problem to choose the best programme. In overcoming this problem, various quality tools have been developed and applied in practice. However, mostly it remains unknown if fundamental psychometric criteria are fulfilled. Hence, this presentation aims to show findings concerning the reliability of the HEPS quality checklist.

### Theoretical/analytical framework

The HEPS quality checklist is one result of the HEPS project (Healthy Eating and Physical Activity in Schools) that ran from 2008 to 2011. The HEPS quality checklist is based on the Health Promoting Schools approach and contains 37 quality indicators which allow a quality assessment of school-based programmes on healthy eating and physical activity (Dadaczynski et al., 2010; Dadaczynski & de Vries, 2012). Each indicator can be grouped to one of four quality dimensions (quality of concept, structure, process, and results) (Donabedian, 2003).

### Methodology/methods

To examine inter-rater reliability (IRR) all available German school-based programmes on healthy eating and physical activity (n=14) were randomly allocated to two programme pools and assessed independently by two raters.

### **Key Results**

The assessment results of programme pool one revealed unsatisfactory Cohen's Kappa coefficients and low to good inter class correlations (ICC). After the HEPS manual guide was amended with regard to its anchoring, the results of programme pool 2 showed substantial improvements with regard to IRR and ICC.

### **Conclusions**

The adapted HEPS quality checklist is a reliable quality instrument for school-based programmes on healthy eating and physical activity.

### **Implications**

Having in mind that most quality instruments in health promotion are not anchored with regard to their application, it is to be recommended that each quality tool in school health promotion should be evaluated before its large scale application. In addition, more studies are needed to replicate the findings with health promotion and educational practitioners.

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## PREDICTORS OF PRINCIPALS' ENGAGEMENT IN SCHOOL HEALTH PROMOTION. RESULTS OF AN ONLINE SURVEY

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**Keywords:** Principals, health promoting school, predictors, TPB.

### Introduction/background

It is widely recognized that principals as gatekeepers to school innovations influence the way health promotion is implemented within the school (Dadaczynski, 2012; Rowling & Samdal, 2011). Evaluation results of specific programmes (i.e. time bounded activities which mostly focus on a specific behavioural topic, such as the the PATHS curriculum) show that high principal support is associated with higher programme effects (Kam et al., 2003). However, very little is known on how principals affect whole school approaches to health (e.g. the health promoting school). Hence, the aim of this study was to identify factors that predict the intention to support school health promotion as well as the implementation status of the health promoting school approach.

### Theoretical/analytical framework

To identify factors which affect principals' engagement in school health promotion, the Theory of Planned Behavior (TPB) has been used as theoretical framework. Originally this model has been developed to explain social behaviour (Ajzen & Fishbein, 1980). TBP comprises four components which in turn have different antecedent components: (1) attitudes (behavioural beliefs and outcome evaluation), (2) subjective norm (normative beliefs and motivation to comply), (3) volitional control and (4) moral responsibility. TBP assumes that the intention (for a specific behavior) mediates between these four components and the behaviour.

### Methodology/methods

We conducted an online survey with primary and secondary school principals in North-Rhine Westphalia, the most populous state in Germany. The questionnaire consisted of 120 items concerning the principals working conditions (e.g. availability of resources, autonomy, openness for innovations), health status (e.g. psychosomatic complaints, emotional exhaustion, well-being) as well as the stage of development of school health promotion (perceived implementation status of different aspects of a whole school approach to health) in their schools. After data cleansing the sample size ranged from n= 1.900 to 2.039.

### **Key Results**

All TPB factors and measures of work conditions, health as well as principals rating of the implementation status of the health promoting school yielded sufficient reliability coefficients. We performed multiple linear regressions analyses to predict the intention to support school health promotion and the implementation status of different aspects of the health promoting school approach from the antecedent factors of the TPB extended by the perceived health status and working conditions. In result, the TPB factors (attitudes and competencies) and the



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health status (well-being) explained 37% of the variance in principals' intention. Principals' intentions as well as volitional control (personal competencies), the health status (well-being) and the working conditions (openness for innovations, time resources) accounted for 36% of the variance in the implementation status of school health promotion.

### **Conclusions**

Results show that school principals significantly influence health promotion in their school. Attitudes, competencies as well as principals' well-being were the strongest predictors for principals' intention which in turn was significantly associated with the implementation status. Furthermore, the study confirmed that the TPB can be applied to an organisational context. However, it needs to be critically emphasized that both the independent variables (TPB factors, health status, and work conditions) as well as the dependent variables (intention to support school health promotion, implementation status of the health promoting school approach) are based on subjective information of the school principals.

### **Implications**

To increase principals' intentions to support school health promotion, measures to improve their competencies (e.g. to implement the health promoting school approach), attitudes (e.g. the educational benefits school health promotion can offer), wellbeing and working conditions should be implemented. This requires longitudinal approaches which evaluate the effects of specific training.

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### MAPPING HEALTH RELATED MESSAGES IN VIRTUAL SPACES – A MEANS TO SCHOOL HEALTH EDUCATION

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**Keywords:** Schools, health education, participatory research, media.

### Introduction/background

While health-related research and health promoting practices in schools often conceptualize health in terms of food and physical activity, less focus has been given to the health related messages and underlying recommendations that children encounter during their daily use of the internet, social- and public media.

This paper presents the first conclusions from a research and development project piloting approaches to participatory research and practice that focus on problems and potentials related to how adolescents deal with health-related messages in everyday virtual spaces.

The aim of the research is twofold: (1) to gain more scientific insight into young people's tactics dealing with the excessive and often contradictory messages related to health and the good life often presented in virtual spaces, and (2) to develop approaches that support young people's abilities to reflect on how they are exposed to and affected by health issues in everyday virtual spaces.

By using visual methods, 50 school children from two 7th grade classes in Danish public schools have participated in mapping some of the health related messages they are continuously exposed to through the internet, social media and TV (i.e. health campaigns, advertisements, fashion sites). By taking point of departure in an ongoing media project, which is part of the school curriculum, the pupils were supported in analysing and critically reflecting on the health messages they are exposed to in their everyday.

### Theoretical/analytical framework

As promoting healthy life styles is a central contemporary political concern, young people are continuingly addressed by health recommendations that seldom allow young people's perspectives to be voiced (Percy-Smith 2007). Studies like 'Young Minds' (Simovska & Jensen 2006) and 'Mind the Gap' (Percy-Smith et al. 2003) underline the importance of youth participation in sustainable health promotion.

A key challenge in child and youth research is how adult researchers can establish insights into young people's lives, and represent their voices authentically within scientific writings. Using participatory methods has been a central element in dealing with this challenge (Thompson 2006), stressing the epistemological importance of gaining young people's knowledge about their everyday lives. The study explores participation as an approach to research a part of young people's lives that is not easily observed, the life in so-called 'virtual spaces'.

The paper discusses methodological issues related to combining health promotion research and participative learning processes as part of one approach to school-based health education. Thus, investigating how participatory and visual methods can both support explorations of young people's everyday lives in virtual spaces, and give young people a voice in health promotion.

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### Methodology/methods

During three days, the pupils take photos of the screen including messages related to health, food, meals, physical activity, body ideals, etc. seen on TV, mobile phones or computers. The collected data are subsequently categorized, analysed and discussed in groups according to a set of questions formed in collaboration between researchers and the teacher. The groups present their findings of how health is represented in their everyday virtual spaces and how their health practices and personal style are influenced by the media. Finally, the pupils create a health session addressing the younger pupils at the school based on their new knowledge, reflections and action competence.

### **Key Results**

The study brings new insights into the potential of visual methods in participatory school-based health promotion. It shows that the visualisation of everyday behaviour - in this case media behaviour - is effective as a means to bring about awareness of one's own health identity and behaviour, and thus the action competence to reflect on and possibly change it.

Additionally, by letting children document the health messages that they meet in the virtual spaces in their everyday lives, the study contributes to our knowledge of children's own perspectives and understandings of what is 'healthy' and 'unhealthy'.

### **Conclusions**

Through mapping their own meetings with health-related messages in the virtual spaces of TV, social media and the internet, the pupils critically reflected on how this daily exposure affects them and how health related messages may often be contradictory or reflecting an 'unrealistic' reality.

Children's use of and time spent on TV, social media and the internet constantly increase in importance with regards to social relations and friendships. Insights into children's everyday virtual spaces are thus significant for understanding how to undertake inclusive health promotion practices in schools.

### **Implications**

The massive presence and importance of social media and internet for children's health perceptions, values and practices calls for further investigation into the social implications and significance of virtual spaces in relation to children's health. Furthermore, visualising health messages as a method of health promotion in school may need adjustments according to the resources and characteristics of the particular school and age-level. From a practical health promotion perspective, a focus on media as a hidden but important setting will open new possibilities.

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## SOCIAL AND PSYCHOLOGICAL ASPECTS OF HEALTH RELATIVE QUALITY OF LIFE OF STUDENTS

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**Keywords:** Students, health, relative quality of life, morbidity.

### Introduction/background

Because of the demographic decline of the 1990s, in the next few years, the number of young people will decline, which may adversely affect the economy, defense, intellectual, innovative, social development of Russia. Young people's health can be considered as one of the leading indicators of public health and its labor potential. Special interest is given to students, as this special group of people united by age, lifestyle, specific training conditions, the ability to realize their intellectual potential, without which it will be possible to the solution of problems of innovative development of the country. As young people due to age, socio-psychological characteristics to a greater degree than other social and age groups susceptible to changes in society, the study of their social well-being, quality of life and health is important.

### Theoretical/analytical framework

In modern Russia the problem of health of students grows from the medical to the social. Actualization of value orientations and motives of professional and educational "luggage" depends on the degree of physical, mental and social well-being of young people, but information deficit about the health of students is due the lack of appropriate state statistics.

The purpose of this work - to study social and psychological status, health and health-related quality of life (HRQoL) of students, health and prenosological assessment and adaptation possibilities in the dynamic learning process.

### Methodology/methods

283 technical and humanities students of academy were objects for investigation (17-18 years at the first point of observation and 20-21 years in the second point of observation). By results of the survey was formed computer database. Anthropometric and physiological parameters that reflect the state of adaptation reserves of the organism, the results of a medical examination, the data of social and hygienic and psychological examinations were analyzed and evaluated. Clinical, psychological, sociological, and mathematical methods were used.

### **Key Results**

More than 70% of students in second point of the survey reveal the state of stress adaptive capacity of the cardiovascular system (CS), show reactions hypertensive CS exercise, detraining CS and 50% - signs of autonomic dysfunction. In 81% of the surveyed, adaptive capacity in the intervening period since the first survey was down. Improving situational anxiety had occurred in 10%, personal anxiety - 15% of persons surveyed. 51% was observed moderate and high levels of social frustration (an increase of 35%), with 42% moderate and high levels of exposure to stress. In the 4-year study of students' health, index decreased up to 4 times. The increase in cumulative incidence was 10%. Increase in the number of cases occurred in 40% of students. Low levels of aerobic performance, identified in 60% of the students, suggests irrational and inefficient nature of adaptation of the cardiovascular system, which can subsequently lead to disease. 27% of the students showed an increase in the risk of major pathological syndromes, including a transition to an extremely high-risk group 44%.



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Persons classified as high risk was significantly (p <0.05) different from those with low levels of risk on HRQoL subscales such as social role functioning, general health. Boys are more satisfied with what is happening at the micro level, and the girls - at the macro level of social relationships.

### **Conclusions**

The results of a longitudinal study of students show a decrease in medical and biological, social and psychological capacities of young people, and to a greater extent in women due to declining health and functionality of the CAS, the adverse condition of the socio-psychological characteristics.

Students assigned to the high-risk group were significantly different from those with low levels of satisfaction with health-risk level of personal security, the level of quality of life in these subscales as a social role functioning, general health.

Paradoxes were found in the attitudes and behavior of students, so as to observance health life style is for most declarative rather than real.

Existing problem of self-preservation behavior of students consists in conflict between consciousness in the field of health and actual behavior.

### **Implications**

The data obtained can be used in developing a technical academy to promote healthy lifestyles of students as a deliberate and purposeful behavior, using social practice material and spiritual factors positively affecting the preservation and promotion of health.



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# APPLYING MODERN SYSTEM THEORY TO HEALTH PROMOTING SCHOOLS AND IMPLEMENTATION PROCESSES OF HEALTH PROMOTION PROGRAMMES

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**Keywords:** Prof. organization, school health promotion, implementation.

### Introduction/background

Schools represent a distinctive setting for health promotion (HP) activities across Europe. One reason for that is that HP programmes in these settings can involve staff members (teachers) together with users (students), and therefore promise to have high impacts at low costs. Yet, achieving successful implementation and sustaining the positive benefits of HP programmes has proven to be quite challenging, if not overextending, when comprehensive changes in health relevant factors are intended (e.g. Samdal & Rowling, Eds., 2013).

The reasons for the obvious difficulties are seldom thoroughly investigated. Instead, HP and implementation specialists have been quick in offering 'hands-on' solutions which are based on concepts like 'leadership', 'capacity building', 'readiness for change', and 'project management' in general. Such models, however, rarely incorporate profound features of organization theory, complex adaptive systems, or modern change management (Kotter & Cohen 2002, Scharmer 2006).

### Theoretical/analytical framework

From a sociological perspective, a crucial part of implementation problems stem from particular characteristics of schools being 'people processing' (Hasenfeld 1983) 'professional bureaucracies' (Mintzberg 1976), as there are: the far-going autonomy of the professionals, the high dependency of clients, the dominance and dynamic of close professional-client interactions opposing leadership standards, weak management, and some more.

Such characteristics can hinder the implementation of HP - especially when it is regarded as 'managerialist' organizational change - and force to re-think and further develop the concepts of what implementation is and how it can be performed. This is to say that implementation theory needs to develop a reflexive second-order perspective on the 'implementation of implementation'.

### Methodology/methods

Literature analysis, fit of theories, theoretical considerations, expert consultations, preliminary empirical tests

### **Key Results**

The presentation will focus on a model that is eligible to integrate these perspectives and to offer explanations for unexpected problems and only lukewarm successes in the outcomes of health promotion interventions and programmes. It is demonstrated which new questions arise from that model when applied to implementation processes and what research needs ensue.

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# THE MORBIDITY OF SCHOOLCHILDREN POPULATION IN SIBERIA (RUSSIA): THE OUTCOMES OF COMPREHENSIVE STATISTICAL STUDY

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**Keywords:** Schoolchildren, morbidity, comparative risk.

### Introduction/background

Nowadays, state and dynamics of children's health are very important problem in many countries. According to advanced medical examinations, the pathological affectedness of Russian children consists of 4665.6 per 10,000 children. The percentage of chronic pathology comprises 84.3% and functional 15,7% (Nazarova E.V. et al., 2012).

The regularities of child population morbidity are discovered accounting for age, gender, type of settlement and health groups.

### Methodology/methods

The morbidity of schoolchildren living in Siberia (Russia) was studied. There is represented the analysis of the morbidity among the children and adolescents in the typical areas of the Irkutsk region during 2003-2011: by example of the Taishet district (rural) and Bratsk (industrial).

### **Key Results**

It is established that depleted morbidity of children aged 7-14 and 15-17 years factually is twice as high as the indicated total morbidity by appealability. Children and adolescents of the whole Irkutsk region as well as the Taishet district distinguish themselves by the increase in the sickness rate of respiratory diseases (the growth rate over the period of the analysis ranges from 18 to 117%). There are calculated the values of the comparative risk of the priority types of diseases for industrial centers: respiratory diseases (for children RR=1,4 (.<0,05), for adolescents RR=1,22 (.<0,05)); injuries, poisonings and accidents (1,8 (.<0,05) for both age groups).

### **Conclusions**

Throughout the study period there are high morbidity rates among rural and industrial city groups of schoolchildren. The broad spectrum of diseases in the schoolchildren affects 13 systems of body. Myopia has been ascertained to occupy the leading place among the diseases. Musculoskeletal lesions, autonomic vascular disorders and digestive system diseases make a significant contribution to morbidity rates in the children. We have established that the morbidity of the Taishet district is typical for every south-west area, however significantly lower than in industrial centers of the Irkutsk region.

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### **Implications**

The study results may be considered as the basis for the optimization of the approaches to the diagnostics and prevention of children's morbidity. The understimation of children with pathology results in underfinancing of pediatric care and minor towns and rural settlements suffer the most in this respect.



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## HOW TO CREATE SUPPORT AMONG TEACHERS FOR THE IMPLEMENTATION OF THE HEALTHY SCHOOL

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Keywords: Healthy School, Support, Implementation.

### Introduction/background

HAN Sports and Exercise (HAN S&E) is part of the HAN University of Applied Sciences that educates young people to become professionals in sports and health and management. Their future work settings are for example: schools (primary and secondary and special education), neighbourhoods, local governments, and municipal health services. HAN S&E has developed a research area in which we investigate the effects of healthy school settings on several determinants. Specific recommendations are developed for the schools, based on the results of these studies.

Boot (2010) examined the implementation of the Healthy School concept in secondary schools. This study looked at how secondary schools value the health of their students and how schools and/or the Municipal health service can enhance health. Many schools find it hard to develop a health policy for their school. Obstacles are lack of time and lack of broad support for the implementation. Employees involved feel responsible, but consider the health of the students not always a school task.

The aim of this study is to write recommendations for the management team (MT) of the Marianum College on how support among teachers can be created for implementing the Healthy School concept.

The research question is: What are the similarities and differences between the views of the management team and the teachers at the Marianum College about the opportunities for the implementation of the Healthy School?

### Theoretical/analytical framework

When considering a healthy school approach or project, it is necessary to find out if the people involved support this idea. RIVM (2013) considers three motivational steps to be relevant to get support:

Get them Informed: talk to people involved and supply information

Get them excited: excite and convince people involved that the healthy school approach is a good innovation Get them involved: to implement the "healthy school project" people have to be stimulated to behave differently.

A way of doing this is to get them involved in the development process of how the project is implemented in their school.

Visser et al. (2005) define willingness to change as a cognitive, emotional and intentional positive attitude towards a change. Pater (2001) uses the following definition of support 'the extent to which people are willing to work on an implementation'. Therefore, this study will examine the willingness to change among teachers at the Marianum College. The assumption is that this also determines to what extent the teachers are willing to cooperate with the Healthy School. This study, therefore, addresses the factors that affect this willingness to change. The model of Cozijnsen & Mason (1997) is an appropriate model to identify the willingness to change. The nine factors in this



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model of Cozijnsen and Mason (1997) will be used to identify which factors deserve more attention in order to obtain the support for the Healthy School at the Marianum College.

### Methodology/methods

Semi-structured interviews were carried out with a purposive sample of 9 teachers from the Marianum College and two team leaders of the Management Team. The teachers were all active in different sections. Interviews were tape recorded, transcribed and analysed using 'framework' approach.

### **Key Results**

The study is actually being carried out at the time of writing of this abstract.

#### **Conclusions**

The study is actually being carried out at the time of writing of this abstract.

### **Implications**

By identifying these factors the Marianum College will have a good impression of the possibilities to increase the willingness to change and, indirectly, the support for implementing the Healthy School. Recommendations will be formulated as to how to use these possibilities for the school to work towards becoming a Healthy School.

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# HEALTHY EATING: SCHOOL POLICY, FOOD ENVIRONMENT AND STUDENT EATING BEHAVIORS

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Keywords: School Policy, Healthy Eating, Ireland, School Environment.

#### Introduction/background

School policies can influence the attitude and behavior of school children. In the context of increasing concern about overweight and obesity in Ireland, and the recognition of the potential role of the school as a health promoting environment, all schools are encouraged to develop polices to promote healthy lifestyles. The external context, or neighbourhood characteristics, around the school and the internal school food environment are likely to influence students' dietary habits. Most recently the content and use of vending machines in post-primary schools and regulation on the proximity of fast food restaurants to schools, have received attention.

Traditionally Irish schools did not provide hot meals (or any meal) for students, but there has been a shift in the approach to food provision across the country. Access to, and availability of food is varied across schools creating diverse food environments in Irish schools. It is unknown whether such environments are essentially obesogenic in nature, or whether the efforts of schools to develop appropriate healthy eating policies is associated with the dietary practices of school students.

The aim of this study was to explore healthy eating policies in post-primary schools in Ireland, and to examine the associations with the eating behaviours and dietary habits of students.

#### Theoretical/analytical framework

This was an exploratory study, designed to answer a specific research question relevant to both health policy and educational policy. School policy development has been a core pillar of the Irish model of Health Promoting Schools since 1996 (Lahiff, 2002), but thorough and appropriate evaluation of policy development and impact has been challenging. The core research question to be addressed is whether the existence or implementation of healthy eating policies or policies designed to at least partially impact on students eating behaviour at the school level actually have such an impact. This has an important potential impact on the professional practice of those working in school health promotion, and specifically those who work to promote the Irish Health Promoting School model.

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#### Methodology/methods

This was a cross sectional survey of post-primary (second level) schools in Ireland. These schools cater for pupils aged approximately 12-18 years. All post-primary schools (n=119) that took part in the 2010 Irish Health Behaviour in School-aged Children (HBSC) survey were invited to take part in this study. Data were primarily collected via an electronic school level questionnaire, which was designed to capture information on school policies and the school food environment. In total 64 schools participated (a response rate of 53.8%).

#### **Key Results**

Data were collected on the nature of school policy on healthy eating and the provision of food within schools. Data on students' freedom to leave school during the school day to purchase food externally were also collected. School level data were linked with individual student data on consumption of fruit, vegetables and soft drinks. School level policy on healthy eating varied, with only 14.5% reporting that they had written healthy eating policy and a further 53.2% that they had an informal healthy eating policy. Most schools had formal structures for informing students about food policies, but fewer officially informed either teachers or parents. Overall 38% of schools reported having a canteen selling a mixture of hot and cold food, while 29% reported a 'tuck shop' and 22% a vending machine. Having a canteen, but not a tuck shop or vending machine, was positively related to healthy eating behaviours in students. Having a general 'healthy eating' policy, whether formal or informal, was not consistently related to positive eating behaviours, but having an explicit focus on the reduction, or elimination, of consumption of chocolates, sweets, biscuits and crisps was related to higher rates of fruit consumption. For all ages, permission to leave school at lunchtime was associated with poorer food behaviour. This presentation will describe the range of school policies and food availability along with the relationships between policies, environment and dietary practices.

#### **Conclusions**

While it is clear that there are significant and important relationships between the dimensions of school policy, school food environment and dietary practices among students, not all hypothesised relationships emerged as expected. All data were cross-sectional in nature and thus it is important to recognise that there may be other school, pupil or family related factors that would explain the patterns identified. Some factors emerged as important in the Irish context - such as leaving the school grounds during the school day - that may not be as relevant culturally in other countries or settings. On the other hand the explicitness of the healthy eating policy and it's communication and implementation are dimensions of school food policy that may travel cross-culturally more easily.

#### **Implications**

Future research should investigate the impact of policy implementation across a diverse range of schools with the aim of providing more explicit guidance on the value of concentrating on this pillar of the Health Promoting School model. Practitioners need to support schools in terms of the content of policy as well as in implementation and monitoring.

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## WELLBEING IN TEACHER EDUCATION: EMBODIMENT AND MINDFULNESS

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#### Introduction/background

The number of empirical studies and educational programmes/experiences adopting meditative practices to promote health and wellbeing in educational settings has grown in the last years (Francesconi 2010; Kabat-Zinn, 2006; Siegel, 2010; 2012). However, a pedagogical and epistemological reflection on this topic is still missing. We present here a preliminary theoretical framework of a pedagogical model for the alliance of Western educational theories and meditative practices (e.g. Mindfulness) in teacher education.

#### Theoretical/analytical framework

Adopting key concepts from the ancient Western educational tradition (Paideia, Foucault 1988, 2005; Jaeger 2003) and from contemporary educational theories (Embodied Education, Francesconi & Tarozzi 2012) we discuss two topics: a) the use of mindfulness meditation in teacher education programmes; b) the concept of wellbeing with a particular focus on Eudaimonia (Eudaimonic model vs. Edonistic model).

#### Methodology/methods

Our presentation will be mostly based on theoretical and epistemological analysis of the consistency of the use of mindfulness in teacher education. In support of that, we will introduce some studies that are taking place in this period or that will take place soon, explaining the research questions, research philosophy, methodology, and methods we decided to use (i.e. Grounded Theory and Phenomenological Method).

#### **Key Results**

The key result consists in the construction of a pedagogical model able to support the theoretical and practical alliance of teacher education and mindfulness.

#### **Conclusions**

Then, we suggest that mindfulness should be formally and structurally employed in teacher education programmes for the following reasons: c) to promote wellbeing and equity in schools at both the individual and collective levels through the development of Ethos (Tarozzi, submitted) and d) to transform schools in dynamical ecologic niches where learning to be well prevails over - or can be considered as important as - learning to do or learning to know.

#### **Implications**

Finally, we discuss further implications of our proposal with regards to specific studies - especially qualitative studies where the teachers' perspective can be taken more into consideration - that should be done to deepen our knowledge of the effects of mindfulness in teacher education. We also suggest why and how mindfulness should be integrated into teacher education programmes.

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# HOW BIG ARE DIFFERENCES IN CHILDREN'S MENTAL HEALTH FOR PRIMARY SCHOOLS?

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Keywords: Primary schools, mental health, multiple informants.

#### Introduction/background

It is well known from international large scale studies (e. g. PISA) that schools show differences between them in the achievement of pupils. Little is known about such differences between schools in mental health, though. In this presentation, we use data from an international study on primary school children to focus on the question how big differences in mental health between schools are and how these differ when we conpare multiple informants (children, parents and teachers).

#### Theoretical/analytical framework

The School Children Mental Health in Europe project (SCMHE, EU 2006336) investigated the adequacy of a multi informant perspective for monitoring the mental health of primary school children in seven European countries. The participating countries were Bulgaria, Germany, Italy, Lithuania, Netherlands, Romania and Turkey. The aim was to build up a set of indicators across different countries in the European Union in order to be able to collect and monitor data on children's mental health and its major risk factors in an efficient methodology. Information on children's mental health was collected in regard to externalizing and internalizing symptoms. Teachers, parents and children were used as informants. As a main innovation, the project employed a multi-informant perspective including children's self reports of mental health problems: "Child mental health assessment requires input from several informants. In general, parents and teachers tend to notice children's externalizing behavior problems, while children themselves tend to be better at identifying their internalizing disorders such as depression, anxiety, phobia, and so forth ... (Kovess et al., 2002) In previous studies, children administered instruments were mainly used with children aged eleven years and older.

#### Methodology/methods

Data were collected in 198 schools in a 2010 cross-sectional survey from children aged 6 to 11 years (N=7552), their parents (N=5272) and their teachers (N=6564). Children were interviewed with the computerized and pictorial Dominic Interactive (Valla, Bergeron, Berube, & Gaudet, 1994), a computerized reliable self report screening that produces risk classifications for 4 internalizing and 3 externalizing DSM-IV diagnoses. The view of parents and teachers on the mental health and collected with the Strength and Difficulties Questionnaires (Goodman, 1997;



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Goodman & Goodman, 2011). Additional information was gathered, e. g. parents' edcuation level and childrens' achievement.

#### **Key Results**

All three informant groups show the same variation between schools (.2 = .05). In contrast, parents' educational level yields a small effect on childrens' mental health (.2 = .01) and smaller), Childrens' achievement as reported by teachers yields small effect sizes, too (.2 = .02) for childrens' self reports and .2 = .03 for parents' ratings). Teachers' ratings of achievement explains most variance (.2 = .14) in their SDQ ratings.

#### **Conclusions**

Differences in mental health between schools are small to medium compared to parental factors like their education. Since school differences seem relatively important and teachers' ratings of mental health are strongly connected to school achievement, school health promotion seems to have to take into account an explicit achievement perspective.

#### **Implications**

We discuss the possible consequences of school differences in childrens' mental health for school based mental health promotion as well as the fostering of achievement and draw implications for mental health monitoring in primary schools. The SCMHE study has established tools for this end from an international perspective that might be useful in evaluating school based health promotion and identify needs of schools and children in an efficient manner.

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# SCHOOLCHILDREN'S MENTAL HEALTH MONITORING AS PREVENTION OF EMOTIONAL AND BEHAVIORAL PROBLEMS

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Keywords: Schoolchildren, mental health, monitoring.

#### Introduction/background

Health protection and promotion of the younger generation depend heavily not only on the level of organization and quality of medical care, but also on conducting preventive and promotive work with students in the educational institutions (Keyes 2009, 2002). This necessitates the development of monitoring the process of students' mental health and adaptation in order to detect emotional and behavioral problems in mental health at early stages, to improve preventive work in schools, based on the indicators common for all educational institutions. Therefore the study of age-related changes and sex differences in mental health of students in the growing up process is of interest. The aim of the study is to analyze the age-related expression of symptom complexes of the emotional and behavioral problems in high school students.

#### Theoretical/analytical framework

The method of express assessment of the frequency and intensity of symptom complexes emotional and behavioral problems, based on a comprehensive survey of students, their parents and teachers, has been developed for these purposes. Gathering information about the symptoms of emotional and behavioral problems of students, including particularities of their health, self-perception and various behaviors of social functioning was based on a comprehensive individual survey based on three questionnaires.

This method provides an opportunity for a standardized assessment of mental state by means of the proposed questionnaires, which greatly increases the assessment objectivity in the absence of common unified criteria of emotional and behavioral problems in children and adolescents, as well as the universal way of epidemiological material selection and processing.

A comprehensive longitudinal study of 220 high school students from a number of Moscow schools was conducted that allowed to trace their development from Grade 3 to Grade 8.

#### Methodology/methods

The performed correlation analysis showed a clear negative correlation of the symptoms of emotional and behavioral problems in adolescents with psychomotor development (tapping test, simple sensomotor reaction to light and sound, hand-eye coordination), with the development of cognitive functions (memory, attention allocation and concentration, the amount of visual perception, logical thinking), with the emotional sphere (school anxiety, level of self-esteem, balance between avoidance and achievement motives), with sociometric status and emotional expansiveness, with adaptation to the educational process, with the success of the learning performance.

#### **Key Results**

Analysis of the studied symptom complexes showed that the greatest number of complaints was noted by obsessive-phobic symptom complex and comprised 44.7%. The second - asthenic - 33,9% and cerebroasthenic



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SC 29,6%, the third - vegetative - 26,2 % and affective SC - 25,8%. Early perinatal pathology was found in 23.5% of patients, and disadaptation in learning performance - in 22.7%.

Gender differences in the studied symptom complexes are ambiguous. Girls significantly more often displayed semiotics of vegetative, obsessive-phobic and cerebroasthenic SC. Girls complained more often of headaches, dizziness, they had sleep disorders such as parasomnias, dyssomnias, high anxiety, emotional lability, resentment. The history of boys contained more often the indications of early perinatal disorders, as well as the presence of mild craniocerebral injury, hyperactivity with an attention deficit, motor tics and stuttering. Asthenic SC showed no gender differences.

The increase of deviations with age was noted in disadaptation in learning performance, especially in boys. The maximum growth was experienced in the 8th grade, which, in our opinion, is connected with the pubertal changes occurring in adolescents, proceeding mostly disharmoniously in boys.

#### **Conclusions**

- 1. Age-dependent dynamics of the studied symptom complex are wave-like, decreasing to 5-6 grade due to the age maturation of body functional systems, and increasing to 7-8 grade due to the oncoming puberty.
- 2. Gender differences for the studied symptom complexes were as follows: the symptoms of neurotic origin were significantly more expressed in girls, while the behavioral problems dominated in boys.
- 3. The performed correlation analysis showed a clear negative correlation of the frequency of symptoms of emotional and behavior problems symptoms in children and adolescents with the development of psychomotor and cognitive functions, with the emotional sphere, with sociometric status and emotional expansiveness, with adaptation to the educational process, with the success of the learning performance.
- 4. The ability to detect early signs of emotional and behavioral problems in students will allow to solve the problem of optimizing the learning and education environment of children more effectively, to avoid or limit the adverse environmental influences on a child's personality.

#### **Implications**

The proposed method of identifying the symptom complexes of emotional and behavioral problems, based on the comprehensive survey of students, their teachers and parents, provides an opportunity for early identification of children and adolescents with possible borderline mental disorders and their referral for medical examination and diagnosis of abnormalities, which is especially important in the context of school children massive preventive examinations. The advantage of this method is its information content, validity, reliability and availability to students in educational institutions, that allows to solve the problems of preventing emotional and behavioral problems throughout the whole period of their education systematically and according to a plan.

Thus, with the rational organization and integration of this method to the younger generation health state monitoring, it will allow to receive regular, objective and standardized information about the health status of each child, various child groups, the entire children and adolescent population.

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# EFFECTS OF SCHOOL HEALTH PROMOTION ON SOCIAL INEQUALITIES: A SYSTEMATIC REVIEW

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**Keywords:** Health promotion, school, inequality, inverse equity thesis.

#### Introduction/background

According to the Inverse-Equity-Hypothesis, public health interventions are usually more effective among privileged social groups. The objective of this systematic review was to find out whether this assumption also applies to the effects of health promotion initiatives in schools on diverse forms of social inequalities in health.

#### Theoretical/analytical framework

The Inverse-Equity-Hypothesis was proposed and empirically tested by Victora et al. (2000). It describes the process by which new public health interventions lead to an initial widening of socioeconomic inequalities, due to preferential uptake by the most advantaged, and only later affect the poor.

#### Methodology/methods

A systematic review provided evidence to assess if relevant interventions tended to have an increasing effect on social inequalities. Two reviewers independently screened the results of comprehensive database queries. Based on pre-defined inclusion criteria 25 publications were selected. The results were synthesised narratively.

#### **Key Results**

Most interventions concerning nutrition and physical activity resulted in an increased gender inequality, but this hardly applies to ethnic and socioeconomic inequalities. Regarding dental health, no intervention that increased social inequality was found. As far as mental health and substance use are concerned interventions had mixed effects depending on the form of intervention and outcome measures.

#### **Conclusions**

The inverse equity hypothesis can only partly be transferred to the field of health promotion in schools. The use of certain kinds of interventions can apparently even help to reduce the risk of increasing inequality among students.

#### **Implications**

The study suggests that policy makers and health promotion practitioners should pay more attention to differential effectiveness of interventions according to social groups. It also supplies policy makers and health promotion practitioners with some guidance about how to design school health promotion programmes, if the aim is to prevent an increase in inequality.

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# NEW APPROACH TO HEALTH EDUCATION REDUCES HEALTH INEQUALITIES AMONG DISADVANTAGED YOUNG PEOPLE

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Keywords: Social inequality; health pedagogy; physical activity.

#### Introduction/background

This paper discusses finding from a midterm evaluation of a health promotion intervention project aiming at involving socially disadvantaged young people in health and increasing their sense of coherence and empowerment through a unique pedagogical method.

The project takes place in eight institutions in the Municipality of Copenhagen, where young people with social challenges live for a longer or shorter period. The young people have heavy social problems and some of them are in danger of being imprisoned because of criminal behavior. An aim of the intervention is to show the young people that they possess unknown competences and resources which will give them a new and more positive image of themselves leading to better health and action competence.

The pedagogical method uses physical activities combined with an approach to the young people based on voluntariness, patience, flexibility, motivation and hope/confidence. The intervention project allocates a personal trainer to each of the young people. The personal trainer motivates the young people and trains with them when they are ready for training. The primary activities are all kinds of physical activities but can also be leisure activities (music, help with homework or handwork). The principle of the pedagogical method is that all activities take a starting point in the specific activities the young people themselves decide to participate in.

#### Theoretical/analytical framework

The analytical framework of the evaluation is inspired by theories of social constructivism/narratives (Gergen, 1997) and the theory of salutogenesis (Antonovsky, 2000).

- What new narratives/stories can the young people tell about themselves because of their participation
  in the intervention project? A narrative is defined as a unit of meaning which frames our experiences. It
  is through narratives that we interpret our experiences and it is through narratives that we understand
  ourselves.
- In which ways does the intervention project help develop meaningfulness, comprehensibility and manageability in everyday life of the young people participating in the project? Theory of salutogenesis consists of the three components: Meaningfulness: a belief that things in life are interesting and a source of satisfaction, and that there is good reason or purpose to care about what happens. Comprehensibility: a sense that you can understand events in your life and reasonably predict what will happen in the future. Manageability: a belief that you have the skills or ability, the support, or the resources necessary to take care of things, and that things are manageable and within your control.

#### Methodology/methods

The evaluation used a qualitative methodology striving for authenticity and in-depth in the empirical data. Because of the social constructivist viewpoint in the evaluation the ambition was to understand the intervention project from the viewpoint of the young people participating in the project.

The evaluation used case studies where five different young people were studied through participant observations and in-depth interviews. Additionally the evaluation carried through focus group discussions with staff working in the institutions where the young people live and individual in-depth interviews with the project leader of the intervention study.

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#### **Key Results**

The narratives from the young people and staff of the institutions give evidence that the pedagogical method in the intervention study holds a large potential to involve the absolute most marginalized young people in a process which strengthen their health, common well-being and quality of life. The evaluation shows that the intervention project strengthens the sense of self-esteem among the young people as well as the case studies demonstrate how the young people have added a new and positive dimension to their identity.

The young people have through the intervention project enhanced their competences - they have experienced that they are actually good at something. The young people have so to speak discovered hidden competences which they can transfer to other contexts of everyday life - e.g. education.

The intervention project has contributed with a structure in the everyday life of the young people, has improved their social understanding and given them a new appreciation of the body. This new bodily appreciation has for some of the young people influenced their diet, so they eat healthier food which in combination with the physical activities has triggered a big (and necessary) weight loss.

The intervention project has created a pass to the common sports clubs. This is an important result as participation in a sports club helps to include the disadvantaged young people in a setting outside the institutions. This has the potential to enhance their social capital.

#### **Conclusions**

- The intervention project creates predictability in everyday life of the young people. This is the foundation of creating the feeling of meaningfulness, comprehensibility and manageability in life (Sense of Coherence SOC). SOC is viewed as the precondition for the development of action competence to handle the challenges of health and well-being in everyday life.
- The enhanced SOC motivates the young people to go to school (not staying or becoming a school-dropout) and to get an education.
- The intervention project creates cohesion in the life of the young people which is characterized by many changes and shifts. The project functions across the boundaries between the institutions where the young people live and the life outside the institutions as well as it creates a pass to the common sports club.
- The young people and the staff of the institutions view the intervention project as a new social network
  which found an alternative to an old social network which for some of the young people made them stick
  to drug misuse and common inactivity.

#### **Implications**

The results of the evaluation show the potential of the pedagogical methods used in the intervention study. This potential needs to be further studied to understand the possibilities of the method and to transfer the method to other settings as the school setting. As such the study has implications for schools – especially for collaboration between schools and institutions related to vulnerable young people.

The midterm evaluation will be followed up by an additional midterm evaluation in 2013 and a final evaluation of the project in 2014. These two evaluations will study further how the specific health promotion method can even out social inequalities in health among disadvantaged young people and will discuss how this method can be implemented in other types of settings where children and young people are.

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HOOLS

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# STRATEGIC PLANNING FOR HEALTH PROMOTION SUSTAINABILITY AT LOCAL LEVEL: LITHUANIAN CASE

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**Keywords:** Strategic planning, sustainability, health promotion, school.

#### Introduction/background

Health promotion and education is not the school's core business. Lithuania joined the European Network of the Health Promoting School (HPS) activities with a pilot project, which had targeted funding and later demonstrated the scientific-based efficiency and acceptance by schools of general education. At the same time a new question evolves here – how to sustain schools' interest, in particular when the schools face challenges of a changing social, economic and political environment, new structural formations are set up, for example, schools-kindergartens, affiliations of schools, schools which adapt curriculum by taking into account the pupil's special education needs, etc. Implementing general goals of education of the Republic of Lithuania, schools prepare long-term strategic plans, educational plans, annual action plans, and monthly work plans. The Health Promoting Schools implement their own five-year programmes which are approved by the National Interdepartmental Health Promotion Commission. Research questions: to what extent health is delivered in strategic documents? Which health themes and to what degree reflect strategic documents? What circumstances promote the development and inclusion of health promotion into the strategic plans? The overall aim is: to determine if the main strategic documents provide facts that could illustrate integrity and sustainability of the health promotion.

#### Theoretical/analytical framework

After pilot testing, negotiating and opening process for membership in the HPS (WHO, 1993), and rapid expansion, the HPS project moved into the new phase of its development. Research emphasizes important demands for the development: designing actions which have the potential for ongoing delivery and institutionalization (Smith et al, 2006); the capacity of schools to meet the demands for change (Denman et al, 2002); making focuses of evidence-based policy on improving organizational performance and evidence-driven policy on motivating individual actions (Desouza & Lin, 2011); development of shared understanding between sectors (Mohammadi, 2010); keeping in mind different management cultures (Blas & Kurup, 2010); context for implementation (Clarke et al, 2010); link between HPS actions and social capital in the school context (Sun & Stewart, 2007). Denman et al (2002) stress the importance of policy as it '<...> serves as a force in the development of school health promotion and source of demands for change'. According to Tones (2005) 'a democratic empowering strategy involving radical-political activities should be the main concern of the HPS'. HPS develop best when efforts and achievement are implemented in a systematic way for a prolonged period (Vilnius Resolution, 2009); outcomes are sustained in some circumstances and depend on schools' capability to identify benefits that fit in with their core business, individual perspectives and motivation (Mohammadi et al, 2010).

#### Methodology/methods

Stratified purposeful sampling of the study is made of educational institutions from the official list of Lithuanian HPS selected under defined criteria. Unit of analysis - strategic documents, which were selected according to the following criteria: long-term planning; authentic, representative public documents. Formed sample composed of 36 different types of educational institutions in 7 of 10 counties and of 92 documents of three types: a strategic plan, an educational plan, and an annual action plan. Qualitative data analysis was carried out using content analysis method. Following a diagnostic review of documents, analysis was performed in nominal scale; some indications - in ordinal scale.



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#### **Key Results**

Health issues are included in all analyzed strategic documents: strategic plan, educational plan, and annual action plan, only the scope and degree of integration varied. In the strategic plans, health is reflected in the school's mission, and in its goals and objectives; it is expressed among other cherished values, priorities, and even - in school vision. Analysis of action plans revealed two tendencies: integral character of health issues and complementary character of the non-formal health education in the formal education. Absolute integral nature of health issues is vivid in the educational plans and among three types of schools - primary schools, kindergartens - schools and it dominates in gymnasiums. The documents clearly identified most frequently and quite rarely implemented health programmes. Some circumstances could be seen in the analyzed strategic documents that promote conditions which schools take into account when including health issues in their strategic plans. Major conditions observed include: strategic development plans at the municipal level; school's community needs analysis, school's educational and cultural experience, available resources, and community suggestions. Education plan is linked to the school's learning environment - physical, psychological, social and cultural factors as a whole. Some schools considered school involvement in the HPS a strength; they see the visible link between the activities of the child welfare and health promotion.

#### **Conclusions**

The research concluded that the health issues in HPS are included in the basic strategic educational documents that define the school policy to varying degree and extent. The school strategic plans often reflected these health programmes which are approved by the Ministry of Education and Science. To a lesser extent strategic plans reflected these programmes which schools have developed individually, or/and implemented the international projects. Despite this, above mentioned facts should be assessed as a positive indication of the HPS to ensure sustainability. The findings revealed the consistency of planning, i.e. health issues are expressed in the most important strategic documents, and significant integral interdisciplinary nature is seen in some schools, and it can be evaluated as a strong orientation to the sustainability. Research also suggests that, in the schools' strategic documents, particular attention was paid to the creation of health promoting, safe and attractive environments which is seen as an important matter when seeking to ensure the quality of education in general.

#### **Implications**

Study analysis covered public documents having official status and which are open access sources. The obtained data is sufficiently large in the sample, and therefore considered to be a reliable and impartial source of information. When schools prepare the strategic plans, they consider the provisions of the Education Strategy, the national programmes which are approved by the Minister of Education and Science. It is also apparent from the study that schools take into account the local government's strategic development plans. So, powers of the municipal institutions in the area of education as well as in health promotion management, implement the state education and health policy, setting out long-term objectives are important. Therefore, the wider analysis of the local government's strategic documents could demonstrate how they reflect and sustain health promotion at the municipal level. Hopefully, the data obtained will allow us to find examples of good policy and take the appropriate actions for sustainable health promotion development.

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#### CHILDREN'S PARTICIPATION IN HEALTH PROMOTING SCHOOLS: CHILDREN'S VIEWS AND EXTENT OF PARTICIPATION

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#### Introduction/background

The increased interest in children's genuine participation (e.g., Simovska, 2007, 2004, 2000), and the possibility of the positive impacts it can have on children and their families transcends individual sectors and disciplines. Child participation in schools is a core dimension of the Health Promoting School (HPS) movement, which has been widely promoted in schools across Europe (St. Leger, 1999), including Ireland (Lahiff, 2000).

Child participation is increasingly becoming a global concept as identified in the Health Promoting School (HPS) initiative. Despite the potential positive effect of child participation on improving the physical and psychosocial environment at school and the possible influence it could have on children's health and well-being (de Róiste et al., 2012), less work has incorporated the definition of participation from children's perspectives and the role of child participation in the school has not been fully tested or investigated.

The aims of this two-phase project were to document a) Irish children's perspectives on what participation in school means and their views on how school participation could be improved, and b) the current practice and role of children's participation in Irish Health Promoting Schools.

- 1. What are the definitions of participation from children's perspectives?
- 2. What is the extent of children's participation in HPS??
- 3. To what extent has the participation of children contributed to good outcomes in HPS?

#### Theoretical/analytical framework

Based on extensive research and practice over the last 25 years, school health promotion has developed alongside other health promotion initiatives that have applied the settings approach. The Ottawa Charter for Health Promotion (World Health Organisation, 1986) acknowledged the influence that the surroundings can have on an individual's health. This established a course for the settings approach in health promotion, which informed the development of health promoting school (HPS) programmes in the 1980s.

Health promotion in schools is understood to be a social process that seeks to encourage both individual and collective empowerment, which emphasises the significance of the whole school environment. The HPS movement encourages the enhancement of students' cognitive and communication skills, improving their ability to make positive choices, as well as understanding the process of developing capacity for team work within the school, in order to improve the health behaviour of the school environment (Simovska, 2007). A student participating genuinely in health promoting school processes is looked upon not as an individual but rather as a 'person-and-environment', where the school and the environment are not abstractions but real entities consisting of real people' (Holzman, 1997). Ecological models can be adapted to investigate the effects of the setting in which an individual functions, and their ability to make health promoting choices.

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#### Methodology/methods

#### Phase 1: Participative research

A Participatory Research Process (PRP) approach, with a three phase design that involved students participating actively in the research process was used with primary school pupils to develop definitions and descriptions of participation from their own perspectives.

#### Phase 2: Surveys in HPS/matched schools

Based on the findings from the first phase, a questionnaire was developed for phase 2 with concepts drawn from the phase one data and academic and practice literature. A matched cohort study was carried out to document levels of child participation among three HPS, which were matched against six other primary schools with similar characteristics.

#### **Key Results**

In phase one a Participatory Research Process (PRP) approach that involved students participating actively in the research process was adopted. A total of 248 primary school students, aged 9-13 years in ten class groups across three schools took part in the second phase, while a total of 231 primary school pupils aged 9-13 years from schools designated as 'Health Promoting' and a matched sample of 'non-Health Promoting' schools were surveyed at phase two.

This paper will present findings from both phases; children's views on participation will be represented schematically, as developed by the children involved. Survey findings illustrate the key differences between types of schools on core dimensions of participation - including being listened to and encouraged, and taking part in planning and decision-making. In addition to important differences between 'HPS' and 'non-HPS', and irrespective of educational context, reported satisfaction with school participation was associated with both liking school and reported excellent self-rated health.

#### **Conclusions**

The concept of child participation has been given various definitions in the literature. This study provides childrens' perspectives on what constitutes taking part in school life and the extent of their participation in school. This study also highlights the importance of including children in research about their lives and shows that children as young as 9-12 years have a clear understanding of what participation in their schools means to them. Children have the capacity to take part in research that is related to them and also has the potential to enhance their wellbeing. Exploring children's views and scope of participation in school can help to ensure genuine participation and wellbeing of students.

#### **Implications**

The Health Promoting School (HPS) initiative emphasises the significance of the whole school environment at the core of its agenda. This places much credence on the importance of not basing learning in schools on teaching alone, but also on making the whole school environment including the physical, social and structural environments healthy and conducive for learning (e.g., Simovska, 2004). It has been hypothesised that the practice of genuine participation is essential for the success of a HPS programme, which impacts both on the student and the school environment as a whole (Simovska, 2000; Simovska, 2004). Genuine student participation can provide the opportunity for students to have a sense of ownership in the method of learning (Simovska, 2007). Children have the capacity to take part in research that is related to them and also has the potential to enhance their wellbeing. It is beneficial to engage children in research to understand their own perspectives on issues that concern them and ensure genuine participation of children in school.

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# ASSESSING PARENTAL INVOLVEMENT IN SCHOOLS – THE SIMILARITY OF VIEWS OF PARENTS AND CHILDREN

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#### Introduction/background Context

The concept of the settings approach and school health promotion encourages parents' participation in school. The participation of parents in a health promoting school process is important for the success of the health promoting school programme (WHO, 2003).

Parents' participation is considered important for strengthening and sustaining the concept of school health promotion (Barnekow et al., 2006). However, the role of parents' participation in the school has not been fully tested or investigated.

#### **Objectives**

The purpose of this study was to assess both parents' and pupils' views on how parents take part or would like to take part in school life.

#### Research questions

This study is part of a PhD research that has the aim of investigating socio-ecological perspectives on the role of children's participation in effecting the health promoting school environment. This study seeks to answer the following research questions:

- What is the extent of parents' participation in health promoting schools?
- Are there similarities or differences between the views of parents and children in regard to parents' participation in schools?
- What is the relationship between the views of parents and children in regard to parents' participation in schools?

#### Theoretical/analytical framework

The crucial role of parents in the developmental years of their children cannot be over emphasised. The amount and value of the interrelationships within the settings where children spend their time (including both their family and schools) can influence growth and development. Best results are expected when parents participate actively in facilitating the promotion of the health and well-being of their children (Lahiff, 2000). It has been theorised that it is crucial for students and parents to have a sense of ownership and commitment in the school life. This is speculated to go a long way in determining a successful outcome for the health promoting school programme (St Leger et al., 2008). Ecological models can be adapted to explore the participation of parents in school settings.

#### Methodology/methods

Data for this study were collected across nine primary schools in Galway County. The data collection process involved parents filling in a short questionnaire to document their perspectives on how parents take part, or



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should take part, in school life. Pupils also filled in a similar questionnaire to that of the parents. Ethical approval for this study was granted by the Research Ethics Committee of the National University of Ireland, Galway. Pupils aged 9-13 years in the 4th, 5th and 6th class groups participated in the study. All parents of the participating pupils were also invited to complete questionnaires.

#### **Key Results**

A total of 218 parents (Males 27%, Females 70%) and 231 pupils (Males 54%, Females 46%) participated in this study. The findings demonstrate that less than half (40.5%) of parents reported that they always or often take part in school activities like the school sports day, Christmas shows, parent-teacher meetings and fundraising events. This was corroborated by the pupils, 43.2% of whom reported that their parents take part in these events. A majority (73.5%) of the parents reported that they were made to feel a part of their child's school and 79.5% that they are encouraged to talk about things that concern their child in school. Pupils varied somewhat with 65.7% reporting that their parents were made to feel part of the school and 83.6% that they are encouraged to talk about issues that concerned them. When asked how parents should participate in school life, parents and pupils volunteered very similar views. These included; parents taking part in school activities, schools to engage or invite parents to take part in school and strengthening or building relationships between parents and the school through communication between school and parents, having an open door system to parents and having more parent-teacher meetings. Many parents and pupils were already satisfied with their own level of participation and instead gave examples of what they considered to be good practice.

#### **Conclusions**

The findings of this study illustrate the perspectives of parents and pupils concerning parents' involvement in school life. The health promoting school (HPS) is a learning environment that always seeks to expand the potential of the participants in its environment to improve their health through upgrading their knowledge on healthy living and working. A settings approach has been advocated to develop the physical and socio-cultural settings in which children live, learn, play and occasionally work, which are the home, community and school, to improve the health of children. Exploring parents' participation in schools can help to enhance the HPS setting. Children can be consulted on issues that concern their parents' participation in the school.

#### **Implications**

The evidence for the active involvement of parents within health promoting schools is increasing. Best results are expected when parents participate actively in facilitating the promotion of the health and well-being of their children (e.g., Lahiff, 2000). Various suggestions and theories have been put forward on the meaning of participation and how to promote the process of genuine participation among young people and children, including parents. It is necessary to assess parents' involvement in school life; this has the potential of enhancing the HPS environment. Working with parents as well as children can improve parents' participation in HPS.

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# MEDICAL MONITORING OF CHILDREN INVOLVED IN PHYSICAL CULTURE

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Keywords: Physical education, children, health, functional capacities.

#### Introduction/background

Currently, there is increased attention from the medical and educational community from physical education as one of the necessary conditions for the harmonious development of the individual and the development of physical and moral health of the younger generation. Unfortunately, the results of years of scientific research at the Research Institute of Hygiene and Health Protection of Children and Adolescents of the Scientific Center of Children's Health show the deterioration in health of children in Russia during the period of study in an educational institution: by the end of school the number of healthy children is only 1%, more than half of students (62%) have chronic illnesses. The prevalence of chronic diseases among children during the learning process from 4th to 9th grade is increased by 40%. Particular concern is the decline in the functional capacities of the organism in today's children and adolescents.

Sustained negative trends in health and functional development of the students stipulate the specific requirements for physical education, which methods and tools in the preservation and promotion of health are the most effective in relation to their impact on the natural character of the body, as well as the adequacy of the processes of age development, availability and wide translation in educational institutions. However, today the reserves of increasing prevention, improved and developed effectiveness of physical lessons are not fully exhausted.

#### Theoretical/analytical framework

Depending on the state of health, level of functionality, participation level in physical fitness training, the students are divided into three medical groups: the main, preparatory and special groups. Classes in the main group suggest the passing of all standards for physical fitness, participation in sports activities in full. Lessons in the preparatory medical group suggest a more gradual development of the complex of motor skills. In the absence of contraindications, with a doctor's permission it can be carried out the preparation and delivery of standards of physical fitness according to the age, visiting sports clubs with a significant reduction in the intensity and volume of physical loadings. Physical lessons in special medical group "A" is carried out on special programmes of physical education for students with health disabilities. Physical training of students of special medical group "B" are held in a medical institution.



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The authors have developed methodological recommendations "Medical and pedagogical control over the organization of physical education lessons for students with health disabilities", which are recommended for the educational process in educational institutions of the Russian Federation.

#### Methodology/methods

According to the methodical recommendations, the medical groups for physical training are conducted out on the basis of the conclusion about health state, the results of evaluation of the functional capacities of the organism and the level of physical fitness of the student. The conclusion about the state of health of students as a result of preventive medical examinations includes diagnosis, the level of physical and neuropsychological development, body resistance. The functional capacities of the child are determined by a medical worker of the school at the beginning of the school year based on the results of the test with dosed physical loading.

#### **Key Results**

The trial is held for children of the main medical group according to the medical report of the previous school year (for students of grades 2-11) and before entering school for the first graders. The level of physical fitness is determined by PE teacher at the beginning and at the end of the school year based on the results of the control exercises with the admission of the doctor.

The acquisition of medical groups has been completed by June 1 of each year. For students who have not passed a medical examination, physical training is not allowed.

Criteria and technology of the acquisition of medical groups were used in medical and pedagogical control over the organization of physical training of 107 students in two 2nd grade classes (52 children) and two 5th grade classes (55 children). The analysis of medical records revealed that 84% of students in grades 2 and 72% of students in grades 5 were attributed to the main medical group for physical training. However, in accordance with the guidelines 63% of second graders and 35% of fifth graders should be attributed to the main medical group. According to the functional tests with a dosed physical loading the occupancy of this group decreased by 32% in grades 2, making 31%, and by 20% in grades 5, making 15%.

The number of children in preparatory medical group was 46% in grade 2 and 54% - in grade 5, in special medical groups - 23% and 31%, respectively.

#### **Conclusions**

In accordance with the guidelines the medical and pedagogical control over the conformity of educational loadings at PE lessons with functional possibilities of students' body are provided. Before the beginning of each lesson the teacher evaluates the students' health. Regardless of the medical group the children with complaints of pain (of various locations), dizziness, nausea, weakness, heart beating; during the acute period of the disease, an injury of organs and tissues; risk of bleeding, expressed violation of nasal breathing, severe tachycardia or bradycardia are not permitted for PE lessons.

In the course of PE lessons the teacher emphasizes and shows extreme care during the performance of exercises that are potentially dangerous for the children's health, strictly doses and eliminates physical exercises contraindicated for the children's health.

A medical worker of the educational institution systematically, at least once per month, assesses the impact of physical activity on the functional state of the organism in the process of the lesson.

#### **Implications**

The introduction of medical and pedagogical control into the educational process in accordance with the guidelines will ensure the compliance of physical loadings with the functionality of the body and improve the wellness, preventive and developmental effectiveness of physical training in educational institutions.

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# NATIONAL POLICY ON SEXUAL AND REPRODUCTIVE HEALTH (SRH) EDUCATION AND HEALTHY LIFESTYLE PROMOTION IN THE REPUBLIC OF MACEDONIA

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**Keywords:** Policy, sexual and reproductive health, education, Macedonia.

#### Introduction/background

In the Republic of Macedonia, like in many other countries, the education for sexual and reproductive health (SRH), as well as promoting a healthy lifestyle, is very important for the future of the country's youth, so they can grow up into healthy and mature people, capable of dealing with all the challenges that life brings. The need for improving SRH is established a long time ago, and it is a more and more important topic among experts, as well as the general population. That is because our youth, as a sensitive category when their SRH comes in mind, are very often subject to a number of risk factors which come from: a different perception of the risk, the existence of sexual myths and prejudices, gender stereotypes and homophobia, the lack of social support from families and the community, the new epidemiological risks and insufficient approach to timely and accurate information. The assessment of the state of SRH and the education for SRH in the Republic of Macedonia in the framework of this international study will collect up-to-date information and knowledge about youth behavior as well as the country's efforts to promote SRH among youth through national public health policies and comparing the situation with other countries in the region. The assessment of current and future health vulnerability will allow us to identify the necessary interventions and adaptive measures.

#### Theoretical/analytical framework

The current status in the field of SRH and education about it and healthy life style of youth showed positive intentions and activities of the community to improve the quality of educational and health services, but still some weaknesses are present which have to be overcome on national and local levels:

- There are no separate funds available for funding of prevention education (programme development, training, publication of materials, monitoring and evaluation, etc.);
- The partnerships between primary health care centers and schools and professors in charge of topics related to health education is insufficient in terms of raising student awareness about work and services that the Youth Counselling Service Centres are providing;
- Although non-discrimination is a topic of elaboration in almost all strategic documents, there is no specific policy framework to prevent discrimination against students and educators regarding HIV (HIV-positive or having HIV-positive immediate family members/ parents, siblings);
- · There is no specific subject for comprehensive sexual education;
- The overall health monitoring system in the country does not provide enough data on adolescent health
  and lifestyle to serve as a monitoring instrument to measure impact and effectiveness in implementation of
  the National strategy on HIV infection and Aids and other strategies related to SRH.

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#### Methodology/methods

Descriptive, statistical and analytical methods were used in this research. Information from the UNFPA web page (profile-Macedonia), documents taken from the web site of the State Statistical Office, Ministry for education and science, Bureau for educational development, Ministry of health, IPH, NGO H.E.R.A, NGO ESE, and etc. were used. Documents used during the initial desk research are the following: the National strategy for sexual and reproductive health in the Republic of Macedonia 2020, Strategy on HIV infection and Aids, Strategy for Youth Development and Health in the Republic of Macedonia, Strategy for safe motherhood, the UN World Youth Action Plan from the year 2000 onward, etc.

#### **Key Results**

There are a lot of studies in Macedonia confirming that young people are showing elements of risky sexual behavior - lower age for the first sexual intercourse, frequent partner change, insufficient use of contraception and anti STD means. On the other hand, the first marriage age is getting higher (on average 25 years for females and 27 years for males), which prolongs the period of pre-marital sexual activity. Besides, for a lot of girls and their partners this means interruption of their academic education, fewer opportunities for getting a quality education, less advantage on the labor market, which leads to higher economical dependence, use of social aid, social isolation from friends, low self-esteem, and fear of uncertainty. Only 19,4% know about ways of preventing sexual transmission of HIV, 3.3% of young women and men aged 15-24 had sex before the age of 15 (boys - 6,2%, girls - 0,8%). The average age of sexual debut for males and females is 16,9. The legal and regulatory framework consists of: the Constitution of the Republic of Macedonia, Health care law, Public health law, Health insurance law, Family law, Abortion law, Drugs law, Communicable diseases law, Labor law, health and safety at work law, Primary education law, Secondary education law, Higher and university education law, Sport law, Law for violence control at sports events etc. The Government of Macedonia each year finances more than 14 preventive programmes, which include programmes of interest.

#### **Conclusions**

The current status in the field of SRH and education about it and healthy life style of youth showed positive intentions and activities of the community to improve the quality of educational and health services, but still some weaknesses are present which have to be overcome on national and local levels. There are some obstacles for incorporation of preventive education at national policy level:

- Sexual education, HIV/STI prevention and reproductive health are topics that are still a challenge to be
  institutionalized into official curricula because of negative attitudes of the public, some politicians, religious
  leaders, parents, etc., towards prevention education (in particular, towards sex education, HIV/STI
  prevention, reproductive health);
- A large part of the public considers that children are already overloaded with the number of subjects they
  have and hours they spend in schools. This is the real problem that the majority of public, professors and
  parents agree with.
- There are no available separate funds for funding of prevention education.

#### **Implications**

Relevant stakeholders at the local level should better coordinate their work aiming to develop a youth-friendly health protection system. For example, schools and professors in charge of topics related to health education should establish partnerships with primary health care centers and raise student awareness about work and services that the Youth Counselling Service Centres are providing. Schools should as well better coordinate their activities with youth offices at local level and in cooperation with them organize different extracurricular lectures and workshops that focus on SRH issues. The framework for comprehensive sexuality education should contain seven essential components according to the IPPF: gender, sexual and reproductive health, sexual citizenship, pleasure, violence, diversity, and relationships. Political commitment/funding in terms of addressing the barriers should be: increasing public financing of healthy lifestyle programs for adolescents and youth; establishing a National commission within MOH for implementation of the National strategy for SRH.



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# HEALTH SCHOOLS AND FEATURES OF PSYCHOSOCIAL ADAPTATION IN ADOLESCENTS

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**Keywords:** Health promoting schools, mental health, adolescents.

#### Introduction/background

The problem of mental and social health of children and adolescents in modern Russia has gained an exceptional importance over the last decade. According to a few observational studies a steady rise of borderline mental pathology, addictive disorders and deviant forms of behavior are marked. The suicide rate among children and adolescents in Russia exceeds the average world rate by 2.7 times. The correction and prevention of mental and social disadaptation of adolescents and in particular, the role of the educational environment have a particular importance.

#### Theoretical/analytical framework

The studies of social and psychological adaptation of individual have an exclusive theoretical medical and psychopedagogical importance. Long-term social and spiritual crisis of contemporary Russian society, expressed by lack of universally accepted dominant moral and ethical standards of behavior, value systems and ideological positions, has a powerful negative impact on the social and psychological adaptation of the developing individual. Adolescence is traditionally considered as a period of formation of the highest spiritual structures - mature 'I'.

The self-awareness is being developed, the system of values, personality orientation, stable patterns of behavior, world outlook are being formed. These processes are carried out through the "interiorization" of norms of the society. In this case the transfer of crisis social problems into the forming psychic field of teenager is obvious. There is a fundamental contradiction between egocentric attitudes and public interests in a significant part of young people. It makes extremely difficulties in socialization of the forming personality and likely underlies the growth of various forms of psychological adaptation. It should be noted that the concept of "health" among the vast majority of teenagers takes a leading place in the system of values regardless of the macro-social influences.

#### Methodology/methods

The objects of the study were adolescents aged 14-17 years - students of grades 8-11 in the health school "Lukomorie" for children with chronic somatic pathology - 140 people, including 59 (42.14%) boys and 81 (57.86%) girls. The findings were compared with the results of the previous studies in usual Moscow schools. Comparison group consisted of 481 adolescents (240 (49.9%) boys and 241 (50.1%) girls). Methods: clinical, psychometric test method "An improved method for the pathocharacterological study of adolescents", epidemiological. The survey was carried out by the group of specialists at all stages, thus ensuring a high level of the unified diagnostic approach.

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#### **Key Results**

The analysis of the overall prevalence of borderline mental pathology of various degree of expressiveness (F42-F42.8; F.43.2-21; F6.0-F60.9; Z73.3; R53; F.90-F.99) showed a significant predominance in the group of students of usual schools, where the frequency of occurrence of disorders was 64.86%. The similar indicator in adolescents - students in health school was 46,0% (p <0,05). The differences between the contingents of adolescent girls (51.9% vs 79.5%, respectively) were especially great; in boys of compared contingents these indices were significantly lower: in health school - 39.44%, in usual schools -59 38%. It should be noted that these differences were solely due by lower frequency of occurrence in the contingent of health school of neurotic reactions (F43.2; Z73.3; R53) - 34,1% vs 66.46% in ordinary schools (p <0,01). The findings seem rather surprising, since the number of students of health school is much more burdened with chronic somatic pathology and, therefore, has a pronounced somatogenic background, causing a higher incidence of neurosis disorders.

The health school had practically no aggressive, unsocialized (F91.1), socialized (F91.2), addictive behavioral deviations. The phenomenon revealed of huge differences in the frequency of occurrence of adolescents with the accented characterological features, which were mainly genetically determined. In the health school "Lukomorie" this indicator was 37.3% while in usual schools it was 68.2%.

#### **Conclusions**

The differences were especially pronounced in adolescents with hysteroid, epilepetoid and unstable traits that made up a contingent of high-risk for antisocial (socialized) behaviors. Considering the extremely poor somatic background, namely the specific of the formation of a contingent of children with chronic pathology in the health school "Lukomorye", the findings indicate a more favorable course of the pubertal crisis in the health school that does not cause a severe social disadaptation of adolescents, in contrast to the extremely adverse trends in a large part of other educational institutions in the city.

The data indicate that the developed model "Health School" "Lukomorie" where the value of a healthy lifestyle is a factor of not only medical, but also psychological and pedagogical process supports, is highly effective in the prevention and the strengthening of both somatic and psychosocial components of the developing personality.

#### **Implications**

The proposed model of "Health School" should be used in the organization of primary and secondary psychoprevention in adolescents in modern conditions of the society.

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# OCCUPATIONAL WELL-BEING AND ITS DEVELOPMENT AMONG SCHOOL COMMUNITY STAFF – A CASE STUDY

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**Keywords:** School staff, well-being, working communities, leadership.

#### Introduction/background

This longitudinal study, carried out in 2000-2009, aimed to describe school staff's occupational well-being in a comprehensive school located in Southern Finland. The aim was to examine what types of interventions were used to promote occupational well-being and how the school community staff's occupational well-being had developed in 2000-2009. On the basis of earlier studies, school community staff's occupational well-being has an impact on the well-being of individual workers and the entire work community. In addition, the school principal, as a member of the working community, has significant influence on the school staff's occupational well-being.

#### Theoretical/analytical framework

Occupational well-being of school staff and its promotion are important topics, as teachers have stressful jobs (e.g. Moreno-Abril et al., 2007) and often suffer from work-related exhaustion (e.g. Stoeber and Rennert, 2008; Skaalvik and Skaalvik, 2009). Grayson and Alvarez's (2008) study indicated that issues related to teachers' working atmosphere affect the strain of work, and this is also increased by such management-related factors as low esteem for employees (Moreno-Abril et al. 2007). Due to these reasons, the promotion of occupational well-being should pay particular attention to occupational well-being in working communities. This study considers occupational well-being in a working community to include work, management and organization, leadership, social support, and communication (Saaranen et al., 2012). The study is based on the idea of action research that has been fairly rarely used in the context of promoting the occupational well-being of school staff (see. Saaranen et. al., 2012). Action research has been utilized in school communities, particularly in promoting the health of children and adolescents (see Gullan, Feinberg, Freedman, Jawad & Leff, 2009; Ozer, Ritterman & Wanis, 2010).

#### Methodology/methods

The material used in this case study consists of five separate data sets. Quantitative research data were collected in 2004 (n=36), 2005 (n=41), and 2009 (n=34) using an index questionnaire on occupational well-being. In 2006, two group interviews of school staff members were conducted (n=21). In addition, retrospective specialist interview data (n=1) were collected in 2011. The quantitative data were analysed using a statistical programme and the results of the study are described as key indicators. Qualitative group interview data were analysed by means of inductive content analysis and the specialist interview was analysed by means of factual analysis.

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#### **Key Results**

The results obtained from the study indicate that several communal interventions to promote occupational well-being, such as well-being afternoons and a chat café, had been developed in the school. Participation in the study had promoted staff's well-being, although continuous development was also experienced as tiresome. The results of the group interview indicate that occupational well-being was developed so that the working community became more tolerant and open. The results obtained from the index questionnaire on occupational well-being indicate that occupational well-being developed in a positive way and the need for further development decreased from 2004 to 2009. In addition, staff's satisfaction with the principal's conduct and support improved and problems relating to leadership were reduced during this period.

#### **Conclusions**

Based on the study, it may be established that interventions developed by staff members improved occupational well-being among school community staff. The methods described in this study may be applied in the development of occupational well-being in work communities.

#### **Implications**

Leaders should be engaged in occupational well-being and their role in facilitating and supporting occupational well-being in schools should be emphasized in the future. It is of essential importance that occupational well-being is developed communally and comprehensively from the perspective of staff. In the future, well-being in schools should be regarded as a whole where the issues of well-being of staff and school principal are not separated from the well-being of pupils.

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# CHILD SAFETY ACTION INDICATORS – MEASURING AN ASPECT OF SAFETY IN EUROPE

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Keywords: injury, prevention, policy, school curricula.

#### Introduction/background

Despite reductions over 30 years, injury remains a leading cause of death, disability and inequity for children in Europe. Effective measures to reduce child injury exist but are not always adopted and implemented, often requiring government action in the form of national level policy commitment or legislation. Indicator based Child Safety Report Cards were developed in 2005 to identify national level policy gaps, allow European-level comparisons and measure safety improvements over time. The purpose of this study was to measure uptake and implementation of evidence-based national level policies, including several addressing action in the educational setting, to support unintentional child injury prevention and benchmark progress between answers obtained in 2007 and 2012.

#### Theoretical/analytical framework

The systems in which injury prevention strategies are implemented are complex multi-sectoral and multi-dimensional. As a result indicators to support injury prevention goals need to go beyond the simple outcome measures of morbidity and mortality and attempt to gauge changes in the systems that need to be made in order to achieve an ultimate reduction in the injury burden. Further as indicators are not purely passive entities, in that the process of measuring an indicator can drive changes in the system being measured, they can be used as tools to advocate for change. In this project we specifically selected, measured and reported on indicators addressing uptake and implementation of evidence-based national level policies within the system in order to create a focus for intervention activity based on best evidence. This included three indicators examining policies mandating the inclusion of education on injury prevention, first aid and life skills as part of national elementary or secondary school curricula and two others examining policies related to swimming lessons and infrastructure to support swimming lessons for school age children.

#### Methodology/methods

Data for 115 evidence-based action indicators in twelve areas related to the prevention of unintentional injury to children were obtained for 31 European countries in 2012 using English language survey tools. Existence of each policy was established and expert opinion was used to obtain judgement on level of implementation. The data collection protocol also requested obtaining detailed information (e.g., name of law and year enacted) to increase likelihood of accurate data. Scores out of 5-stars for each of the 12 areas and an overall 'grade' were calculated. Trend analyses to benchmark progress were conducted using paired T-tests to compare scores of like items in 2007 and 2012.

#### **Key Results**

None of the 31 countries have adopted and implemented all recommended policies. Uptake is highest for road safety compared to home safety or water safety. When indicators addressing the educational setting are examined,



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19 countries (61%) have injury prevention education as a mandatory part of school curricula; the majority covering road safety. Mandatory inclusion of first aid and life skills education occur in 11 (35%) and 15 (48%) countries, respectively. However, few monitor implementation and several report that minimum content is not standardised. Twenty countries (65%) have a national policy making water safety education, including swimming lessons, a compulsory part of the school curriculum. However, only 13 (42%) reported full implementation and few are monitored to assess student access and participation. Ten countries (32%) have either a national or regional investment programme to renew infrastructure to increase the number of available pools to support swimming lessons amongst school age children.

Between 2007 and 2012 the change in overall report card score for the 16 countries participating in both time periods ranged from -6.5 to +18.5, with the greatest improvements in fall prevention, burn/scald prevention, pedestrian safety, leadership and capacity; and in countries where safety investments have been made (e.g., Czech Republic, Hungary, Scotland, Spain). Trend analysis indicated an average increase of 5.09 (p=0.019; 95% CI 0.96-9.22)."

#### **Conclusions**

Report cards are a simple and useful tool for benchmarking progress. Supported by national and European governments, they have been key in catalysing policy action at the national level and benchmarking progress. While schools offer one important setting for building capacity to prevent childhood injuries, not all countries have adopted national level policies making injury prevention related education mandatory and thus the potential in this area has yet to be fully realised. Both increased investment in child injury prevention, including interventions in the educational setting, and a better understanding of how good practices filter down to sub-national levels are needed. However without monitoring of implementation and impact of the evidence based policies adopted, it is possible that unequal access to preventive measures will result in continuing health inequities for children.

#### **Implications**

- All governments need to do more to address child injuries included Ministries of Education.
- Adopting and implementing a policy at the national level is inadequate action. Monitoring of implementation and impact are necessary to ensure wise investment and prevent further inequities.
- Injury prevention experts need to work more closely with their counterparts in the Education setting to figure out how best to integrate injury prevention into the educational setting and school curricula.

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# TRANSFORMATIONS AND TRANSLATIONS. POLICY ANALYSIS OF HEALTH PROMOTION AND SUSTAINABILITY IN SCHOOLS

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Keywords: Health promotion and education for sustainable development.

#### Introduction/background

The aim of this paper is to present and discuss how health promotion and education for sustainable development (ESD) are addressed and articulated in key selected international and national (Danish) policies related to primary and lower secondary schools, with a special focus on aims, approaches, competences/knowledge and context. This includes common issues as well as variations across health promotion and education for sustainable development, various interpretations of the fields during recent years, and consequences for where we stand now. A main theme in the analysis is the transformation processes taking place in the (re)contextualization of international policies and guidelines to national policies and strategies (Beech 2006). The research has been carried out as part of the newly established research centre Schools for Health and Sustainability (www.shs. au.dk).

#### Theoretical/analytical framework

The analysis is based on critical health education and health promotion theory (Simovska 2009, Jensen 2000; Carlsson, Jensen and Simovska 2009; Simovska and Jensen 2012) and on the conceptualization of education for sustainable development (Læssøe, Breiting, Schnack and Rolls, 2009; Schnack 2003; Scott and Gough 2003). Main concepts within this framework are participation, action competence and a whole-school approach. Further, the analysis draws on theories within standard formation and transformations of policies in relation to education (Timmemans & Epstein 2010; Moos 2009; Beech 2006, Rein & Schön 1981) and specifically in relation to health promotion and education for sustainable development (Jourdan 2011; Stevenson 2006, 2007). The metaphor of translation stresses that something is always lost and other things added in these processes (Gherardi, 2006), implying negotiations about defining problems and the solutions which seem necessary.

#### Methodology/methods

The policy analysis falls in three parts: (1)The development phase, (2) the construction- and dissemination phase and (3) the national framework. The analysis draws on documents with different status - from ratified policies, to inspiration material encouraging local interpretations, to collections of 'best' practices. Based on concepts of framing and naming (Schön 2001; Rein and Schön 1981), the focus of the analysis is not only on the solutions suggested, but also on how problems and challenges are defined and contextualized. In the identification of a problem, frames are set for what is relevant and what is not and could be excluded, which also points to ways forward.

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#### **Key Results**

The preliminary key results point to the following issues:

- A tension between aims of strong national leadership within health promotion and education for sustainable development and aims of decentralization, stressing the participation of local actors and collaboration in networks.
- Policies within health promotion and ESD could be said to form 'norm supporting structures' (Wickenberg 2004, 1999), whereas the relatively broad definitions of health promotion and ESD, and the fact that the issues are often shaped as a 'could', not a 'should' at the schools, could imply norm hindering structures.
- Current Danish action plans naming health promotion mainly as providing healthy food and physical
  exercise for the pupils could also be said to form a norm- hindering structure for the work with health
  promotion in schools, as seen from a critical pedagogical understanding of health promotion.

#### **Conclusions**

A number of common issues and challenges appear in the work with health promotion and sustainability in school. Both health promotion and education for sustainable development are 'elastic' concepts which creates room for local authorities, school management and teachers to form and adjust health promotion and sustainability according to subjects, levels and personal interests. On the other hand, there is a risk that these issues become so open and flexible that they 'fall apart' in the implementation processes. As emphasized by Timmermanns and Epstein (2010) the work with health-promoting sustainable school development seems to be about finding a balance between rigidity and flexibility in order for the concepts of health and sustainability to keep their complexity while at the same time remaining meaningful for pedagogical practices aimed at learning and competence development of the pupils.

#### **Implications**

During recent years an international and national policy framework for the work with health promotion and sustainability in schools has been formed. A crucial point here seems to be that space is left for teachers' critical professional reflection and interpretations of the themes (Moos 2009), and that the teachers considerations are also reflected in the further research within the fields. Another crucial point seem to be to ensure that the educational dimension of health promotion and education for sustainable development is not 'lost in translation', as the educational part is not necessarily emphasized when actors outside school contribute to the definition of health promotion and sustainability in schools.

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## COMPOSITIONAL AND CONTEXTUAL PREDICTORS FOR EMOTIONAL PROBLEMS AMONG ADOLESCENTS

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**Keywords:** Social epidemiology, Adolescents, Emotional health.

#### Introduction/background

Most adolescents' emotional health and wellbeing is good but a large proportion experience emotional and psychosocial problems such as having trouble falling asleep, feeling low or sad and feelings of loneliness and being left out (1,2). Experiencing these kinds of feelings more or less constantly may have serious consequences for everyday life and health (3-5). Because emotional problems in adolescence may compromise academic functioning (6) it is important for schools to promote the emotional health and wellbeing among students in order to fulfill their core objective: learning. Promoting student's emotional health at school may also prevent negative impacts from other life arenas and act as a buffer for students who do not receive support elsewhere (7). The prevalence of emotional problems varies greatly from one school to another. To what degree these variations are caused by the composition of students or by contextual factors at the school or classroom level is unknown.

The objective of this presentation is therefore to identify factors and conditions at the individual-, classroomand school level that are associated with students' experiences of emotional problems.

#### Theoretical/analytical framework

The theoretical framework relates to the settings based approach to health promotion. This approach adopts a socio-ecological perspective in which it takes into account that the individuals' mental health is not only influenced by the person itself, but also formed by the different contexts and environments that the individual lives and functions in.

#### Methodology/methods

Data stems from the Danish contribution to the International Health Behaviour in School-aged Children (HBSC) study in 2010 and includes 4,922 students aged 11, 13 and 15 years from a random sample of schools. The outcome measure, emotional problems, was defined as daily presence of at least one of four symptoms: feeling low; irritable or bad tempered; feeling nervous; and having difficulties falling asleep. Further, information about school environment and characteristics, obtained through school administrators, was used. We applied multilevel multivariate logistic regression analyses to identify and quantify explanatory factors at individual, classroom and school levels.

#### **Key Results**

Initially a large variation in emotional problems was observed from one school to another. The proportion of students with daily experience of emotional problems varied between 7% and 32% across schools. Individual



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level variables such as socio-economic position and family composition explained much of the variation across schools. Students from low (OR=1.74 (CI:1.37;2.22)) and medium (OR=1.53 (CI:1.24;1.87)) social class, girls (OR=1.37 (CI:1.15;1.63)) and students exposed to bullying (OR=3.20 (CI:2.17;4.72)), had increased odds of experiencing emotional problems. At the classroom level, a high proportion of students who reported a negative classroom climate was significantly associated with emotional problems (OR=1.43 (CI:1.07;1.92)). Further, bullying seems to reach beyond the individual. In classes with a high prevalence of bullying, students have significantly higher odds (OR=1.33 (CI:1.05;1.70)) of experiencing emotional problems compared to classes where bullying did not appear. These findings suggest that contextual exposure affects emotional problems.

#### **Conclusions**

This study shows the importance of applying multilevel analysis. We expected that the composition of students would explain much of the variation in prevalence of emotional problems between schools. Though this is the case, this study also suggests that contextual factors at the school- and classroom level are important to take into account in studies of emotional problems among children and adolescents. Further research to identify school- and classroom level factors of importance for adolescents' emotional health is important.

#### **Implications**

More research about what constitutes positive and inclusive classroom climate is important in planning interventions to promote emotional health among students. Information could be obtained by qualitative research i.e. interviewing students about what makes them happy and safe in their class. Observations of positive and negative climates in schools and classrooms would also be informative. Developing longitudinal studies would be informing in studying the complex processes that take place in a school context and influences students' emotional health for a longer period of time.

As previous studies show that positive dimensions of mental health e.g. sense of coherence (SOC) and social class are related (8) it could be interesting to explore to what degree social inequality in emotional health and positive dimensions such as coping and SOC exist and whether these positive dimensions can be mediators in the relationship between SES and emotional health.

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## THE INFLUENCE OF THE BOOK 'THE KIDS WITH PERFECT SPINES' ON CHILDREN'S HEALTH BEHAVIORS RELATED TO SCHOOLBAGS

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**Keywords:** Schoolbags, backpacks, changing behavior, health promotion.

#### Introduction/background

The impact of daily overweighted schoolbags, overloading children's spines has become a public health concern area, which requires an urgent empowerment of children, caregivers and teachers, by means of health promotion programmes.

There are few studies focusing on the evaluation of the effectiveness of intervention strategies to adopt / to change healthy behaviors (Fernandes, Casarotto & João, 2008; Noronha & Vital, 2008).

When health notions are transmitted, as in health promotion programmes, the content must be designed specifically for the target population (Kreuter, Strecher & Glassman 1999).

A comic book was written for children, by a Portuguese physiotherapist, entitled 'The Kids with perfect spines'. It is about the benefits of correctly using a backpack and it has six characters: a Magical backpack, a Perfect Spine Fairy, a Pathological Wizard and its three assistants the Ignorance, Indifference and the Laziness. The content is related to the correct use of backpacks and its influence on health.

It was questioned if the book by itself could be used as an educational health session and change children's and caregivers' health behaviors.

The aim of the present study was to evaluate the influence of reading the book 'The Kids with perfect spines' on changing children's health behaviors especially the way they carry their backpacks, how they organize the school supplies inside the schoolbags and their weight, as well as on parents' perception regarding these issues.

#### Theoretical/analytical framework

Schoolbags are the most practical and adaptable accessory to carry books and other items to school (Negrini & Carabalona, 2002; Simpson, Munro, & Steele, 2012). Ergonomically, the best way to transport school supplies (Habibi, 2009; Atreya et al., 2010) is using a backpack (Pascoe, Pascoe, Wang, Shim, & Kim, 1997; Wang, Pascoe, & Weimar, 2001; Pau, 2010; Dianat, Javadivala, Asghari-Jaffarabadi, Hashemi Asl, & Haslegrave, 2013) because it allows optimizing the load distribution on the spine (Reneman, Poels, Geertzen, & Dijkstra, 2006).

According to Grimmer, Dansie, Minasese, Pirunsan, & Trott (2002), a school backpack when used on both shoulders distributes uniformly the forces on shoulder girdle and the weight is supported by trunk muscles. Nevertheless when backpacks are very heavy, spine structures are submitted to additional pressures, worsening when backpacks are used very low and for long periods of time.

Schoolbags used only on one shoulder or with a handle cause an ipsilateral shoulder elevation and a contralateral trunk lateral inclination (Pascoe et al. 1997). Moreover wheeled schoolbags are, on one hand an option to prevent against overweight and its effects on musculoskeletal system, but on the other hand they seem to offer a false safety and protection way to carry more weight (Fourjouh, Schuchmann, & Lane, 2004). Due to the bad effects on children's spines it is important to implement health promotion programmes in elementary and secondary schools.



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#### Methodology/methods

A controlled trial was performed in a sample of 76 grade one and four students. Intervention group (IG) (N=36), to whom the book was read, was composed by grade 1 (n=11) and grade 4 students (n=22) from a Portuguese elementary school (ES). Control group (CG) (n=40) was composed of 1st grade (n=19) and 4th grade students (n=21) from another ES, situated approximately 20 km from the IG school.

Two questionnaires were prepared, one to evaluate students' behaviors and the other to evaluate the caregivers' perception of in the changes in students' behavior.

The weight and position of students' schoolbags in relation to C7 were measured.

All instruments were used before reading the book and after 3 months.

#### **Key Results**

The IG significantly improved the position of the backpack (. . = 6.702, p = 0.035) and the organization of the school supplies, specifically, placement of heavier supplies close to the spine (. . = 32.864, p <0.001) and their distribution in the different sections (. . = 15.587, p <0.001) when compared with the CG. Regarding the way they carry their backpacks, there was a significant increase of students (p <0.001) that carried backpacks properly after reading the book (65%). School backpacks of grade 4 were heavier than those of grade one. After reading the book, grade 4 students in the IG significantly reduced the weight of the schoolbag (p <0.001), when compared with the grade 4 CG students. Caregivers perceived a significant improvement in students' adjusting their backpacks (. . = 6.231, p = 0.013) and a better organization of the school supplies when compared with the caregivers of control group. According to their perception, a higher percentage of students began to carry less school supplies (. . = 5.394, p = 0.020), snacks (. . = 14.266, p <0.001) and drinks (. . = 5.365, p = 0.021) inside the backpack. All students began to distribute school supplies in different sections of the schoolbags. (p = 0.021).

#### **Conclusions**

Reading 'The kids with perfect spines'? proved to be effective in changing behaviors of children regarding the use of the schoolbag, specifically the way to use a backpack, its load as well as the way to organize supplies and the load to carry, with heavier supplies close to the spine and their distribution in the different sections.

The book had an effect on health both in children and caregivers suggesting that it can be used as an alternative to health education sessions or as a complement to health promotion programmes.

#### **Implications**

The findings of the present study reinforce the need for intervention strategies in schools for the adoption of healthy behaviors regarding children's spine protection.

Replacing the traditional concept of school health, focusing on disease prevention with a model centered on the individual included in a family, social and community environment is extremely important to enable students to be responsible for their health.

The school will be the appropriate place to empower students in relation to health behaviors in order to grow as healthy adults and transmit healthy concepts to their children. These gains will be reflected in the at a long term by reductions in Portuguese health costs.

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## FRIDA. THE LEARNING PRESCHOOL FOODSCAPE – HOW FOOD ENVIRONMENTS CAN CAN HELP PROMOTE HEALTHIER EATING

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**Keywords:** Preschool, learning, foodscapes, eating, food literacy.

#### Introduction/background

Meal programmes in Danish preschool have undergone a rapid change over the past years and the new educational opportunities that meal provision offers have fuelled a new interest from the research community. Institutions for preschoolers offers a solid infrastructure and skilled human resources that might contribute positively to active learning about life & health skills if food provision is linked to curricular activities in a creative way.

#### Theoretical/analytical framework

The paper is rooted, theoretically, in Bourdieu's notion of cultural capital. The idea was translated into a food and nutrition heuristic using a typology of embodied, objectified and institutionalized cultural capital. The heuristic was then used to analyze the relation between the Dagmar intervention and the cultural capital as a proxy for food & nutrition literacy.

#### Methodology/methods

The paper is based on the case of the Dagmar intervention (Dannelse og sundhed gennem bedre madrammer i børnehaver: www.dagmar.plan.aau.dk). A protocol for the intervention emphasizing the food related hands-on learning activities was developed on the foundation of the meal and learning programme running in the Fuglsang kindergarten in Aalborg. The intervention was developed using an action research approach and was then evaluated formatively. Data collection was done using individual open ended interviews combined with focus group interviews. Interviews was transcribed and thematic analysis was carried out leading to identification of important constraints and perspectives for action.

#### **Key Results**

The study found that meal programmes in preschool offer a well suited opportunity for building active learning components into the preschool foodscape. The study further found that the commitment of the workforce involved in both curricular activies and food activities is crucial and that the interprofessional understanding between the teaching and the food & nutrition professions needs to be reinforced if coherent foodscape are to develop in preschool. The study finally showed that the whole school approach provides a good framework for developing the important links beween food praxis and curricular activities.

#### **Conclusions**

The paper concludes that there are promising opportunities for developing the learning opportunities regarding to food, nutrition and health in preschool and kindergarten.

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#### **Implications**

Better policy frameworks for integrating hands on food & nutrition activities in the foodscapes of preschool are needed. Food provision in preschool offers a first class opportunity to promote healthy eating but food service and meal programmes needs to be embedded in learing activities if long term improvements in eating patterns are to be achieved. The cultural capital approach to understanding childrens' food literacy and knowledge offers a good theoretical framework but needs to be further developed.

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## DEVELOPING DISPOSITION FOR SUSTAINABILITY: LINKING FOOD SYSTEM COMMUNICATION TO SCHOOL MEALS

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**Keywords:** Disposition, sustainability, meal, communication, system.

#### Introduction/background

High hopes have been invested in school meal systems as enabling sustainable food consumption for young people during their formative years. This paper deals with the school meal system of the welfare state whereby proper meals are served free for young people on a daily basis. This meal is typically understood to embody equal provision of food, healthy nutrition and representative food culture. However, environmental sustainability, reflected for instance by carbon footprint, or the socio-economic equity between the supply chain actors often remain fuzzy and detached from eaters' everyday experience. Their relation to the food system becomes mainly nutritional-cultural, without more profound integration to the system as a socio-economic and ecological entity. However, transformative learning about food systems seems to create a novel disposition for eaters as internal to the system, whereby they learn to support and enjoy environmentally and animal friendly food with more equitable socio-economic relations between the system actors. This paper explores whether visual communication about sustainable meals may exert transformative potential among young people. Should this visualization of sustainable meals support such transformations to take place, the communicative method would enable young people increasingly to respect their own as well as others' wellbeing, and environment at large, to their own happiness.

#### Theoretical/analytical framework

The paper moves on the ground of discursive psychology, which is used to frame everyday transformative learning about food system operations through critical reflection among young people. The transformative learning is understood as a highly discursive phenomenon, which is studied here as taking place through food system visualizations and their sporadic commentary by young people. This externally stimulated but voluntary reflection entails emotional and moral colorings, which carry strong meaning making support and direct behavior in particular ways. Through discursive psychology the paper gains access to the constructive flows of young people as exhibited in their talk and behavior, and enables in-depth research of learning with limited research inputs.

#### Methodology/methods

The paper deploys (critical) discourse analysis of young people's talk, which has been recorded and transcribed verbatim. The four focus groups represented different educational institutes and were conducted during 2012-2013. The students were at the age of 20 to 25. The young people were shown models of sustainable meals, depicting the dishes, their carbon footprints and countries of origin of ingredients. The analysis focuses on emotional expressions and moral evaluations as these were connected by young people with known or assumed food system operations. The systemic view meant the collection of talk regarding the system from upstream to downstream.

#### **Key Results**

The young people were able to view simultaneously the dishes of a meal and their carbon footprints. They identified the nutritional plate model and could evaluate the carbon footprints of different ingredients. The results led to thoughts about justified changes in the menu; however, meat was claimed to be an interesting and necessary part of the meal particularly by boys. However, meat qualities with smaller footprints could be used and a systemic



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understanding of the dairy industry justified the consumption of beef. The young people also expressed moral concerns and sympathetic statements about animal welfare which was seen as a responsibility for those in animal husbandry and those eating the meat; they were obliged to know about animal welfare. For young people, animal and environmental welfare were seen as sources of happiness. Furthermore, domestic employment was suggested to be central, highlighting the economic system and justified income through participation on the labor market. However, young people did not identify extensive differences in income of various system actors. At large, what was deemed morally acceptable or right induced happiness, and vice versa, unjust operations made young people feel angry. The personal quality of food consumption appeared to assume more extended and profound relational control, making this consumption a matter of shared duty and happiness.

#### Conclusions

The visualization of the food system seems tentatively like a positive strategy which enhances transformative everyday learning and the increase of regard within the system, particularly through one's own consumption and commercial behavior. Especially new connections between morals, emotions and operations seemed central as transformative learning outcomes.

#### **Implications**

The method needs contextual data and willingness for transparency by the system actors. Furthermore, the artistic visualizations may be studied in terms of their content, quality and effect, as these may be expected to vary by young people of different ages.

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## FOSTERING RECIPROCITY IN PRE-SERVICE TEACHERS' HEALTH EDUCATION - THE POTENTIAL OF REFLECTIVE JOURNALING

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Keywords: reflexivity, journal, pre-service health education.

#### Introduction/background

This paper reports the usage of reflective journal keeping as an element of pre-service teacher education in health education. This occurred as part of a pilot module in HE the aims of which included:

- 1. To explore experiential learning methodologies for HE;
- 2. To enable students to critically reflect on their role as a teacher of the whole person;
- 3. To promote discussion on the place of HE within schools;
- 4. To become familiar with the subject Social Personal and Health Education and health promoting schools;
- 5. To develop students' self awareness of their own health behaviour;
- 6. To develop students' critical thinking skills

Learning journals are a personal narrative in which students can record their feelings, opinions, reflections, comments and attitude on the content and processes of a course (Bisman, 2011). Learning journals can offer students a positive learning experience, including fostering sense of ownership, awareness of their learning, increased self-confidence, regular reading, a whole course focus, as well as allowing them to engage with the course material (Park, 2003). Reflective journal writing can also stimulate deep learning. In addition it can be utilized as a research tool to investigate the depth and quality of student learning as well as the relevance and pitch of module content.

#### Theoretical/analytical framework

The theoretical framework that guides this study is one of pragmatism with an over-arching social constructivist lens. Using this approach "researchers recognise that their own backgrounds shape their interpretation and they position themselves in the research to acknowledge how their interpretation flows from their personal, cultural and historical experiences" (Creswell, 2009:8). People create knowledge through interaction with their world and through discourse with others. Therefore, for the purposes of this study social constructivism has a significant impact on the planning and execution of the research. Constructivism is the "epistemological doctrine that social reality is constructed, that it is constructed differently by different individuals, and that these constructions are transmitted to members of a society by various social agencies and processes" (Gall, Gall & Borg, 2007:22). While viewing knowledge as a social construct, a pragmatist approach is undertaken. Data is collected in a way that most appropriately addresses the research question. The researcher collects the data practically in a way that 'works' to address the specific research question (Creswell & Plano Clark, 2011).

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#### Methodology/methods

Students in their final semester of the post graduate course in teacher education (consecutive model) in the discipline of Physical Education were invited to participate in an elective HE module. Nine students volunteered to participate. A mixed methods approach was employed, in which questionnaires, a focus group and reflective journals were all employed to gather data. For the purposes of this paper, the findings from the reflective journals will be discussed. Students kept a reflective journal, in which they discussed insights gained during the module each week. In addition they provided further analysis on their insights, connecting their learning to existing literature in the field.

#### **Key Results**

Very soon the potential of the reflective journal for promoting deep learning and for providing formative feedback for the lecturer became apparent. Students were encouraged to critique and analyse their learning. Through the data it became evident that participants enjoyed their reflexive freedom and the insights documented were very wide ranging. Some focused on content knowledge in SPHE and HPS, insights they gained from discussions with peers in their class about topical health issues such as bullying, as well as insights as to how they would approach a class, teaching methodologies, classroom pedagogy, the lack of status afforded to health education in schools, links between Physical Education and SPHE, societal health issues that drew their attention, their own personal experience of SPHE and school policies. The journals soon began to serve a number of purposes, giving the lecturer insight into what the students were taking from the classes each week as well as providing a thoughtful and critical way of qualitatively evaluating the teaching and learning in order to assess if objectives had been met. For the students, the journal facilitated them to increase their confidence in reflective writing and explore issues that were pertinent to them. Many of the students used the final week to provide an overview and evaluation of the module. This facilitated them to exercise their voice and to express themselves freely and without a time or word constraint.

#### **Conclusions**

The use of reflective journals surpassed expectations and is a methodology that has great potential for the teaching of HE in schools. Teacher educators can provide effective modelling for student teachers through their pedagogy (Lunenberg et al., 2007). The journal became reciprocal helping both student and teacher in this study, and they potentially can be for both student and teacher as long as students are given supportive guidance to build their confidence in reflective writing (Dyment & O' Connell, 2010). The open nature of the journals employed in this study facilitated students to be creative and to excercise their voice freely. Reflective journals also have potential as a qualitative evaluation tool. By including it as part of the assignment, students engaged deeply in the course content and provided many meaningful insights. The honesty in the writing gave the researcher much food for thought in terms of her practice

#### **Implications**

This paper reports an initial study. Clearly there is scope for further research on the potential of reflective journals as a pedagogical tool for health education. As teacher educators, we need to critically examine the "goodness of fit" of some of our assessment and evaluation methodologies. Employing methodologies such as the journal that have such potential for deep reflection and reciprocity is worthy of consideration. It is also necessary to explore in more depth the relationship that is needed between journal writer and journal reader for this type of methodology to work effectively. The relationship is one of the key factors that influences the level of reflection that occurs (Paget, 2001). If a trusting relationship is developed, the students may be more open to writing their deep and critical thoughts (Dyment & O' Connell, 2011) and this is worthy of further exploation.

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## WHOLE SCHOOL APPROACH: PROMISING IDEA, BUT DIFFICULT TO IMPLEMENT?

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**Keywords:** Implementation, Whole School Approach, Mental Health.

#### Introduction/background

Interventions to promote mental health through a Whole School Approach (WSA) gain increasing attention these years. Despite all the good intentions it seems to be difficult to implement a WSA at the school. Therefore the objective of this presentation is to report new experiences regarding the implementation of mental health promotion based on WSA in schools.

Optur is a Danish school-based intervention study that aims to promote mental health and well-being among children and adolescents. The intervention applies a WSA, and includes four intervention components:

- Education and activities for students with the aim of strengthening their knowledge, action- and social competence,
- · Courses and guidance for teachers to qualify them to implement Optur,
- · Involvement of the parents in Optur, and
- Initiatives in the everyday life of the school to promote the social, physical and political environment. Optur has been implemented in three schools in Denmark during school years 2009/2010 and 2010/2011.

#### Theoretical/analytical framework

To evaluate the implementation process of the WSA we performed a formative evaluation. The evaluation had a development and learning aim to provide a breeding ground for further development of Optur. The formative element ensured that the evaluation, intervention design and practice engaged in a dynamic process and thus made it possible to adjust the intervention during the implementation process at the schools. A participatory perspective provided the background for the evaluation. The assumption was that successful implementation depends on how the participants involved in the project receive and use the intervention.

#### Methodology/methods

Data were collected in three schools and consist of focus group discussions and interviews with pupils, parents, teachers and principals. Further participant observations in classrooms and at meetings and course days.

#### **Key Results**

The evaluation demonstrated both facilitating factors and barriers of the implementation of Optur. Among facilitating factors were: teachers, parents and principals support of the idea of applying a WSA in the promotion of mental health and wellbeing in schools, high commitment among some teachers, teaching material involving



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all subjects in all grades especially designed for the Danish school, and a democratic decision process regarding the school's participation in Optur. Barriers consisted of: difficulties in engaging the pupils in the intervention, competition from academic goals, lack of commitment among some teachers, teachers' experience of lack of time to implement the intervention, difficulties to ensure collaboration with parents, and difficulties to implement initiatives to promote the social, physical and political environment of the school. The next stage of Optur will build on these findings and develop new ways to tackle the experienced barriers.

#### **Conclusions**

The formative evaluation shows that it is not enough to encourage the participating schools to implement a WSA. It is necessary to develop tailored strategies to assist the different schools in implementing a WSA based on the needs and the culture at each school.

#### **Implications**

Future interventions to promote mental health through a WSA should be aware of the barriers identified in this study. Further research is needed to understand the causes of the barriers and to develop methods to overcome them.

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## SOCIOECONOMIC INEQUALITY IN POSITIVE MENTAL HEALTH AMONG SCHOOL CHILDREN

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Keywords: Positive mental health, School children, Socioeconomic inequality.

#### Introduction/background

Promoting school children's mental health and reducing socioeconomic inequalities in mental health are priority areas within public health (WHO 2005). WHO defines mental wellbeing as the positive component of mental health, a state in which "the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (Herman et al. 2005). Positive mental health in childhood predicts better perceived general health and fewer risky health behaviors during young adulthood (Hoyt et al. 2012). Positive mental health has also been associated with higher educational attainment in childhood and adolescence, and with better occupational functioning in adulthood (Clarke et al. 2011).

The majority of studies examining socioeconomic determinants of mental health among young people have focused on negative affect and mental health problems such as depression, anxiety and psychological morbidity (Levin et al. 2009). Most of these studies found socioeconomic inequalities with poorer mental health among more deprived adolescents (Goodman 1999, Maughan et al. 2008, Wight et al. 2006). There is however a lack of knowledge regarding socioeconomic differences in positive mental health among school children. The aim of this paper is therefore to examine socioeconomic inequalities in positive mental health among school children.

#### Theoretical/analytical framework

The analytical framework is the Perth Charter for the Promotion of Mental Health and Wellbeing which place emphasis on the importance of studying positive mental health (Perth Charter for the Promotion of Mental Health and Wellbeing).

Defining and conceptualising positive mental health among school children is a difficult task. Positive mental health can be separated in to two streams, the eudaimonic stream; the way in which people function in life, and the hedonic stream; the way in which they perceive themselves and their life (Keyes 2006). In this study we use social competence as a measure of positive mental health belonging to the eudaimonic stream. Social competence was measured by three items: "I speak my mind when I think something is unfair" (assertiveness), "I



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try to understand my friends when they are sad or in a bad temper" (empathy) and "I am good at working together with others in a group" (collaborative skills). To be categorized as having high social competence the students must have answered "Often" or "Almost always" to all three items.

As an indicator of socioeconomic position we used parents' occupational social class (OSC). It was measured by the item (Currie et al. 2008, Currie et al. 1997): "Does your father/mother have a job? If yes, please say in what place he (she) works. Please write exactly what job he/she does there". We classified each student by the highest ranking parent into high (I-II), medium (III-IV) and low (V + economically inactive).

#### Methodology/methods

We used The Health Behaviour in School-aged Children Methodology Development Study 2012 (HBSC-MDS 2012). The study includes all 11-15-years old school children in all schools in two municipalities in Denmark, participation rate 77.0%, n=3,975.

Statistical analyses: As a first step we studied the frequency of high social competence in the socioeconomic groups by cross tabulation separately for boys and girls. As a second step we conducted logistic regression analyses with occupational social class (OSC) as independent variable and social competence as dependent variable, stratified by sex and adjusted for age, migration, and family type.

#### **Key Results**

For boys the prevalence of high social competence is 52.1% in the high OSC-group, 49.6% in the medium OSC-group and 44.8% in the low OSC-group. For girls the prevalence of high social competence is 53.9% in the high OSC-group, 46.1% in the medium OSC-group and 41.5% in the low OSC-group.

The odds of having high social competence increase with increasing socioeconomic position. For boys the Odds Ratio (OR) for high social competence is 1.22 (95% CI 0.95-1.58) in the medium OSC-group and 1.33 (1.02-1.73) in the high OSC-group. For girls OR for high social competence is 1.15 (95% CI 0.89-1.47) in the medium OSC-group and 1.57 (1.20-2.05) in the high OSC-group.

#### **Conclusions**

This study shows a graded increase in social competence with increasing socioeconomic position among school children in Denmark.

#### **Implications**

The observation of a socioeconomic gradient in social competence raises new questions. First of all how to explain this socioeconomic gradient: Is it related to cultural capital in the family, material wealth, or other kinds of family resources? It also raises the question how much benefit children from higher socioeconomic groups enjoy from their higher social competence and also what children from lower socioeconomic groups suffer. Further, it raises the question whether a supportive and inclusive school environment can buffer the disadvantage among school children from lower socioeconomic groups, how much children with high social competence contribute to a positive classroom climate, and what schools can do to stimulate children's social competence and promote equity in positive mental health through school-based health promotion.

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## IMPLEMENTATION OF HEALTH PROMOTING PROJECTS IN PRIMARY SCHOOLS. TEACHER'S PERSPECTIVES

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**Keywords:** Implementation, schools, health promotion, food, exercise.

#### Introduction/background

This paper discusses the findings from qualitative research which aimed to investigate how teachers in primary schools implemented a health promotion intervention initiated by local authorities in Denmark. The intervention focused on healthy eating, physical activity and the development of health-related action competence of pupils in five schools in a municipality. The purpose of the study is to contribute to the field of health education and health promotion in schools, by formulating a 'science of delivery' in relation to the implementation of policy objectives and guiding principles initiated by actors outside schools.

The research is guided by the following research questions:

- How teachers implement health promotion intervention focused on healthy food, regular physical activity and the development of pupils' action competence initiated by the municipality?
- How can teachers' narratives concerning their knowledge, skills and attitudes, as well as their perception of institutional conditions, help in understanding the potentials and barriers of the implementation?

The study focuses on teachers' experiences, reflections and perspectives concerning the pedagogical strategies they use in conjunction with the implementation of the health promotion project.

#### Theoretical/analytical framework

The research is positioned within the critical approach to school health education and health promotion, developed within the European Network of Health promoting Schools, and especially the Danish model focusing on holistic health, action competence and empowerment, interdisciplinarity and pupils' participation.

In similar studies other researchers have typically used the PRECEDE-procede planning model (Green & Kreuter, 2005) or Greenberg et al. (2005), which focuses on the implementation practices of school-based health professionals. This study is based upon an integrated implementation model (Winter & Nielsen, 2010), which employs the theory of 'street-level bureucracy' (Lipsky, 1980, 2010). The core of Lipsky's theory is that it is the public employees - the street-level bureaucrats - who are the real policymakers. In this study this term refers to the teachers implementing the intervention. According to Lipsky, when implementing an intervention, they employ a number of behavior patterns - mastering or coping strategies - as a result of the structural framework they operate under. The integrated implementation model also points to the importance of the teachers' competences and willingness as possible explanation of the variation in the implementation that may exist between different fields (Nielsen, 2006).

#### Methodology/methods

The study, that belongs to the qualitative genre embedded within the constructivist methodological framework, is designed as a multiple case study. The case-schools are examined as a means to gain comparative insight into similarities and differences in teachers' implementation practices in the five different contexts of the individual schools.



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The data generation methods include focus group interviews with 19 teachers, individual interviews with the project leader, observations, analysis of the project documents and local curricula, and a survey focusing on teachers' professional skills.

The analysis is inspired by Kvale (2000) and focuses on meaning coding, condensation and interpretation.

#### **Key Results**

The planned intervention consisted of a series of actions in relation to fostering healthy diet, physical activity and health-related action competence. The research showed that the implementation faced a number of challenges. The teachers in all the five schools initiated a lot of activities, especially in relation to healthy food and physical activity. However, none of the schools fully met the policy objectives stated by the municipality.

While all the schools fulfilled the objective in relation to ensuring breakfast and encouraging healthy diet, only one of the schools met the goal of ensuring physical activity for pupils for one hour daily during school hours.

The study showed that there is a gap between the core principles of critical health education and teachers' implementation practices. In general, the teachers' practice is closer to the principles of traditional health education than to the principles of critical health education focused on pupil participation, development of action competence and learning. The teachers in each of the five schools employed one or more mastering strategy, including rationing, automating and/or controlling the teaching. The employment of these strategies is related to both individual and institutional factors.

#### **Conclusions**

The study demonstrates a gap between policy and practice. In order to meet the demands in front of them, teachers use a number of coping strategies, including the following:

- prioritizing teaching of the compulsory subjects rather than health in a cross-subject perspective
- prioritizing physical activity rather than healthy food and breakfast
- maintaining their usual teaching practices rather than exploring participatory strategies recommended for the intervention
- Justifying the traditional pedagogical practice in the health promotion area by stating that it 'is for the pupils' own good'.

#### **Implications**

The findings are in line with the previous research on implementation within the health promoting schools, pointing to the gap between the policy objectives and teachers' implementation of school-based health promotion.

The study points to the need to involve teachers early in the planning of health promotion interventions, so that they can be motivated and committed to the aims of the project. Further, the study points to the need to provide sufficient resources, professional development and support for teachers if they are to work with the critical health education and health promotion principles.

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#### Introduction/background

The physical, mental, and social health benefits of physical activity (PA) in children and adolescents are well documented. Growing evidence suggests that PA in childhood and adolescence will track into adulthood and can prevent lifestyle related diseases. Despite the benefits of PA, a significant number of young people in Denmark and other Western countries do not reach recommended levels of PA.

Efforts to increase levels of PA in children and adolescents have primarily relied on community, family or school settings, and individual or educational approaches, but results have been mixed. As young people tend to spend a large proportion of their waking hours at school, schools have long been recognized as potentially effective settings for public health initiatives. This is the background for the Space Study (School site, Play Spot, Active transport, Club fitness and Environment) with the objective to develop, document, and assess a comprehensive intervention in local school districts that promote everyday physical activity. The study involved 14 schools (7 intervention schools and 7 comparison schools) and 1348 adolescents in 5th and 6th grade were enrolled at baseline.

The above-mentioned is the background for an anthropological exploration of movement among students in school. The focus in this study is the students' experiences during the school day.

#### Theoretical/analytical framework

The theoretical and analytical framework for the study is an anthropological phenomenological approach. Concepts such as 'the-agent-in-its-environment' and the school as a civilizing institution are central in the analysis.

#### Methodology/methods

Anthropological fieldwork is the basis for the study. The main methods have been participant observation in combination with in depth interviews. Two classes from two different schools were followed from the 5th to the 7th grade. Very few anthropological studies follow the informants for a period this long, which makes the empirical material unique. The main concerns were to obtain sufficient anthropological quality and at the same time provide empirical analysis relevant to supplement the quantitative analyses in the SPACE Study. The SPACE Study is designed as a cluster randomized study.



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#### **Key Results**

There can be a divergence between the Danish public school as a civilizing institution where it for example is important to learn how to sit still, only move at certain times in certain ways and the health discourse here exemplified by the SPACE Study.

In a phenomenological perspective age can be viewed as both biological, social and institutional and if the different types of ages do not correspond, it will be difficult to navigate for the student.

Where and how students move during breaks are closely related to their bodily competence, gender, social status and age.

#### **Conclusions**

A phenomenological anthropological perspective can contribute with useful perspectives in a cluster randomized study.

#### **Implications**

School based projects to enhance health and promote physical activity among students should take the perspective of the students and the importance of student ownership seriously and consider how to include the students before, during and in the evaluation of such projects. At the same time the context of the school as institution and the learning objectives the school is oriented around need to be considered in designing and implementing projects that aim to improve health behavior among students. Themes such as these need to be considered in future health enhancing projects based in schools.

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# POSTURAL EDUCATION AND PHYSICAL ACTIVITY IN EARLY CHILDHOOD – AN EVALUATION INSTRUMENT FOR PRIMARY SCHOOLCHILDREN

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**Keywords:** School Health Promotion, Postural Education, Physical Activity.

#### Introduction/background

Back pain is considered a public health problem. In recent years, low back pain (LBP) is increasingly common in children in earlier stages of life, affecting around 25%, which is a strong predictor for occurrence in adolescence and adulthood. The epidemiological surveys have been followed by interventions targeting primary prevention in LBP, with postural education and physical activity playing a key role. In fact, there is an increasing interest in health education for schoolchildren because school-based health education is considered the cheapest most realistic and feasible approach. The benefit of health education carried out in educational systems is the possibility to give prolonged feedback and reach of a greater percentage of child population, guardians, teachers and the rest of educational community, not forgetting the school as the local where children spend most of their time. Schools have an enormous potential to help students develop knowledge and skills they need to be healthy.

Thus, it's necessary an early and precocious effective plan that support back health programmes. In that way it was observed a lack of measurement and evaluation instruments directed towards first-grade children. The aim of the study is the construction and validation of an instrument of evaluation and characterization of school children aged 5 to 9 focusing on their level of physical activity and postural education.

#### Theoretical/analytical framework

In order to get an effective health education and promotion, tailored to the target population, came the need to characterize and to survey the needs of the schoolchildren population. Thus, was developed the Assessment Instrument Postural Education and Physical Activity in Primary School Children (IEPAF).

This instrument consists of 13 items, applied in the form of a structured interview. Each item has specific instructions addressed to the assessor.

Over the construction of IEPAF were avoided regionalisms, slang terms, and words with ambiguous meaning or not understandable by children. Were provided exhaustive and mutually exclusive response options.

During the survey, in some items response options were used in cards with images in an attempt to make the IEPAF more didactic and interesting for children.



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The IEPAF has two items for behaviors assessment, in which the evaluator asks the children to perform a certain activity, evaluating their performance with a scale.

#### Methodology/methods

The content validity was asserted regarding the exploratory analysis of the questionnaire, the critical review of a panel of judges formed by four community physiotherapy experts, the instrument's author and two children. The instrument's final version was applied twice with an interval of 7 days between each use. The internal consistency was evaluated using the Kuder Richardson (KR 20) statistical test and its reliability between tests by Cohen's Kappa. Criterion validity was not tested, because there was no instrument that could be used as "Gold Standard".

#### **Key Results**

The tests revealed Cohen's Kappa values between 0.174 and 1, with the mean of the registered values in the range of 0,61-0,8. As to the Kuder-Richardson Test results, the values were not deemed acceptable.

The study participants were school children from 1st and 2nd year of a school of Oporto. Of the 189 children, 102 were male and 87 were female. Were between 6 and 9 years and the mean age of 6.94 (± 0.719).

The results showed that the majority of children (59.8%) most of the time does not sit properly. With respect to the backpack was possible to determine that the majority of children using regular two handles backpack (77.2%), followed by the trolleys with a percentage of 16.9. On other view, more than half the children do not know how to properly prepare a backpack (50.8%).

Ontransportofthebackpackonthewayhome-school, most of the time is made by the child (76.2%), but 3.7% of these there is a help from the family that takes the child to school. Most children find their backpack light weighted (51.3%). Regarding the means of transport used in the way to school, 49.7% makes it by car or bus, and 32.3% by walking. With regard to recreation and physical activity, only 4.3% of children surveyed have physical education in school and 15.3% play sports. Finally, 75.7% of children interviewed spends most of the extra school time indoors.

#### **Conclusions**

IEPAF presented a very good reliability between tests; however its internal consistency did not revealed acceptable results. Its validity is also limited, due to the impossibility of testing all validities.

Gathering all search data it can be concluded that the evaluated population gets most of the risk factors associated with low back pain, thereby being very conducive to this happening with many of these schoolchildren.

It would then be important to try to encourage these children to physical exercise and backcare, since it is up to the period of childhood that interest in sports is established and it is easier to modeling health knowledge.

#### **Implications**

The inherent characteristics of schoolchildren population take some difficulties beyond the construction of an instrument of evaluation, but the IEPAF seems to be a good start point to development of future instruments in this area

As we know that individuals who continue to practice at least 3 hours of physical activity per week have a lower incidence of low back pain, make us believe that it is certainly more convenient promote health habits than performing exercises for back pain when they have already become a reality. And to achieve a better and an effective promotion strategy, it is urgent to develop instruments more and more valid.

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## THE SECURITY OF THE EDUCATIONAL ACTIVITIES OF CHILDREN AND ADOLESCENTS IN TERMS OF MUSEUM ENVIRONMENTS

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**Keywords:** security, educational programmes, the Museum, children.

#### Introduction/background

Priority is the preservation and strengthening of health of the younger generation. Museum pedagogy in many countries is considered as a system of parallel education, having a certain contingent of social order, especially meaningful component, special the structure of the didactic process, using a specific form of education, and, finally, training opportunities (as through the Museum's teacher, and the exposition of the Museum). At the turn of XIX-XX centuries, the concept of Museum pedagogics was one of the most advanced and could perform the function of stabilizing the social and cultural factors. Such a trend continues, and at the present time, in the conditions of integration of cultures. Modern Museum pedagogics may use such traditional forms and methods of training in the Museum, as scientific-educational excursions, organization of the work of studios of artistic and technical orientation, learning in the Museum libraries and foundations. Creating a safe environment for the implementation of any educational programmes and Museum, including is one of the elements aimed at preserving the health of children and adolescents.

#### Theoretical/analytical framework

The aim of the work to optimize the of organization of the safety of educational technologies for children and adolescents in the affecting Museum environment. In accordance with this purpose it is necessary to solve the following tasks: to classify the factors Museum environment; to examine and evaluate the conditions in which educational technology is implemented; to study and evaluate the forms of organization of work with children and adolescents in museums; to examine and evaluate the organization of nutrition for children and adolescents (the assortment of sold pantry products); to examine and evaluate a printed product, which is used with the educational purpose of the classes for children and adolescents; to examine and evaluate the organization of health care workers engaged in educational activities with children and adolescents in museums.

#### Methodology/methods

On the basis of the developed questionnaire, factors that may have adverse effects on children and adolescents engaged in the educational programmes in the conditions of the museum are systematized.

#### **Key Results**

Classes organized in the museums for children are exposed to a variety of factors such as: physical (electromagnetic fields), chemical (demonstration of chemical experiments with potentially dangerous substances), biological (classes with biological objects), radiation. Parameters of the font design in 66,0% of the publications, which were calculated on a few age groups, did not correspond to the least of these in the reader's address age groups.

The parameters of the light environment in exhibition halls do not correspond to the normalized values specified for the conduct of educational classes using printed publications, as well as modern electronic media.

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#### **Conclusions**

At the present time the funds of Museum pedagogics you can solve a lot of educational and scientific tasks, including the adaptation and integration into the new society. The educational potential of museums has a steady growth trend, the mission of the Museum is recognized as training and education of children and teenagers. Its growing popularity museums must first of all informality of the training: it is a non-formal education, they have the greatest capacity (experimental methods and new tools, for example, exhibitions with the use of techniques, which visitors called "you can touch"). However, the problem of the safety of the organization of educational activity of children and adolescents in terms of Museum environment with hygienic positions is not developed well enough, and requires further study.

#### **Implications**

Proposals for optimization of the organization of the educational space in terms of Museum environment: creating an accessible environment for children with limited possibilities of health, i.e. ramps, special lifts; premises suitable for group work; the level of lighting in the rooms for classes of children and adolescents should correspond to the nature of the performed visual work; microclimatic conditions in the classrooms for children and adolescents must comply with the requirements of the educational institutions with regard to the type of activities; include in the basic premises of the office for classroom, equipped them with the furniture, the respective growth figures of children and adolescents; the sanitary room establish children's toilets and to label the booths, expert evaluation of programmers on biological and chemical safety; creation of conditions for organization of power to meet the needs of child's organism and the principles of rational nutrition.

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# EVALUATION OF INTERSECTORAL COLLABORATION BETWEEN HEALTH AUTHORITIES, SCHOOLS AND PREVENTION PARTNERS IN COORDINATED SCHOOL HEALTH PROMOTION IN THE NETHERLANDS BY UTILIZATION OF THE DIAGNOSIS OF SUSTAINABLE COLLABORATION (DISC-) MODEL

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**Keywords:** DISC- model, collaboration, implementation.

#### Introduction/background

In the Netherlands, in 2010, the national implementation of coordinated school health promotion is still in its infancy. It is given form in the systematic approach (Dutch Healthy School Model) that Dutch schools can follow on their way to a 'Healthy School' supported by professional assistance of a 'Healthy School Advisor' (Buijs 2005; Leurs, Jansen et al. 2005; RIVM Centrum Gezond Leven 2010). The extent of collaboration between stakeholders from education, health authorities and public (health) services varies between Dutch regions (Bos, De Jongh et al. 2010; Boot, De Jongh et al. 2011). Roles and task distribution of involved parties (financers, coordinators, expertise and service providers and implementers at school level from education, authorities and public service stakeholders) develop naturally and spontaneously from legal obligations, expertise on particular topics, shared interests and common goals on school health promotion. This explorative study gives insights into: (1) the facilitating and hindering factors of intersectoral collaboration towards coordinated school health promotion by the utilization of the Dlagnosis of Sustainable Collaboration (DISC)-Model, also called DISC-analyses (2) the activities that can be employed by collaborating partners to bring collaboration forward (3) and the effects of employed activities on the DISC-determinants.

#### Theoretical/analytical framework

In the Netherlands, where the national implementation of coordinated school health promotion is governmentally supported (since 2003), increased interest has been devoted to collaborative structures which could support sustainable implementation of coordinated school health promotion (Buijs 2005; Leurs, Jansen et al. 2005; Leurs, Schaalma et al. 2005; Leurs, Mur-Veeman et al. 2008). Therefore, the Diagnosis of Sustainable Collaboration (DISC-) Model for formative evaluations of the collaborative structure within school health promotion was developed (Leurs, Mur-Veeman et al. 2008). The DISC-model summarizes 27 indicators in five DISC-constructs (project-management, change management, external factors, context, collaborative support) which predict whether collaboration stays an incidental coalition or becomes a sustainable collaboration, a stable and long-term cooperative effort, such as needed for comprehensive (school) health promotion (Leurs, Mur-Veeman et al. 2008).

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#### Methodology/methods

To maximize full exploration of possible facilitating and hindering factors and employed activities by collaborating partners, the study was conducted in five different contexts (five Dutch regions) and analyzed from different point of view (education, municipalities, public service stakeholders and PHS) and at different levels (management, executor, coordinator). Representatives of health promoting organizations, policy makers and schools completed the DISC-questionnaire twice. Based on the results of the first DISC-diagnosis coordinators responsible for effective school health promotion in the regions were advised. Activities of the collaboration were followed by monthly phone calls.

#### **Key Results**

DISC-analyses of intersectoral collaboration between education, public health and local health authorities towards coordinated school health promotion yielded important differences between sectors which were later fundamental to decisions on strategies that could improve collaboration with the different stakeholders. The advice trajectory mainly targeted (1) the positioning of coordinated school health promotion within the coordinating organization, (2) the collaboration with Youth Health Care to bridge collective prevention and individual health (3) and collaboration with prevention partners to establish a demand-driven offer for schools. The process evaluation of the advice trajectory showed some relevant activities employed by involved actors that facilitated collaboration in its initial phases.

#### **Conclusions**

With the DISC-diagnosis impediments and facilitators for collaboration can be determined. DISC-based advice can help to structurally work on these factors. Identified activities employed by collaborating actors can be supportive for other health professionals involved in collaborations in this field.

#### **Implications**

Different assessment tools should be used additionally when analyzing the determinants of coalitions and their process in order to interpret data correctly.

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## SEXUALITY EDUCATION: IMPLEMENTATION OF A CRITICAL PEDAGOGICAL APPROACH

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Keywords: Sexuality education, schools, implementation.

#### Introduction/background

Sexuality education is compulsory in Danish public school as a part of health education. There is a national curriculum which is based on the theory of critical health education and promotion (e.g. Jensen 1997; Carlsson et al 2009; Simovska & Jensen 2012), emphasising health-related action competence of pupils as one of the key intended outcomes. However, research has documented that there are major differences between the intentions stated in the curriculum and the classroom practices (Sex & Samfund 2005, Sex & Samfund 2012; Lindegard, 2012).

The study discussed in this paper suggests that the participation of teachers in the national sexuality education campaign, titled Uge Sex, has a positive impact on teachers' practices through providing an appropriate support for teachers in implementing the critical pedagogical approach. Uge Sex is a campaign that aims at supporting the development of pupils' action competence in regards to sexuality, wellbeing, rights and health. The campaign has achieved large success resulting in 230,000 pupils (35.6 % of the total population) enrolled in the campaign week this year. This calls for an in-depth insight into its impact as well as the implementation process. Important questions to be asked are (a) does the campaign actually support the development of action competence? and (b) is the implementation characterized by dimensions consistent with critical health pedagogy?

#### Theoretical/analytical framework

The Uge Sex materials, as well as the campaign as a whole, are characterized by an approach to sexuality education inspired by the tradition of critical health education, as mentioned above, as well as norm critical pedagogy developed within the theory of Swedish queer pedagogy (Brade et al 2008, Bromseth et al 2010, Kirk et al 2010). Furthermore, the approach is based on research findings indicating that a secure, inclusive learning environment for all pupils is an important factor for the effectiveness of sexuality education (UNESCO 2009).

The theory of change (Green & Tones 2012) of the campaign is based on the hypothesis that there is a link between certain implementation factors, including a cross-disciplinary approach, secure and inclusive environments for the pupils, focus on pupil involvement through dialogue, and the immediate positive effects on the participating pupils. These effects are identified as changes in the health-related action competence of pupils, their positive attitudes towards the sexuality education lessons and increased awareness of classroom diversity as a positive value. Earlier research related to the campaign suggests that implementation of a critical pedagogy approach into classroom practices is characterized by challenges concerning several of these factors (Roien 2012). The aim of this paper is to discuss these implementation challenges further in order to learn how pupils can benefit more from sexuality education in school.

#### Methodology/methods

The study draws on quantitative and qualitative data from multiple data sources gathered in 2012 and 2013. These include two large scale questionnaires among 500 randomly selected teachers as well as 800 randomly selected pupils from 4th-6th grade (age 10-12) as well as 7 in-depth interviews with teachers and 3 case studies including



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interviews with pupils and classroom observations. The data from the different sources was triangulated in order to secure validity of interpretations (Green & Tones 2012). The analysis combined inductive and theoretically driven strategies, drawing on the concepts of action competence, empowerment and participation in health education.

#### **Key Results**

The findings show minor tendencies towards the development of action competence of the pupils, concerning mainly a positive development in their knowledge and ability to identify action possibilities. The campaign seems to support those pupils that have insufficient knowledge on possible actions to solve dilemmas related to sexuality issues. Furthermore, a positive attitude towards sexuality education has been identified among the majority of the participating pupils.

The findings do not document any increased awareness of classroom diversity among the pupils as a positive value.

In regards to the implementation of the campaign, especially one factor is identified as having positive influence on pupils' learning, namely the effort to create a secure learning environment based on the recommendations from Uge Sex materials. On the other hand, other implementation factors prove to be highly problematic in connection to the principles of critical health education. These include: lack of an inter-disciplinary approach to sexuality education, low priority of pupil participation and a very traditional view of the role of the teacher as an expert and 'transmitter' of appropriate knowledge.

With regard to the lack of increase in the pupil's awareness of diversity as a positive value it is suggested that this can be related to the focus of Uge Sex as a purely educational campaign focusing solely on teaching without including a whole-school approach to health promotion and diversity.

#### **Conclusions**

The findings demonstrate that the implementation of a critical sexuality education approach by the teachers is challenged by the traditional approach to sexuality education, characterized by established boundaries between subjects, a view of the role of the pupils as passive and the teacher as the one who decides on content, methods and resources (Green & Tones 2012; Simovska and Jensen 2005). This approach results in a low level of pupil participation and points to the difficulties teachers face when implementing the sexuality education processes intended by the Uge Sex concept. Nevertheless, the findings suggest that a focused effort through concrete recommendations and exercises that teachers can use in the classroom, can be beneficial. Finally, the findings point to the critical role of the whole-school approach, and the lack of it in the campaign. This can be seen as a barrier in regards to pupils' learning linked to wider health promotion and the value of diversity.

#### **Implications**

The insight into the implementation of the Uge Sex campaign by the teachers provides important knowledge concerning the challenges teachers face when working with critical comprehensive sexuality education focused on the development of pupils' action competence.

The findings point to the need for professional development of the teachers so that they can work with participatory and action-oriented teaching methods as well as with an open concept of sexuality that allows for diversity and human rights to be freely discussed in relation to sexuality issues.

The findings provide implications for future research and development of the school practice of sexuality education as a part of health education and health promotion as well as for introducing health pedagogy and health promotion related to sexuality education within the initial teacher training at teacher training colleges and in-service professional development.

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# HOW CAN STUDENTS PLAY AN ACTIVE ROLE IN A HEALTH PROMOTING FOODSCAPE? PRELIMINARY RESULTS FROM PHD STUDY

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Keywords: Health promoting school food scape, Students' active role.

#### Introduction/background

This paper is part of the symposium 'Understanding the active role of children and youth in health promoting schools – implication for school and community operation' that has been proposed for the 4th European Conference on Health Promoting Schools in Odense, 'Equity, Education and Health'. Its aim is to present and discuss results from innovative research projects that deal centrally with the implications of students' autonomy and agency in regard to activities associated with their foodscape and health related issues in the fields of food, meals and exercise. Participants will address challenges linking research with policy and practice and such linkage will be manifested more concretely in attempts to understand collaborations between school and local community and the development of innovative multisectorial partnerships that can contribute to health, food literacy, empowerment and action competence among students. In addition, participants will discuss how integrated health promotion approaches can be related to the preconditions for achieving sustainable change, social inclusion and the tensions and dilemmas associated with these relationships. Within this framework, the current abstract takes its point of departure in the research question: How can students in secondary school play an active role in a health promoting foodscape? Preliminary results from the Phd. research, case study: LOMA-Nymarkskolen, Denmark will be presented in the paper.

#### Theoretical/analytical framework

The case study applies a multi-disciplinary theoretical framework within social science that includes theories from the WHO health promotion platform, represented by Jensen & Simovska (2009) and Green & Tones (2009), as well as theories of participation (Hart, 1997), food literacy (Pendergast 2011), foodscapes (Mikkelsen 2011), schoolfood revolution (Morgan & Sonnino 2008) and agrifood systems (Lamine et al. 2012; Ruge, 2012). Schools are generally considered to be ideal settings for health promotion and findings within learning and health promotion research show that participatory strategies especially can increase positive outcomes related to food literacy and action competence. These themes are evident in the logic model of the LOMA Nymarkskolen case, where the activities that take place can be understood by a four-dimensional model that enables investigation of the active role of students in a health promoting setting: Dimension 1: Local cooking and local meals at the school - students participating. Dimension 2: Local learning and local cooking integrated with curriculum in science, mathematics, exercise, media and language. Dimension 3: Local food production at local farms and processors - educational links between school and producers through excursions. Dimension 4: Local public food procurement. In this paper we will investigate students role in the four dimensions by applying a.o. the IVAC terminology and analytical framework (Simovska & Jensen, 2006).

#### Methodology/methods

The research question: How can students play an active role in a health promoting foodscape? is answered with reference to a research project that is conducted as a single-case, descriptive case study of the LOMA-



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Nymarkskolen project. Data have been collected through observations, interviews and questionnaires. Qualitative methods, providing triangulation of data collected during pilot projects (that encompassed certain components: workshops with cooking, excursions to farmers and workshops integrating subejcts of exercise, science, media and language) are applied. The hypothesis is that students must have an active role in the LOMA-Nymarkskolen case in order to achieve health promotion.

#### **Key Results**

Results from the case study are still of a preliminary nature. However, they do indicate that LOMA interventions that integrate students' participation in food related learning processes contribute to food literacy ('cooking skills') and social innovation ('educational links between school and the local community') seem to be an outcome. Data also indicate that the majority of students were very pleased with cooking and eating together and also eating together with teachers. These results correspond very well with the notion of 'belonging to an eating group' (Lewin, 1997) and with the idea of how a common meal can contributes to 'Quality of life' in the salutogenic way (Antonovsky, 1993). These findings will have an impact on the final intervention at the school in October-November 2013.

#### **Conclusions**

These preliminary results indicate that a LOMA-Nymarkskolen intervention will contribute to students' action competence and food literacy if students play an active role in the daily management of a health promoting meal system.

#### **Implications**

Compared to more service-oriented school meal systems, e.g. in Sweden and Finland, the LOMA concept represents a new paradigm for a participatory, integrated and hybrid school foodscape that has health as an outcome. In the final intervention at Nymarkskolen taking place in October-November 2013 (the deployment of the new facilities with a new production- and learning kitchen) students will play an active role in planning and preparing the daily meals in cooperation with professionals as part of the curriculum. In the analysis, the four-dimensional logic model will be applied to the final intervention and the results will be disseminated to a wider audience in the hope that schools, municipalities and universities may find the results inspiring, valuable and useful in a health promotion perspective.

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# PHYSICAL ACTIVITY IN THE CONTEXT OF THE HEALTH PROMOTING SCHOOL: ECOLOGICAL ANALYSIS IN A REGIONAL SAMPLE OF ITALIAN SECONDARY SCHOOLS

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**Keywords:** Comprehensive HPS, Physical Activity, Assessment, Wellbeing.

#### Introduction/background

Scientific evidence highlights association between physical activity and youth health, both 'physical' (body weight, glucose tolerance, bone health, lipidic profile, blood pressure), 'psychological' and 'social'.

In particular, there is a huge amount of literature about the relationships between physical activity in young people and their mental health (e.g. anxiety, depression) or cognitive development (e.g. ability to reason quickly and abstractly; cognitive skills of concentration and attention; academic achievement) (Biddle & Asare, 2011).

Our study was aimed to assess indicators for Health Promoting Schools at the institutional and student levels, and to evaluate their relationships, focusing attention on physical activity experience at school.

#### Theoretical/analytical framework

In the framework of the Health Promoting School, WHO outlined some important issues about physical activity: assuring a safe environment for physical activity; enhancing physical education quality (enjoyable, motor abilities and fitness oriented, adapted to different needs); increasing the amount of time spent in movement during school days (curricular and extra-curricular physical education, recreational physical activity during recess; active transport to and from schools); sustaining children's personal development by educating life skills through physical education and sport activities; inserting physical activity into curricular lessons as learning approach and for relaxation/concentration (e.g. stretching breaks); offering physical activity opportunities and facilities for school staff and parents; collaborating with communities (e.g. sports teams, municipalities) (WHO, 2007).

#### Methodology/methods

In 2010, sixteen high schools were enrolled in the Abruzzo Region (Middle Italy). Teachers filled in an Italian validated version of School Health Index (SHI) (Scatigna et al, 2009) and 476 students (aged  $16.8 \pm 0.9$  years; 53.3 % females) filled in a questionnaire on school wellbeing and school physical activity and behaviours affecting health. In the questionnaire we used an Italian version of Konu & Rimpelä's School Well-Being Scale (Konu & Rimpelä, 2002; Konu et al, 2002), validated with a back translation method and confirmatory factor analysis.

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#### **Key Results**

At the school level, our samples showed the highest scores in Physical Education and other Physical Activity Programmes and in School Policies on Health, Safety and Environment, with the lowest scores in Health Promotion for Staff and in Family and Community Involvement.

School Conditions (i.e. crowding, noise, lightness) was the worst feature in the students' perception (median on a 1-4 Likert scale: 2.92) compared with Social Relationships (3.25) and Sense of Fulfillment at school (3.09).

About physical activity experience at school, Quality of Physical Education was evaluated by students with a median score of 3.38 on a 1-5 Likert scale, better than Health Orientation of Physical Activity initiatives (2.67) and School Policies for Physical Activity (1.50).

The Intraclass Correlation Coefficient, calculated in respect to different schools, is very low, more in boys than in girls: that might prove a low level of 'school effect' on determinants of wellness and health. There were, also, gender differences, statistically significant for Health Status and Means for Self Fulfillment.

Crossing data at institute level with students' questionnaire, we found very few connections, only in females and principally in the physical activity domain. The ecological analysis correlated data on single schools as units of observation: health perceived status correlated with health policies adopted by single institutes (ktau=0.410, p<0.05) as well as physical activity policies (ktau=0.564, p<0.001).

#### **Conclusions**

Schools from our sample appeared still far from a true systemic health promotion perspective, as demonstrated by the very low performances in the SHI specific indices on community / family connection and on staff health promotion initiatives.

PA could be perceived by young people as a concrete and desirable aspect of school experience, especially by girls that have an outside school physical activity involvement lower than their male peers. However our study showed a low level in the effort within policies and activities to orientate school setting towards health promotion and it seems generalized (no school effect found). In particular schools gave little opportunities focused on physical activity such as extra-curricular activities, active transport to and from school, health education on physical activity benefits, parents and school personal involvement in physical activity within school context, ergogenic substances use and doping prevention, enjoyable physical activity proposals.

#### **Implications**

Physical Activity could be a strategic interface between adolescent-students and adult-teachers to promote and share a healthy school experience. Moreover it could be simpler to start from 'concrete' programmes in the area of physical activity promotion, involving families and staff. For example walking groups for students, parents and teachers; gym activities in extra-school hours; physical activity level monitoring aimed to screen health or risk profile in adults and their children together (i.e. excess of sedentary behaviour).

Positive outcomes could be expected from an actively-oriented school, so a validated instrument for assessing setting and individual characteristics represents a major issue in the perspective of health promotion.

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# THE ECOLOGICAL APPROACH IN THE PHYSICAL EDUCATION CONTEXT. A DELPHI PROCEDURE TO DESIGN A WORKBOOK FOR PRIMARY SCHOOL CHILDREN

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**Keywords:** Ecological Approach, Physical Education, Primary School.

#### Introduction/background

In recent decades a huge amount of scientific literature showed a negative trend of motor capacities and a parallel increasing burden of risk factors in young people, first of all overweight and its consequences. That arises from a lack of Physical Activity (PA), particularly free play and active transport (Smith & Biddle, 2008; Tomkinson, 2007).

Health promotion advocates an ecological multiple approach, based on different strategies and settings, first of all the school (Wang et al, 2010).

It should be necessary not only to expand Physical Education (PE) classes, but also: to provide active recess time; to make school facilities accessible before and after school time; to involve family and community (WHO, 2007).

The objective of the present study has been to evaluate an educational instrument (the 'Movimentiamoci Workbook') before using it, with the aim of improving it and forecasting the concrete impact on PE teachers' work and children's and families' attitudes and behaviours towards physical activity.

#### Theoretical/analytical framework

In this perspective, researchers recognize active Homework (HW) in PE as a good instrument to make children more active and aware of health advantages of an active lifestyle. Physical education encompasses the cognitive, affective and psychomotor domains of learning and homework in this discipline has the potential to address all three domains.

Active physical education homework can be either structured (e.g. run in place for 60 minutes, walk forward and backward on jump rope) or unstructured physical activity (e.g. active transport, dancing with friends).

Physical education homework provides student alternatives to improve motor skills and physical fitness, but even more important, to develop habits of being physically active at home and it can also be used to improve health-related fitness.

Teachers may assign students to engage in any physical activities they are interested in on a daily basis, in this way homework emphasizes participation in the activity. It would be better if parents can join the participation in the activity with their children and, also, parents may help holding students accountable to complete physical



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education homework. In some cases, teachers even need to educate the parents on the value of physical activity through a variety of communication forms (e.g. meeting at school, e-mails) (Wang et al, 2010; Smith et al, 2001).

#### Methodology/methods

Within the activities of 'Movimentiamoci Project', carried out in 2012 in 46 primary schools of the Abruzzo region (middle Italy), we created a PE Workbook (WB). That is an educational booklet containing different purposes of cognitive, affective and active HWs targeted to 6-8 years old children. It contains 20 modules, each composed of 3 units classified in 8 categories: Cognitive Learning, Self-Awareness, Creativity, Tradition, Swap it, Family, Affective Learning, Physical Exercise. An 'a priori' evaluation based on experts' judgment, is being carried out.

#### **Key Results**

The Delphi procedure includes a series of questionnaires in subsequent rounds till the panel opinion will become definitively acceptable. At the moment 22 experts filled in the first questionnaire (Q1) answering 5-points Likert scales.

Statistical analysis compared median values and interquartile ranges with fixed cut-offs to establish the position and the agreement of judges' opinion on each issue.

The panel judged the eight overall categories on these different aspects: feasibility; correspondence to PE objectives; children liking.

After they expressed a more in-depth evaluaion on single units (60 in total).

Results from Q1 indicated that only 3 units have to be rejected, 32 units have to be changed with major revisions and 7 with minor revisions.

- The panel recognize 'Family' units as very popular among children but less feasible in practice.
- The 'Tradition' category has been the most appreciated of all investigated aspects.

#### Conclusions

Overall, WB has been judged complete and very attractive for children in respect to iconographic character while the verbal language has to be improved.

Forecasting opinions were very positive about the possibility that WB should increase actual children's PA, should improve children's enjoyment and attitude towards PA and should help teachers in performing PE programmes. They were less positive about parents' involvement and their behavioural change.

In conclusion, our study, with a very rigorous subjective opinion analysis, depicted WB as a good health promotion instrument and provided some important suggestions for improving it.

#### **Implications**

After this first step of a priori evaluation (Q1) a new version of WB will be made taking into account the suggestions from the panel and it will be submitted to the second step (Q2) in the Delphi procedure. The final version should be the object of a posteriori evaluation, i.e. an experimental study on a school children cohort, aimed to assess cognitive, affective and motor outcome from the use of the WB in physical education.

Very few studies evaluated the physical education HW programmes, in particular targeted at primary school children, and they were inconclusive due to the weakness in the epidemiological design, assessment methods and statistical power. So, further research in the field of health promotion and educational methods should be implemented and carefully enhanced from a quality point of view for scientific reasons and for good practice.

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## EFFECTS OF PHYSICAL ACTIVITY ON COGNITION AND ACADEMIC ACHIEVEMENT IN CHILDREN AND ADOLESCENTS

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#### Introduction/background

Long-term health benefits of regular physical activity have been well established for decades. Numerous studies, of which many are epidemiological, have shown reduced risks of metabolic and cardiovascular diseases and cancer. However, many people show sedentary behaviour that is hallmarked by physical inactivity, not only adults and elderly but also children and adolescents (e.g. Troiano et al. 2008). Emerging evidence indicates that physical activity does not only influence physical health but also facilitates cognitive development during childhood. Moreover, an increasing amount of research supports a positive correlation of physical activity and cognition as well as academic achievement in school aged children (e.g. for review: Voss et al. 2011; Hillman et al. 2008). This presentation aims to elucidate and discuss these benefits and the challenges it can offer for school health promotion.

#### Theoretical/analytical framework

Effects of regular physical activity on cognition in children can be assessed (1) by using standard (neuro-) psychological tests (e.g. IQ Tests, Memory Tasks, Stroop Task, and Eriksen Flanker Task) and (2) by evaluating results of academic achievement tests. Furthermore, neurophysiological methods (3), e.g. brain imaging studies, enable to evaluate changes in brain structure and function. Most often, levels of physical activity are estimated by aerobic fitness. Besides, physical activity can be measured directly by accelerometers that assess all movements during a period of time. Within this context, a common scientific approach is to analyse correlations between parameters of physical activity and cognition or academic achievements.

#### Methodology/methods

This talk will present a systematic narrative literature review as well as first results of our own comprehensive meta-analysis concerning the effects of physical activity on cognition and academic achievement in children and adolescents.

#### **Key Results**

- 1. It is proven that physical inactivity is associated with lower performance in several neuropsychological tests and that children's cognition can profit from aerobic exercises (Chaddock et al. 2010; Pontifex et al. 2011; Chaddock et al. 2011; Hillmann et al. 2011; Fedewa & Ahn 2011).
- 2. There is significant evidence that physical inactivity is associated with poorer academic achievement (Castelli et al. 2007; Chomitz et al. 2009; Roberts et al. 2010; Fedewa & Ahn 2011).



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3. Several studies combined psychological cognitive tests with functional brain imaging. This approach allows additional evidence on a neurophysiological level that aerobic exercises influence cognitive control in children and adolescents. On one hand physical activity improves neuroelectric activity in children suggesting enhanced cognitive control processes (Chaddock et al. 2011a, b) on the other hand even increased volumes of specific brain areas are described in preadolescent children due to aerobic exercises (Chaddock et al. 2010a, b).

#### **Conclusions**

It is proven in cross-sectional and longitudinal studies throughout the literature that physical activity is associated with higher cognitive functioning and academic achievement scores (see Fedewa & Ahn 2011). "In sum, cross-sectional and longitudinal training studies support a positive association between aerobic fitness and enhanced performance in both the classroom and laboratory" (Voss et al., 2011, p. 1506).

#### **Implications**

These finding have important implications for health promotion in schools regarding the relevance of physical activity and physical education. Based on positive correlations between physical activity and cognitive performance, confirmed in numerous studies and reviews, it can be assumed that school-aged children profit from approaches of health promotion and health education considering a certain amount of physical activity (Pucher et al., in press). Available evidence suggests that these approaches should be holistic by combining behavioural and environmental measures of physical activity (de Bourdeaudhuij et al., 2010).

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## HEALTH AND LANGUAGE INTEGRATED GAMING ONLINE (HEALINGO) AS AN INNOVATIVE APPROACH IN SCHOOL HEALTH PROMOTION

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#### Introduction/background

Overweight and obesity are seen as global public health problems affecting more than 20% of schoolchildren in Europe (Currie et al., 2012). Next to short and long term health risks, emerging evidence indicates that overweight and obesity also have negative educational consequences (Suhrcke & de Paz Nieves, 2011). Within this context, online and video games are mostly discussed in view of their potential risks (e.g. online gaming as sedentary behaviour that prevents users from engaging in physical activity). However, digital media have increasingly permeated the life of young people (as digital natives) in recent years and hence should not be excluded from (school) health promotion. This presentation aims to illuminate the positive aspects of gaming for health and education and the opportunities it can offer for school health promotion.

#### Theoretical/analytical framework

Health and Language Integrated Gaming Online (HeaLinGo) is a project at Leuphana University Lueneburg that aims at the development, implementation, and evaluation of serious game applications within the area of health (physical activity and healthy eating) and language education (English). As such, HeaLinGo links health and education in an innovative manner. The theoretical framework consists of two approaches: (1) the serious games approach and (2) the content and language integrated learning approach. Whereas "normal" electronic games aim to entertain their users, so called serious games pursue the idea of integrating gaming and learning for serious purposes like health or education. Available evidence shows that serious games can improve physical activity but also health literacy and health behaviour (Baranowsky et al., 2011; Rahmani & Boren, 2012). Content language integrated learning (CLIL) on the other hand, tries to combine content learning through a second or foreign language (e.g. English), i.e. CLIL is an approach that allows both to teach a subject and a language in an integrative manner. CLIL has proven to be effective (Klieme et al., 2006) and increasingly finds its way into European schools.

#### Methodology/methods

The HeaLinGo project uses different methodological approaches such as (1) systematic literature reviews concerning the effects of serious games, (2) feasibility studies with pupils, teachers and parents concerning the usefulness and usability of serious games applications, (3) randomized controlled trials to evaluate the



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effectiveness of serious games applications developed within the project, and (4) process evaluations to identify conditions for successful serious games.

#### **Key Results**

First results of the project will be available in the first half of 2014.

#### **Conclusions**

Serious games can be seen as an innovative approach to (school) health promotion and prevention that comply with young people's lifestyles and therefore can be used to improve health literacy and health behavior. However, to be successful in schools, serious games should be linked with educational and curricular approaches. CLIL is such an approach that allows teaching a subject (e.g. health in biology) and a language simultaneously.

#### **Implications**

Both serious games and CLIL represent new approaches to health education. Hence, more research is needed to understand how both approaches are to be linked and how schools (pupils and teachers) can benefit from them.

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#### SOCIAL INCLUSION IN PRESCHOOL

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**Keywords:** Preschool, social inclusion, equity, vulnerable children.

#### Introduction/background

This paper discusses a case study exploring social inclusion in preschool institutions in Denmark. International research indicates the importance of an early intervention to promote learning skills among vulnerable children and to reduce social inequality, including social inequality in health (Sylva et al. 2012, Jespersen 2006, Palfrey 2006, Melhuis 2003).

The study is based on an intervention titled 'Social inclusion in Preschool', which took place in a smaller Danish municipality, Tønder. It aimed to establish, develop and manage an inclusive learning environment with a view to create equal conditions for participation for all children. The study was based on a hypothesis that an institutional pedagogical practice seeking to promote social capital of the vulnerable children would contribute towards the social inequality of health being reduced.

The duration of the intervention was three years. Over the course of this period all the pedagogical staff working with preschool children age 3 to 6 in the municipality attended a professional development course about social inequality, health and inclusive learning environments. Each preschool organisation planned, implemented and self-evaluated educational/pedagogical progress, targeting vulnerable children. Consultancy support was offered during the process and a cross-professional network was built among the participating staff. The professional development course as well as the intervention was evaluated.

#### Theoretical/analytical framework

This study was based on the theory of social capital (Holstein 2007). The assumption was that as a result of participation in social practices of communities the individual children would obtain resources and would be able to convert these resources into a higher social position than the one they are positioned in before the intervention, and thus into better health.

The working theory was that, in order to promote a vertical social mobilization process of low-positioned vulnerable children, these children should be included as active participants in heterogeneous communities of practice, while the resources that can be acquired in these communities are assumed to extend beyond the existing community (Putnam 2000).

In other words, according to this theoretical framework, there is direct correlation between social capital as a resource for health promotion and social inclusion, with the objective of social inclusion being to create equal opportunities for all (Schulz & Pedersen 2010).

#### Methodology/methods

The project was designed as a case study. Method triangulation was applied in the evaluation research, by using the following quantitative and qualitative methods: Questionnaires, self-evaluation by the participating institutions and interviews (individual and focus group) with the participating pedagogical staff. The aim of the evaluation was to examine whether, and to what extent the intervention had promoted a more inclusive pedagogical practice, and what constitute the inhibiting and promoting factors in the implementation of the intervention.



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#### **Key Results**

The study shows that a common conceptual framework to reflect and discuss the practice was developed, which was demonstrated in the staff's argumentation, ways of addressing children and parents and in their own cooperation. Key contents from the course were integrated in both the staff's reflection and practice, e.g. more positive ways of perceiving the vulnerable children and their families.

In several cases, however, it appears that concepts and methods acquired by the pedagogical staff were not enough. The evaluation shows that the following factors facilitate an inclusive institutional culture:

- Constructive and critical feedback culture that makes it legitimate for the staff to observe and comment on each other's practices.
- Systematically targeted efforts to integrate inclusion in thinking, dialogue and doing of the staff.
- Shared conceptual issues, priorities and decisions at institutional level.
- A link between new developments and the existing practices.

Further, the findings showed that a whole-family approach is an extremely important facilitating factor for the integration of inclusive practice in pre-school institutions.

Last but not least the study identified the most inhibiting factor in the efforts to promote an inclusive learning environment to be the absence of prioritisation and support by the day to day management.

#### **Conclusions**

The study shows that staff professional development can strengthen the professional reflection and dialogue about educational practice and social inclusion in pre-school institutions. It is important to be aware of contextual factors that can influence the development and integration of the inclusive practice in the everyday life of the institution, and to make sure the management backing is present in the change process.

#### **Implications**

It has not been possible to measure the outcomes of the intervention on the vulnerable children, due to the limited timeframe. Further empirical research is needed to explore how and to what extent focus on bridging social capital as early childhood intervention can foster equality in health. Another research area is to identify effective political strategies, seen in the light of preschool institutions having a lower political status than e.g. primary school in Denmark even though the return of investment seems to be higher when investing at an early stage.

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#### MOVING MOMENTS FOR CHILDREN, SCHOOLS AND PARENTS: CRITICAL LESSONS FROM A CASE OF RESOURCE INNOVATION IN THE NETHERLANDS

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#### Introduction/background

Children's multiple literacies include social literacy, which can be described as the ability to negotiate relationships of well-being within different environments, notably the home and school, and across these environments. Time provides an important frame for negotiating such relationships, and is 'captured' by timetables at school and informal routines at home. The paper describes a pedagogical resource intended to enable children to express themselves more effectively in the visualization and use of time at school and at home, whether for learning or play or cultural involvements. The resource is a family activities calendar, distributed at school for children to take home, and to be used in the co-construction of daily activities by children, schools and parents. The case is located in one city within the Netherlands.

#### Theoretical/analytical framework

Social learning is described by Etienne Wenger (2007) as far more than classroom learning for exams, and comprises competent and active engagement with everyday experience. Such ideas mesh with Larsson's (2000) emphasis on 'life-broad' learning where formal knowledge is woven into everyday experience. Social learning or literacy is parallel to health literacy as defined by Paakkari and Paakkari (2012) in terms of critical thinking, self awareness and active citizenship. When these approaches are applied to the use of innovative resources in schools, the discussion must be related to the capacities of pedagogues to support such learning and to the abilities of parents to enhance it. Here Wenger's (2007) discussion of 'communities of practice' gains importance with reference both to schools and to families.

#### Methodology/ methods

In order to explore how different pedagogues within everyday communities of practice perceive their work and challenges, the family activities calendar distributed by schools was discussed by a developer of pedagogical resources, a classroom pedagogue and a mobilizing pedagogue, first through separate discursive interviews and later within a focus group that brought them together. Qualitative and narrative approaches were used to involve these pedagogues as reflective practitioners (Schon 1983) in a research project that sought to sensitize rather than to generalize (Wiener and Rosenwald 1993) and to generate hypotheses rather than to test them.

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#### Key results

Different categories of pedagogues showed important similarities as well as significant differences. Their variant perspectives could be seen as complementary and as providing checks and balances to each other. Together they illuminated logistical and political and economic issues as well as pedagogical ones. Political relationships proved especially important, whether balances of power between school and home (and different kinds of home), or the micro-politics of the multicultural neighbourhoods and cities that characterize Europe today.

#### **Conclusions**

- Pedagogical resources provide a useful entry point for examining and exploring many of the key issues
  and challenges within European schools today. Innovative resources attempt to address some of the
  issues and challenges, and in doing so can illuminate the complexities involved. The case of the family
  activities calendar introduced into one city in the Netherlands is a useful case in point.
- 2. The discursive and qualitative methods familiar in anthropology can be used to involve pedagogues of different kinds as co-participants in research and as reflective practitioners.

#### **Implications**

This case of resource innovation from the Netherlands highlights issues that can be explored through further research, for example by extending the qualitative interviews and focus groups to include parents from different backgrounds as well as children of different ages. The involvement of various kinds of pedagogues results in the identification of important issues within practice, both in the classroom and beyond. Both the research and practical findings in turn are useful in the formulation of policies related to resource innovation in schools.

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## HEALTH PROMOTING SCHOOLS AND EDUCATION FOR SUSTAINABLE DEVELOPMENT: WORLDS APART OR OF LIKE MINDS?

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Keywords: Education; health promotion; sustainable development.

#### Introduction/background

Health and sustainability are important issues that schools need to address in their educational practices if they are to respond to societal challenges of a global and complex nature and foster children's competences to deal with these challenges in creative, socially responsible and productive ways.

The concepts of health and sustainability themselves, and related school practices, are value-laden and shaped by a number of policies on global, regional, national and local levels. Research points to a persistent gap between, on the one hand, political aims and objectives concerning health promotion and education for sustainable development and, on the other hand, the treatment of these topics in school educational practices – both in terms of formal teaching and learning processes as well as the everyday life or 'culture' of the school (Stevenson, 2007; Jourdan, 2011; Samdal and Rowing, 2013).

This paper maps the key international and national policy documents influencing work with health education/promotion and education for sustainable development within primary and lower secondary education in Denmark. The aim is to synthetize similarities and commonalities between the concepts of health promoting schools and education for sustainable development and explore the possibilities for integrating ESD within the concept of HPS.

#### Theoretical/analytical framework

The paper is situated within the paradigm of whole-school approaches to both health and sustainability education. This paradigm is characterized by common underlying values such as equity, agency, social justice and democracy. In this sense, both concepts, health and sustainability, can be seen as 'essentially contested'; that is, socially constructed and open to diverse, often conflicting interpretations.

They can be characterized as contested according to the criteria that Green & Tones (2010) propose. According to these criteria, the concepts of health and sustainability can be seen as contested because:

- they are complex, ambiguous and value-laden;
- their definitions are vague, their meaning depends on the sociocultural, historical and political contexts;
- their different interpretations are mutually competitive, involving emotional reactions; and
- they hold a degree of authority and credibility.

These characteristics, naturally, pose specific challenges for schools when it comes to determining the aims, content, teaching strategies and expected outcomes of education for health and sustainability.

In Denmark, the health promoting schools approach has been most apparent in the development of the critical (Schnack, 1994; Jensen, 2000; Carlsson et al., 2009; Simovska and Jensen, 2012) approaches to health



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education as well as education for sustainable development, emphasizing the importance of the educational outcomes of health-promoting schools.

#### Methodology/methods

The policy mapping focused on the period from the end of the 1980s until 2012. At international level, the search was focused on international organizations, primarily UN, WHO, EU and IUHPE.

The search at national level focused on policy and strategy documents, school curricula, national guidelines and inspiration material published by the Danish Ministry of Education and the Ministry for Children and Young People. The keywords were: sustainable development; education for sustainable development; sustainability; climate change; the environment; environmental education; health; health education; health promotion.

#### **Key Results**

A number of policy documents have been identified in the mapping, and they are presented in a chronological order. The status of the documents is also identified (e.g. ratified, mandatory, guiding, recommendations etc). Many of the documents address, or have relevance for, both health promotion in schools and education for sustainable development.

#### **Conclusions**

The following dimensions can be seen as common characteristics of health promotion and ESD in schools:

*Time and place:* The actions of today have consequences in the future, particularly within ESD. To work with these somewhat abstract and complex dimensions in school-based teaching poses specific challenges in terms of curriculum.

Self-reflexivity: The knowledge we possess today will not be sufficient in the future.

Therefore, it is important to facilitate pupils' capacity to handle uncertainty and complexity.

*Critical dimension:* Both health promotion and sustainable development include negotiation between and reflections concerning different interests which may be conflicting, but are nevertheless legitimate.

*Interdisciplinarity:* The interplay between individual, social, cultural, environmental, structural and economic dimensions is central to both areas. Issues such as climate change, chronic disease or mental health are of a complex nature and cannot be addressed within a single discipline.

#### **Implications**

The initial analysis points to the following lines of discussion that could be interesting to examine in more detail. We will discuss these issues with the conference participants.

- Who sets the agenda within health education and education for sustainable development?
- What gets lost in translation on the two-way trajectories between policy and practice?
- What are the consequences for the roles and competences of teachers?

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## THE NEED FOR HEALTH KNOWLEDGE OF TEACHERS WORKING IN LITHUANIAN SCHOOLS OF GENERAL EDUCATION

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Keywords: Health education, Teachers, Health knowledge, Behaviour.

#### Introduction/background

School based health education is integrated in the general education system in Lithuania. It means that all teachers, regardless taught subject, have a duty to pass health knowledge to children at all levels of educational process according to children's age. Teachers gain basic health knowledge during their higher education and later participating in training courses. Teachers' responsibility is not only to teach children the principles of health and healthy lifestyle but also they have to follow the rules of healthy lifestyle themselves and have to be an example for children. On the other hand, teachers have to be able to identify health education issues and the potential health risks; indeed the teachers have to be not only observers, but also active participants, able to strengthen children's health.

There are not many studies undertaken in this field. Some researchers conducted studies to find out the needs for training courses and their benefit, while others tried to identify the basic knowledge needs on health education, training needs and value systems (1,2,3). So far, in Lithuania only one study was conducted investigating some of these issues (4).

The objective of the study was to assess health knowledge needs of teachers working in two regions of Lithuanian schools of general education.

#### Theoretical/analytical framework

State delegates the obligation of learning to each child in Lithuania. According to the Constitution of the Republic of Lithuania, education is compulsory for all persons aged under 16 years. Children attend school from seven or six (if parents wish so and if the child is sufficiently mature to study) years. Lithuania has implemented a 12-year general education system. Primary and lower secondary education is compulsory for every child. Duration of programmes is ten years (four plus six). During these years, pupils develop different competences natural sciences, mathematics, and social competences. In the field of general competence is foreseen that every pupil also obtains health and life skills. General competence is developed in all subjects, lessons. So it's very important that teachers have enough knowledge to educate and promote health during their lessons.

#### Methodology/methods

A cross-sectional study was conducted in eleven urban and rural schools which are based in two regions (Vilnius and Panevezys) in Lithuania.

A standard questionnaire was developed. The questionnaire was piloted interviewing 20 teachers. The questionnaire was completed anonymously by teachers in the schools that were enrolled in this study.



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Statistical analysis was conducted using SPSS (Statistical Package for Social Sciences) software (version 15.0) and WinPepi 1.55 computer programme using the  $\chi$  square method and Fisher's exact test for categorical data analysis. The difference of results was considered significant, when p value was less than or equal to 0.05.

#### **Key Results**

Overall 330 teachers completed the questionnaire. More than half of the respondents (63.9%) indicated that they do not have enough knowledge about health. The majority of teachers lack knowledge about occupational health (51.8%), healthy eating (29.1%), mental health (27.3%) and physical health (21.2%). Teachers receive most of their health knowledge from the press (69.4%), television (51.2%), their doctors (47.3%) and internet (37.3%). Teachers indicated that the main obstacle to receiving information about health is lack of time (61.2%). More women (63.2%) specified this obstacle than men (46.2%, p < 0.05). The health knowledge that teachers acquire during higher education was indicated as negative by almost half the teachers (48.2%). The 73% of respondents participated in in-service training courses: 38% of them specified that the quality of these courses was "good", 50% - "satisfactory" and 12% - "poor".

Teachers' health-related behaviour is not ideal. Prevalence of tobacco smoking, physical activity, healthy eating differs between genders: 30.8% men and 10.3% women use tobacco (p <0.05); 69.2% men and 44.3% women are physically active; only 41.6% of women and 30.8% of men (p >0,05) follow healthy eating recommendations. Self evaluation data indicate that 49.4% of teachers evaluate their health as very good or very good.

#### Conclusions

The study findings confirm that the majority of teachers think that they lack health knowledge. They are not satisfied with the quality of health knowledge acquired during higher education, and some of them are dissatisfied with the quality of the training courses related to health. Teachers' health-related behaviour is inadequate for children's health education. Health-related behaviour differs between genders.

#### **Implications**

Further work needs to be done reviewing teachers health related competence and in-service training programmes. For health and education systems it's necessary to find the best way for health education in general education schools. It's necessary to involve other specialists, working in schools (public health specialists or psychologists) in health education processes. There is also need to share experiences of good practice from health promoting schools.

In the field of research, it is useful to evaluate health education competence of public health specialists, working in the schools. Also, after some interventions it would be useful to repeat the same study.

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#### RUSSIAN AND FINNISH SCHOOLCHILDREN'S HEALTH LEARNING AT HOME AND AT SCHOOL: KEY FINDINGS FROM BASELINE STUDY IN AN AHIC-PROJECT (ADDRESSING CHALLENGING HEALTH INEQUALITIES OF CHILDREN AND YOUTH BETWEEN TWO KARELIAS)

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**Keywords:** Russia, Finland, health learning, schoolchildren.

#### Introduction/background

Home and school are school-aged children's key health learning environments. Children confront numerous health possibilities and challenges inside and outside these primary settings, which either promote or prevent their health. At home, health learning occurs mainly informally through parental advising, role-modeling, and parenting practices. At school, formal health learning takes place through the subject of health education, school health services, and various programmes and initiatives related to health. Additionally, a large amount of informal health learning occurs in schools through role modeling and instruction in daily situations, such as in-school lunches and through peer influence. This study aims to explore how Russian and Finnish 11-12-year-old children experience their health learning at home and at school. The study belongs to a Finnish-Russian research and development project called "AHIC": Addressing challenging health inequalities of children and youth between two Karelias, 1 January 2013-31 December 2014.

#### Theoretical/analytical framework

Children are natural learners. They learn by watching, by listening, and especially by doing. According to Tinsley (2003, p. 10-11), three mechanisms influence children's forming of health attitudes and behaviors: children's background and characteristics such as developmental status, demographic, and personality; extrafamiliar agents such as peers, school, or media; and the parents' and families' relationship and interaction. Various risky behaviors usually start during childhood or early adolescence (e.g., unhealthy eating, inadequate physical activity), during the transition to or during adolescence (e.g., tobacco use, alcohol and drug use, unhealthy sexual behaviors, violence), or when major developmental tasks related to puberty and sexual maturation, cognitive development, and identity construction occur (e.g., Suvivuo et al., 2008). Understanding the nature of risky behaviors and their timing is important, but it is equally important to acknowledge the factors that protect children and adolescents from unhealthy behaviors. Protective factors, according to Cattelino (2005 p. 81), are



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'the combination of variables and personal and contextual characteristics that are able to limit adolescents' involvement in risk behavior.'

Such factors are usually tied to family, school, friends, knowledge, and free time.

#### Methodology/methods

A quantitative survey for Russian and Finnish 5th grade pupils (age 11-12) was conducted on 6-7 May 2013 in Finland, North Karelia (two schools, N=63) and on 16-17 May 2013 in Russia, Republic of Karelia (two schools, N=140).

#### **Key Results**

Results will be presented related to children's responses regarding the following areas: Parents' health guidance at home (hygiene, sleep, nutrition, physical activity, media / internet / TV use, alcohol and tobacco, puberty), formal and informal health learning at school (health guidance in daily situations, health education), and children's health habits.

#### **Implications**

The children's questionnaire partly forms the basis on which the intervention activities in the two Russian and two Finnish schools will be built. A one-year intervention will be targeted to build a positive, health-oriented collaboration between home and school to support children's health learning and to minimize the risk behaviors of children / future adolescents.

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#### SOCIOECONOMIC EQUITY, LEARNING AND HEALTH

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**Keywords:** Equity, Learning, Health, Gini-index, School results.

#### Introduction/background

This paper describes a project for statistical analysis of factors influencing young peoples' learning and health. During the latest years many countries have expressed concern about their pupils' bad results in international knowledge tests such as TIMSS and PISA as well as the worse mental health, reported in studies like HBESC and UNICEF report cards.

Among educationalists and health workers there is an ongoing debate about what comes first; if effective learning leads to good mental health (Grosin,2004) or if it is the other way around (Ogden, 2006). This paper argues that there is a third factor involved that affects both health and learning among young people. This factor is socioeconomic equity.

The research question is if it is possible to observe covariation and connection between socioeconomic equity, health and learning. If there exists such a connection, the objective is to find the direction (causality) of this connection.

#### Theoretical/analytical framework

Wilkenson and Pickett(2009) have shown that economic equity is a strong health-promoting factor and they also argue that economically equal societies produce better school results, fewer dropouts from school and weaker impact of the parents' educational level on the pupils' results. UNICEF arrived at the same result in a study among 30 OECD countries reported in Innocenti report card no. 9.

Wilkenson's studies have been criticized for being 'snapshots' of a situation and not taking into account differences in culture, values, demographic structure, policies etc. in the different countries.

To take such factors into consideration, this project is designed as a longitudinal, retrospective, statistical analysis of the changes in national ranking in Science and Mathematics in TIMSS and PISA studies as well as the changes in economic equity, as described by the Gini index. The Gini-index is a well established measure over income distribution in a society (Wikipedia 13.04.22).

To avoid bias from changes in the tests' degree of difficulty between different years, changes for a country in its position in TIMSS and PISA ranking scales, rather than changes in points received, are plotted against changes in that country's Gini-index during the same period.

#### Methodology/methods

To overcome the criticism that met Wilkenson's and Pickett's studies for being just snapshots, the methodology in this study is a retrospective statistical analysis of the results different countries have reached in the international TIMSS and PISA studies during the period 1990 - 2009. These results are statistically related to changing levels of economic equity in the same countries, using the Gini-index as a measure for economic equity.

The statistical relation between the Gini index and the development of young peoples' health, as measured by UNICEF report card 7, is also analyzed.

#### **Key Results**

When changes in TIMSS-ranking for Mathematics and Science during the latest decade are related to the changes in Gini index, a considerable co-variation is observed. Countries where the economic equity has increased, reflected by a decreasing Gini index, have climbed upwards in the TIMSS ranking scale! The co-variation shows the same tendency, but not so clear, when results in PISA studies are related to changes in Gini-index.



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Also the distribution of health and well-being shows the same tendency. Mental health among young people is better in more equal countries.

This paper argues that the observed co-variation is a reflection of a real connection between economic equity and young peoples' learning and health and that the causality goes from economic equity to pupils' learning and health. The hypothesis is that economic stress is the mediating factor (Hagqvist, 1998). Economic stress affects the human neuro-hormonal system in the same way as other kinds of stress which results in decreasing learning ability and increasing tendency to develop illness (Wöhrborg, 2009).

#### **Conclusions**

The findings so far are that there is a considerable co-variation between changes in a country's position in the TIMMS ranking scale and the changes in Gini-index for the same country.

Also pupils mental well-being in a specific country shows a co-variation with the same country's Gini-index.

The hypothesis in this analysis is that increasing inequity in a society that is dominated by a discourse of equity and of all people's equal rights and value, results in economic stress among those of its inhabitants who have access to less assets than most other people. This kind of stress has the same negative consequences for learning possibilities and health as other kinds of stress.

The results of this stress are increased risk for ill-health and deteriorated possibilities for learning.

Increasing economic inequality in a country thus can be considered to be an important contributing factor behind the deterioration of young peoples' health and learning outcomes in that country.

#### **Implications**

An analysis of the afflictions of inequality on young peoples' learning and health must be considered highly relevant in the light of the present reconstruction of European economy which regularly leads to increasing economic differences and inequality in the European societies. Another question that finally will be considered in this analysis is if, and how, the concept of economic equity/inequity could be an issue to handle in school (Bruun Jensen and Lund, 2007). An important question is if schools can contribute to increased equity in health and learning among pupils without addressing the question about socioeconomic equity? Another important question is how this issue can be dealt with in school. This question should be subjected to further research.

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## PROBLEMS IN SCHOOL FUNCTIONING IN THE OPINION OF STUDENTS WITH CHRONIC CONDITIONS AND THEIR PARENTS

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#### Introduction/background

Some pupils suffer from chronic conditions which affect the way they function at school. The results of the latest edition of the Health Behaviour in School-aged Children (HBSC) survey showed that 21% of 4,600 students aged 13-17 attending public schools were chronically ill. In the last four years, a growth in the percentage of these students was recorded (3). It has been proven in many studies that the school functioning of students with chronic conditions is inferior to that of their healthy peers: they are more stressed out, feel more burdened with learning, receive less support from teachers and more frequently become victims of peer violence (2, 3, 4, 6).

The aim of the study was to define school functioning problems among children with chronic conditions. Two points of view were used - those of the children and their parents.

The following research problems were defined: a) What are the most important problems in the school functioning among children with chronic conditions?; b) Are there differences between the means indexes of DISABKIDS questionnaires between: children and parents, the kind of conditions they suffer, gender, age; c) Are there differences between the main school functioning problems in the perception of children and parents?

#### Theoretical/analytical framework

Bronfenbrenner's concept was adopted as the theoretical basis. The ecological model of child development is a combination of child activity in an environment, as well as the reflexive impact that an environment has on the child's activities (1). A chronic condition will present the child, along with his family/peers at school, with some specific challenges. Facing these will reflect upon the mutual relations between the child and the parents/peers at school and also between the parents and the school that the child attends, as well as health care representatives.

#### Methodology/methods

The study covered 300 students aged 10-18 with chronic conditions and their parents. Chronic conditions were confirmed by medical diagnosis. The anonymous questionnaires were collected by school nurses. The study was conducted within the framework of the project "Polish adaptations of the DISABKIDS questionnaires for measuring children's health related to the quality of life". The DISABKIDS chronic generic module (DCGM-37) and specific modules were used. The DCGM-37 consists of 37 Likert-scaled items assigned to six dimensions: independence, emotion, social exclusion, limitation, treatment (5). Two additional questions about: the most important problems, ways of coping with these problems.

#### **Key Results**

Mean indexes of the DCGM-37 were measured. Results showed differences in the areas: chronic conditions, population and gender. The evaluation of parents turned out to be worse than the children's in the dimensions of: emotion, social inclusion, social exclusion and special limitations. The areas in which children with chronic conditions have school functioning problems were defined. The most important ones were: peer relations,



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coping with school duties, relationships with teachers. Differences were found between children's and parents' perceptions of main school functioning problems. Differences in perceiving the ways of coping with the problems were also identified. It is most important for students to improve relationships with peers, while for parents macro system changes are essential.

#### **Conclusions**

Specifying problem areas in school functioning for students with chronic conditions makes it possible to diagnose the needs of this group and improve cooperation between schools and families.

#### **Implications**

The way children with chronic conditions function in the school environment should become a subject of wider discussion among teachers, parents, school nurses and pediatricians. To increase the level of the health related quality of life among children with chronic conditions there is a need for good cooperation of all the parties involved and a need to develop standards of caring for such children in the school setting.

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# PROCESS EVALUATION OF THE SCHOOLS INTERVENTIONS IN THE PROMOTION OF OCCUPATIONAL WELL-BEING IN FINLAND AND ESTONIA / DEVELOPMENT AMONG SCHOOL COMMUNITY STAFF - A CASE STUDY

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#### Introduction/background

This action research "Promotion of school community staff's occupational well-being - action research project in Finland and Estonia, 2009-2014," is a long-term project carried out in two countries. The project belongs to the Schools for Health in Europe (SHE) programme. 21 Finnish schools (N=879) and 40 Estonian schools (N=1978) were committed to this research project in autumn 2009 and winter 2010. The study's baseline survey was collected with a quantitative questionnaire from entire school staffs in Finland (n=486) and in Estonia (n=1330) between autumn 2009-winter 2010. After the baseline survey in spring-summer 2010, each school community received a summary of the results from their school that they could use in their community. Next, between autumn 2010 and spring 2011, the staff of each Finnish and Estonian school and school health promotion groups planned their own school project and interventions based on the baseline survey results. The 18 Finnish and 33 Estonian schools' well-being groups wrote their school's individual action plans that itemize, e.g., school staff's resources, required development, and targets for development and interventions scheduled for 2010-13. This paper presents the evaluation of the process of developing occupational well-being of school staff in autumn 2011 and early 2012. This research aimed to produce descriptive research information on the importance of goal-oriented and structured activities in the promotion of occupational well-being.

#### Theoretical/analytical framework

Promotion of occupational wellbeing is a key aim of international political programmes and legislation (Schools for Health in Europe, 2008). In Finland (Ministry of Employment and the Economy, 2012) and Estonia (National Health Plan 2009-2020, 2008), the promotion of well-being has been raised as one of the priorities of policies. This study is a contribution to these international and national goals. School staffs' well-being has generally been approached from the point of view of work-related stress and burnout (Stoeber & Rennert, 2008; Skaalvik &



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Skaalvik, 2011). However, in the future, there should be increasing identification of the resources of workplaces and staff and exploration of positive perspectives, similarly as in this study. For example, action research is an excellent way to integrate ideas of health promotion into communities, and to expand the influences of this information to health promotion practices (Kelly 2005). Organizations' developed programme plans will not guarantee that the project is implemented as planned (Lohrmann, Blake, Windsor & Sawyer, 1997). Without the process evaluation, researchers would only gain access to information based on self-evaluation and feedback on how interventions affect results regarding which areas of intervention should be developed (Sormunen et al., 2010). In addition, process evaluation is important, because it shows the process elements that work well and can be improved (Crilly, Chaboyer & Wallis, 2012).

#### Methodology/methods

The process evaluation is based on an online survey conducted in the autumn of 2011 and winter in 2012 in Finland and Estonia. The process evaluation of the questionnaire was sent to each school's well-being group so that each school returned one questionnaire. In Finland, questionnaires were sent to 18 schools who returned the action plan for occupational well-being. 16 schools responded to the evaluation. In Estonia, the assessment was sent to all schools (39) and was returned by 38 schools. The qualitative data were analyzed using the inductive-deductive content analysis.

#### **Key Results**

Schools named their aims on all sections of the Content Model for the Promotion of School Community staff's Occupational Well-being (Working conditions, Working community, Worker and work and Professional competence) (see Saaranen, Tossavainen, Turunen, Kiviniemi & Vertio, 2007) in their action plans on promoting occupational well-being. Goals connected to the section on working conditions were identified, for example, in the schools' physical environment. These goals were realized in schools, for instance, by installing soundproofing and renewing lighting. The section on working community included such goals as improving the flow of information. Flow of information was improved in schools, for example, by having weekly meetings and shared electronic mailing lists. The schools also named health promotion as one of the goals for promoting occupational well-being that is connected to the section of worker and work. This goal was realized, for example, in the form of health check-ups in Estonian schools. Professional growth was named as one of the goals of the section on professional competence. This goal was reached by offering training to update the skills of school staff. Based on the process evaluation, the aims of all sections were primarily realized in the schools in a systematic way. Schools felt that the action plan for occupational well-being helped them to set goals for occupational well-being and the planned actions were realized in a more systematic way than before.

#### **Conclusions**

According to a process evaluation carried out at the end of the year 2011 and at the beginning of 2012, there has been active development of occupational well-being based on the schools' individual needs. The purpose of the actions has been to develop working conditions, working communities, work and workers, and occupational competence. Based on the results of the process evaluation, the schools have primarily been successful in realizing the goals that the groups promoting occupational well-being at schools planned when drawing up their action plans for promoting occupational well-being during autumn 2010 or the beginning of 2011.

Moreover, a further goal of the process evaluation was that the schools update their action plans for the remaining time of the project after the evaluation. Updating action plans systematized the realization of interventions connected to the development of occupational well-being. The true impact of the intervention will be studied based on the results of the quantitative follow-up questionnaire of the final stage of the project.

#### **Implications**

In the future, there will be an increased need for recognizing resources within school communities so that occupational well-being can be developed, and strengthening the resources must be the starting point for all development work. In particular, school management must give their support to the development and realization of interventions so that the entire school staff is involved in development work as extensively as possible. Action research is an excellent method for supporting the coordination of interventions and for directing development



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work towards a target-oriented goal. In an action research, the meaning of process evaluation is a key to successful project; it enables detecting development needs during the realization of the project, and this makes it possible to change actions to be in line with the aims of the project.

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## INTERDISCIPLINARY COLLABORATION FOR HEALTH PROMOTION IN DANISH PRIMARY SCHOOLS

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#### Introduction/background

The study investigated how health can be promoted in Danish primary schools. The Danish primary schools are suitable institutional entry points for health promotion, because the health promotion activities may be nested within a whole school approach during both formal teaching and breaks.

In Danish primary schools there are at least two professions that are concerned with the health of the pupils, the teachers and the school health nurses. Different approaches and competences may be an advantage because many of the tasks regarding the pupils' health are often complex and multi-faceted. Consequently, the study objective was to investigate the prospects for collaboration between teachers and school health nurses within health promotion in Danish primary schools. This is a field that few have studied and therefore a field that makes sense to investigate more with a view to qualify the existing work in the field.

The research questions were: (1) How do the school, the teachers and the school health nurses understand and work with health? (2) How do the teachers and the school health nurses experience the collaboration in their work day? (3) Which conditions influence the collaboration between the teachers and the school health nurses?

#### Theoretical/analytical framework

The study included different theoretical perspectives: (1) The sociological approach to professions, (2) theory about interdisciplinary collaboration and (3) the settings-based approach to health promotion.

The sociological approach to professions was applied to illustrate what impact is has on the collaboration between teachers and school health nurses regarding health promotion that the teachers and the school health nurses belong to two different professions with different fields of work, working procedures and values. Both professions work with pupils in the school, but they have two different objectives with their work with the pupils.

The theory about interdisciplinary collaboration outlines a division of different forms of collaboration between different professions. The theory was applied to illustrate how the collaboration between teachers and school health nurses worked in practice and how it could be characterised.

The setting-based approach to health promotion combines the different considerations of the contextual circumstances and it was applied to clarify what conditions the Danish primary schools hold as a context for health promotion.

#### Methodology/methods

A qualitative case study was conducted in a Danish primary school with approximately 900 pupils. The pupils come from a strong social background. The school was purposively sampled based on the criterion that it already was working with health. The school has since 2009 worked with health promotion primarily focusing on the pupils' lifestyle, especially their diet and physical activity. Semi-structured interviews were conducted with 3 teachers, 2 school health nurses and 1 representative from the management of the school. In addition observations of a teacher's and a school health nurse's workdays were conducted.

#### **Key Results**

The collaboration between teachers and school health nurses is limited. The teachers, the school health nurses and the management of the school all see a potential in increased collaboration and wish it to be intensified. The study showed that there are different obstacles that hinder the prospects of the collaboration from becoming



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reality. These are: (1) Other work-related tasks of higher priority than the collaboration. Both the teachers' and the school health nurses' work are regulated by law, and this implies that both the teachers and the school health nurses have other work-related tasks that they need to prioritise higher than the collaboration. (2) Lack of knowledge about the collaborators' competences. Especially the teachers lack knowledge about the school health nurses' competences and their health services in the primary school. This lack of knowledge implies that the teachers have different expectations to the role of the school health nurse regarding health promotion than the school health nurses have themselves. (3) Different ways of organising their work. The teachers' and school health nurses' work are organised differently. The school health nurses only spend two half workdays at the school, the rest of their working hours are spent on other tasks. Additionally the teachers are allowed to work at home when they are not teaching classes. Therefore it can be difficult for the teachers and school health nurses to find time where they can meet each other.

#### **Conclusions**

Collaboration between teachers and school health nurses holds a potential for facilitating health promotion in Danish primary schools. Even though the teachers, the school health nurses and the management of the school want to collaborate, the study concludes that the prospects of the collaboration to promote health in the primary school are limited because of different obstacles. The study concludes that many of these obstacles can be explained from the perspective that the teachers and the school health nurses have different institutional affiliations and belong to two different professions with different fields of work, working procedures and values. Furthermore, the school health committees play a key role regarding promoting health among the students in general and interdisciplinary collaboration in particular. The school health committees may serve as a place where the teachers and the school health nurses can meet and bring their different competences and knowledge into play.

#### **Implications**

The study showed that the potential of interdisciplinary collaboration between teachers and school health nurses in Danish primary schools was not fully utilized for health promotion activities. The many structural obstacles for this collaboration to flourish need to be systematically addressed and facilitated at a managerial level within the municipal administrations. Research needs to be conducted to explore these initiatives. Furthermore the study proposes that the following points can be relevant to consider locally in the schools regarding the future planning of the collaboration. These are: (1) The school health nurses should make an effort to disseminate the knowledge about which health services they offer in the school and which competences they have, in order to make it easier for the teachers to benefit from them. (2) The teachers and the school health nurses should clarify which expectations they have to each other's roles regarding health promotion.

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# INFLUENCE OF OUT- AND INDOOR AIR POLLUTION ON SCHOOLCHILDREN'S CHRONIC RESPIRATORY PATHOLOGY (IN SIBERIA)

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**Keywords:** Schoolchildren, chronic respiratory diseases, air pollution.

#### Introduction/background

A pathology of the respiratory organs is known to prevail in the structure of the child and adolescent incidence in the industrial centers of the northern and eastern regions and their proportion reaches 70%. Different patterns of activity and behaviour in the different age groups have a significant influence on children's exposure to pollutants in or from the environment. The disease symptoms of the respiratory tracts (blocked nose, discomfort and throat tickling as well as hoarseness) and especially their complications may lead to a decrease in children and adolescents' life quality.

#### Theoretical/analytical framework

Taking into account that at present it is impossible to remove the technogenic air pollution to the full degree, the complex studies on revealing the unfavorable factors which may influence the organisms of children and teenagers are known to be the prior task of preventive medicine.

#### Methodology/methods

396 schoolchildren (14-17 years) living long-term in the Siberia region (Russia) with different air pollution levels air with the developed oil-chemical and industries have been examined. Laboratory methods include their blood analyses; common microbial number of the nasal cavity and the pharynx; activity of lysocyme, immunoglobuline E in mucous membranes.

#### **Key Results**

The differences in the structure of chronic respiratory pathology have been revealed in the adolescents examined: under conditions of the pollution with a complex of chemical compounds (with a high Hasard Index, HI=17) nasal diseases were highly prevalent among respiratory diseases (with the mean level of HI = 3,6) - the nasal diseases in prevalence. It was found that about 12,6% of the incidence variability in the category of the respiratory organs, in particular throat pathology among teenagers may be correlated with the level of air pollution.

#### **Conclusions**

The more significant factors of forming chronic respiratory pathology were found to be the health state, characterized by the laboratory indices (common microbial number of the nasal cavity and the pharynx; activity of lysocyme); chemical inhalation exposure; the work of the parents under harmful conditions during the period before child birth.

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#### **Implications**

The study results may be considered as the basis for the optimization of the approaches to the diagnostics and prevention of the respiratory pathology of adolescents.

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# A CONCEPTUAL FRAMEWORK FOR UNDERSTANDING CHILDREN FOODSCAPES IN & OUT OF SCHOOL: IMPLICATIONS FOR SCHOOL FOOD REFORM

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**Keywords:** School food, foodscapes, conceptual framework.

#### Introduction/background

Every time a child eats his/her school lunch, there are a number of factors that can influence and affect the actual intake of food. While most of those factors have been documented and/or studied as part of the school foodscape (Poppendieck, 2010), others that go beyond the school but that are nevertheless central to school-based food reform have remained largely unstudied.

This paper employs the emerging concept of school 'foodscapes' (Johansson et al. 2009, Mikkelsen, 2011) to elaborate a conceptual framework to examine the complexity of eating practices among children in and out of school. Our research questions are, (a) How can the framework be employed to understand children's eating practices across diverse settings? (b) How do those settings or foodscapes relate to each other? And, c) How do we go about studying them? Our objective is to develop a set of conceptual tools that can critically inform and enhance health-promoting interventions among children in and out of school.

#### Theoretical/analytical framework

Language socialization (Agha 2007; Ochs 1988; Schieffelin 1990;) and socio-cultural theories of apprenticeship (Lave & Wenger, 1991) are employed to construct its leading elements, which seek to understand children's behavior at the interactional (Karrebæk, M. 2012) and developmental levels. The framework proposes that school (and other) foodscapes be considered (a) permeable systems, from which and to which factors that shape and define them can flow in and out of them, and (b) dynamic systems that change as agents, elements, and conditions affecting them shift in ways central to their formations.

#### Methodology/methods

Empirical observations, using elements of conceptual framework have and will take place across school-lunch rooms, school kitchens, homes, candy stores, and family restaurants. Interviews with school food service staff (cooks, lunchroom supervisors, catering company staff), parents, children, and business representatives have and will continue to take place. Surveys will be deployed in schools, homes and others sites to assess participants knowledge in regard to the production, service and consumption of food across diverse settings.

#### **Key Results**

Initial results from observations reveal that children may be developing eating practices-in-context, meaning they selectively assess, adjust and develop eating practices according to the particular elements or/and factors existing in the foodscapes they participate in. In addition, results indicate that there are important 'gaps' between the institutionally expected eating practices and the actual ones across the production, service and consumption of school food.

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#### **Conclusions**

Without a systematic examination of children's eating practices in and out of school it might be premature to assume that learning to eat in school may have positive and lasting effects on the eating practices of children outside of school. Furthermore, the persistent 'gaps' between what is institutionally expected in terms of school food and what actually happens may signal a lack of proper analytical tools to examine the complexity of eating practices in & out of school.

#### **Implications**

The paper illustrates how the framework can be employed to understand children's eating practices across diverse settings, and proposes ways in which this conceptual framework can critically inform and enhance health-promoting interventions among children in and out of school.

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## ADDRESSING CHALLENGING HEALTH INEQUALITIES OF CHILDREN AND YOUTH BETWEEN TWO KARELIAS

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Keywords: Karelia ENPI, health behavior, health promotion.

#### Introduction/background

Research has indicated that problems linked to children and adolescents' lifestyles and their health behavior have grown in number and become increasingly complicated. If attempts to prevent and break this negative tendency for health remain futile, the problems' multiplier impacts on the humane, economic and societal levels will be substantial.

The overall objective of this AHIC project is to promote health and well-being of children and adolescents in the Finnish North Karelia and the Republic of Karelia in Russia, and to influence the differences in health between the two regions in the long term. This shall be achieved by utilizing cross-border cooperation and expertise in developing innovative and effective methods for promoting healthy lifestyle.

The project aims at

- 1. Finding out the most alarming risk factors that affect children and adolescents' health in the area.
- 2. Determining the primary solutions that can be used to influence these factors.
- 3. Developing, testing and instilling new, effective health education materials and successful operational models for health promotion practices in schools and in cooperation with parents.
- 4. Bringing the health of children and youth into public discussion by developing health communication together with media and disseminating the results of the project.

This project is administered by the University of Eastern Finland, Department of Nursing Science.

#### Theoretical/analytical framework

Health behavior is affected in many direct and indirect ways by socio-cultural factors such as culture, policies, state economy, socio-economic differences within population, health services, family structure, social networks, psychosocial factors, learning and lifestyles. For decreasing health disparities between children and adolescents,



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up-to-date information on these factors is needed. Children and adolescents also need information on the possibilities and the importance of their health choices and health habits.

The survey among adolescents will provide information about the adolescent health behavior trends from 1995 to 2013 in these geographically close but economically very diverse areas. Previous studies have indicated that the major risks for adolescents' health include sedentary behavior and lack of exercise, overweight, obesity and nutritional problems, binge drinking and increased cigarette smoking. The increasing prevalence of the western way of life has affected the health of adolescents also in Eastern Europe.

The intervention activities of the project comply with the aims of the SCHOOLS FOR HEALTH IN EUROPE (SHE) network by assisting schools in the development and maintenance of health promotion by providing information and sharing good practices. The tested models of pilot study (HEPA, Health partnership development between home and school, 2008-2010) will be utilized and elaborated further in the pilot schools during the project.

#### Methodology/methods

Survey on the current health behavior of adolescents in April 2013: 8 schools in North Karelia (NK), Finland and 8 schools in the Pitkyaranta District, Republic of Karelia (RK). Questions about physical activity, smoking, alcohol, nutrition etc.

Surveys on health learning, health promotion and cooperation between school and homes in the four pilot schools (2 schools in RK, 2 schools in NK) in May 2013: children (5th grade), their parents and teachers; interviews among school nurses. The surveys will be repeated in the spring 2014.

Developing health educational materials and operational models for the pilot schools and co-operation with parents, also training the school staff.

#### **Key Results**

Expected results of the project:

Health and wellbeing of the children and youth in the project area will be improved. The target groups will receive information about the importance of their health choices and healthy lifestyles, and therefore are expected to pay more attention to sufficient exercise, balanced diet, and avoiding risky behavior including smoking, drinking and drug abuse. The health of children and adolescents today affects the quality of life of the future generations.

The teachers and school health care staff in the pilot schools will increase their professional competencies by gaining new knowledge and tools for promoting child health and cooperating with parents.

In general the wellbeing of families will be improved. Parents of the children in the pilot schools will be invited to consciously think about their views about the health of their children and how it can be improved. They will be informed about factors affecting child health and the importance of cooperation between school and homes. This is expected to trigger healthier lifestyles for whole families. Better health of the family means better quality of life and less health-related problems to solve.

Supporting the well-being of children and adolescents by providing preventive health care is more beneficial for both humane and economic reasons than treating illnesses and solving crises.

#### **Conclusions**

The project was launched on January 1st, 2013 and it will run until the end of 2014. So far it is too early to make any conclusions, except that the Finnish-Russian cooperation is necessary for solving the problems related to the child and adolescent health in the border areas of the two Karelias.

This project "Addressing challenging health inequalities of children and youth between two Karelias (AHIC)" is funded by the Karelia ENPI CBC Programme, the key objective of which is to increase wellbeing in the programme region with cross-border cooperation.

#### **Implications**

The project is expected to produce significant knowledge to promote health and reduce adolescents` cultural health and social disparities between Finland and Russia. The project will produce data about the trends in the health of adolescents for the past twenty years, as well as new efficient materials, operational health models



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suitable for the school environment, and provide methods that support the well-being and health-promoting lifestyles of children and adolescents in Russia and in Finland. These materials, models and methods will be applicable to other regions as well.

The project may also produce recommendations that can be used to redirect the currently existing legislature and to assess its efficiency.

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Partners in the project:

The National Institute for Health and Welfare, www.thl.fi

The North Karelia Public Health Association, www.kansanterveys.info

Federal State Budgetary Educational Institution "Karelian State Pedagogical Academy", www.kspu.karelia.ru/ State Unitary Enterprise of the Republic of Karelia "PERIODIKA Publishing House" /Karjalan Sanomat, www. karjalansanomat.ru

State Budgetary Health Care Institution of the Rep. of Karelia" *Pitkäranta Central District Hospital*" Karelian Education Development Fund, kfro.karelia.ru/.

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## SPACE – A SCHOOL INTERVENTION STUDY TO PROMOTE ADOLESCENTS' PHYSICAL ACTIVITY

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#### Introduction/background

The physical, mental, and social health benefits of physical activity (PA) in children and adolescents are well documented. Growing evidence suggests that PA in childhood and adolescence will track into adulthood and can prevent lifestyle related diseases such as cardiovascular diseases, some cancers, osteoporosis and diabetes that are manifested later in adulthood. Despite the benefits of PA, a significant number of young people in Denmark and other Western countries do not reach recommended levels of PA.

Efforts to increase levels of PA in children and adolescents have primarily relied on community, family or school settings, and individual or educational approaches, but results have been mixed. As young people tend to spend a large proportion of their waking hours at school, schools have long been recognized as potentially effective settings for public health initiatives, and PA interventions can largely benefit the most socially disadvantaged groups of children. This gave rise to establish a working relationship between schools, municipalities and University of Southern Denmark with the ambition to develop knowledge about how to promote PA in a school setting. It led to the Space Study (School site, Play Spot, Active transport, Club fitness and Environment) with the objective to develop, document, and assess a comprehensive intervention in local school districts that promote everyday physical activity (PA) among 11-15-year-old adolescents.

#### Theoretical/analytical framework

The intervention in the SPACE study can be characterized as multicomponent. The intervention is developed based on a social ecological framework. The theoretical framework is that a multicomponent PA promotion programme comprising different organisational and physical environmental intervention components can be designed and successfully implemented in collaboration with schools and municipalities, and that the intervention will lead to increased PA levels among adolescents.

The study involved 14 schools (7 intervention schools and 7 comparison schools) and 1348 adolescents in 5th and 6th grade were enrolled at baseline (mean age 12.6 years). The intervention consisted of 11 components targeting the physical environment i.e. school outdoor area and safe route to school, and the organizational environment i.e. school PA policy, mandatory outdoor recess, PA facilitating teachers during recess, student recess play patrol, school traffic patrol, PA theme week, cyclist education and an after school fitness programme.

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#### Methodology/methods

The SPACE study used a cluster randomized controlled study design. Twenty-one eligible schools in the Region of Southern Denmark were matched and randomised in seven pairs according to eight matching variables summarized in an audit tool. The seven best matched pairs were selected for randomization, resulting in a total of 14 schools participating in the study. The schools were then randomized in an intervention group and a control group. Based on the eight school characteristics and the limited number of schools, a matched pair design was applied to optimize the randomization. In order to increase power an unmatched analysis of the matched data was adopted.

#### **Key Results**

The multicomponent intervention was developed and implemented in the seven schools. parameters. All intervention schools upgraded their outdoor areas (10,000-20,000 €) and established Playspots (65,000-250,000 €). They also implemented school PA policy, kickstarters, mandatory outdoor recess, and school theme week. The school's play patrol, school's traffic patrol and cyclist education were already implemented if feasible at most schools, and did not directly change apart from being included in the school's PA policy. The improvement of cycling infrastructure and organization of the after school fitness programme was implemented in only two local areas.

#### **Conclusions**

With reference to the ecological model of PA, and with some empirical evidence, multicomponent interventions have been recommended as most effective in increasing PA for children and adolescents. However, it is evident that the Space project did not manage to fully implement all components. Especially the components targeting active transportation and the after school programme were unsuccessfully implemented.

The process analysis showed that a multicomponent intervention generates synergy but there is an upper limit related to feasibility and external validity of the intervention.

The final effect analyses based on accelerometry data, fitness test and survey data will show to what degree the intervention has altered the adolescents' PA, physical fitness and well-being.

#### **Implications**

School intervention research applies many study designs including cluster randomized, non-randomized, and natural experiments. The use of multicomponent interventions entails several methodological and analytic challenges. Therefore, further research in close collaboration with school and municipalities is needed to expand our knowledge about the potentials and limitations of using multicomponent interventions.

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# REDUCING THE INCREASE IN CHILD OBESITY: ASSESSMENT OF A SCHOOL-BASED INTERVENTION IN EATING HABITS AND PHYSICAL ACTIVITY IN SCHOOL CHILDREN

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**Keywords:** School, child obesity, action competence, longitudinal study.

#### Introduction/background

In 2006, a prospective study - Avall - was designed to evaluate the effect of a community-based intervention aimed at reducing childhood obesity by educating children on the importance of healthy eating and body movement.

The evaluation measured the effects of these actions on the children's body mass index. The study took place in Granollers, a town situated in the northern metropolitan area of Barcelona (an area called 'Valles Oriental'), Spain.

The town of Granollers has 59,000 inhabitants, 19.85% of them born outside of Spain, most in Africa (7.83%, Maghreb and sub-Saharan countries) and South America (9.13%). Granollers is placed in a semi urban environment with industry and trade, around a road network hub, as the main resources of the city. From 2008 Spain has entered an economic crisis, which seriously affects towns like Granollers, with an economy based on industry and trade.

The acronym AVall stands for 'Alimentation and Physical Activities at the 'Eastern Valles' region'.

The project worked with the schoolchildren using a methodology which focuses on children's participation in four stages: Investigation, Vision, Action and Change (IVAC). This child centred approach views children and schools as catalysts for health promotion actions at the community level. This method had been successfully applied in a pilot project - Shape Up - funded by the European Union and that took place in 20 Member States.

#### Theoretical/analytical framework

The Avall project applied an educational intervention - IVAC - in which children investigate and reflect on how the living conditions of the environment and society affect their health and their lifestyles.

The project worked with the schoolchildren using a methodology which focuses on children's participation in four stages: Investigation, Vision, Action and Change (IVAC). This child centred approach views children and schools as catalysts for health promotion actions at the community level. This method had been successfully applied in a pilot project - Shape Up - funded by the European Union and that took place in 20 Member States.

The Shape Up/IVAC approach differs sharply from traditional preventive or health-promoting interventions focused on modifying children's behaviour, which are based on the implicit assumption that the locus of responsibility for childhood obesity (or any health problems) lies with the children. In contrast, the chosen



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approach aims to tackle the different layers of responsibility and, more importantly, to develop children's and young people's capacity to critically explore and improve the health-related conditions, practices and choice-possibilities at different levels: family, school, community, city and even wider.

This methodology provides a framework for developing strategies for health promotion that guarantees perceptions and knowledge developed by students are action oriented. The teacher becomes a partner for the dialogue.

#### Methodology/methods

The study consisted of a two-year cluster-randomised prospective approach with two parallel arms. For two consecutive years, an intervention was carried out on all the schoolchildren born in the year 2000 in the intervention schools (5 public and 3 semiprivate schools). The rest of the primary schools of the city were used as control groups. At the beginning and at the end of the study, each family participated in the quick Krece Plus test to evaluate the food habits of the child.

The weight and height of the children were measured at their schools during September and October 2006 and 2008 by two specifically trained nurses.

#### **Key Results**

Two years after the end of the study, the intervention group showed a lower increase in BMI (0.85 vs. 1.74 kg / m., p <0.001). The prevalence of overweight and obese children increased by 8.2% and 2.6% in the control group, and by 4.8% and - 0.7% in the intervention group, thus the total prevalence of overweight children increased by 10.8% in the control group and by only 4% in the intervention group.

4 years after the intervention, the differences in BMI and changes in life styles remain the same as the ones observed just after the intervention.

In the case of children with mothers with only primary schooling or less, no difference was observed in the BMI progression between the intervention and control groups, whereas in mothers with secondary or university education, the increase in the BMI was lower in the intervention group (p=0.018).

The results obtained after the multivariate linear regression analysis including all the variables show that maternal obesity and eating at school were the variables that had an impact on the observed effect of the intervention on BMI, always adjusted by school.

#### **Conclusions**

The results demonstrate the sustainability of an innovative educational intervention in health eating habits and physical activity in schools. The IVAC methodology has been effective in Granollers. Participatory and action-oriented approaches are shown to be essential to engage teachers, students and the surrounding community.

It is worth observing that the IVAC methodology prevents overloading the schools with additional tasks. This method requires the training of the teachers, and does not affect their teaching programmes. The study also reveals the importance of an extracurricular intervention that relied on the collaboration of the school and the family.

The IVAC methodology has been a motivational tool for schoolchildren and teachers to adapt the curriculum of each school to include reflection and action related to eating and physical activity. Results have been the fruit of IVAC methodology implementation, and the work of professionals in the project becoming each of them active agents of health promotion.

#### **Implications**

In view of these results some proposals are made for future implementations:

 Firstly, a more intense approach is needed for children from families with an obese mother. This approach should involve the implication of Primary Health Care team for the treatment and follow up of the mother working together with the school team. We have to keep in mind the priorities of family and child at the time to prioritize a particular action, and integrate this into the dynamics of home and family, while mindful of their economic impact.



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- Also, an adapted approach is needed for children with mothers in the less educated group. A cultural
  adaptation of the materials should be done to facilitate understanding, acceptability and compliment of
  recommendations. In addition, less education is a proxy of lower socio economic status, recommendations
  and leaflets need to take into consideration the price and time needed to follow recommendations.
- At the school level, the IVAC approach should be strengthened through in-service training to empower teachers to use a participatory approach.

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## TEACHERS' VIEWS OF ADOLESCENTS' HEALTH PROMOTION AT VOCATIONAL SCHOOL

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#### Introduction/background

In the Finnish Child and Youth Policy Programme 2012-2015 the government has proposed that, among other things, children and adolescents, regardless of their background, should have access to high-quality education, and their well-being and health should be maintained through preventive measures. Improving adolescents' employment, and their equality should be invested in. (Ministry of Education and Culture 2012). The learning environment should be collaboratively involved in adolescents' life management and health promotion. Schools should focus on increasing adolescents' holistic well-being. (Tossavainen 2007.) The purpose of this study was to examine vocational school teachers' views about adolescent health promotion and teachers' role in it. The aim of the study was to find out information on the tasks and responsibilities of teachers and gain insight into their personal thoughts and experiences. The research questions were: (1) How do adolescents' health issues occur in school as evaluated by teachers? (2) How is health promotion for adolescents realized in the school environment as perceived by teachers, and what is the teacher's role in it? (3) What kind of cooperation is there between teachers and parties outside the school community in relation to adolescents' health promotion as evaluated by teachers?

#### Theoretical/analytical framework

An ecological model of health promotion was used as the theoretical framework. The theory includes widely accepted criteria for environmental impacts on children and adolescents, and the assumption that they are products of their environment, and also its producers. (Lohrmann 2010.) Different ecological models take into account the environmental impact on health. The idea is that different environmental factors regulate an individual's health behavior and the physical environment also has a direct impact on one's health. Ecological models have been used in various children and adolescents' health promotion programmes, and, in addition, they have provided a framework for a variety of studies (e.g. Vamos and Zhou, 2009 Waters et al. 2009).

#### Methodology/methods

The data were collected in May 2012 in a vocational school in Southern Finland. The study sought discretionary sampling of the teachers who were willing to share their views and experiences of adolescents' health promotion. The thematic interviews were conducted with 15 teachers as individual, couple, and group interviews. The interview material was interpreted by a theory-driven content analysis based on Lohrmann's ecological model which recognizes individual intrapersonal, interpersonal, and institutional factors.

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#### **Key Results**

Teachers believed that adolescents have a lot of knowledge about health issues. According to them, adolescents' health behavior and health are affected by the ability and willingness to apply the knowledge. In addition, it is influenced by social relationships. The results show that the teacher's role in adolescent health promotion is affected by various health issues in different ways. As the results show, teachers' intrapersonal factors include their life experience, professional competence, and motivation. The results also show that teachers' health promotion particularly materializes as interpersonal interaction in the psycho-social school environment. It includes, among other things, creation of trust with students, educating, and caring. Institutional factors include the physical school environment and management-related factors of the organization. The teachers felt that their ability to influence the level of institutional factors is limited. In addition, it was discovered that teachers had only little cooperation with external parties related to adolescent health promotion. The results show that co-operation with parents is mainly conducted by group leaders.

#### **Conclusions**

- Adolescents' health problems are associated with symptoms that often appear in the form of unauthorized absence from school. The reasons for absence must be clearly sorted out when intervening in adolescents' health problems in an effective way.
- 2. As society changes, the adolescents' behavior also changes. Information about adolescents' health promotion is increasingly available, so teachers need to be updated how to apply that information on their daily practices. Vocational teachers should be given training particularly on adolescents' growth, so that they have better opportunities to respond to the challenges that adolescents face during their studies.
- 3. Cooperation between teachers improves teachers' health promotion actions. Large institutions need to create more opportunities to ensure that teachers get to know each other better.
- 4. Cooperation between parents and teachers is rare, and exists mainly when there are problems. Therefore, developmental work is needed to create more diversified cooperation.

#### **Implications**

Research on adolescent health in vocational and upper secondary schools is rare and, therefore, the phenomenon needs to be studied further. This would provide more comprehensive information on health promotion at school among the whole age group and help understand how the need for health promotion is defined and acted upon in different operation environments. Secondary school teachers and young people's expectations and views of health promotion and implementation could also be studied more widely. Students' and teachers' views can thus be compared with each other and thought about the possible reasons for similarities and differences. In this study, only teachers were selected for interviews. In the future, it will be appropriate to study the views of other vocational school participants on pursuing health promotion for adolescents. Other members might include student counselors, social workers, nurses, school psychologists, and pastors.

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# SCHOOL ORGANIZATION AND TEACHERS' COMPETENCIES FOR HEALTH PROMOTION AND INCLUSION OF STUDENTS WITH DIABETES

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#### Introduction/background

The international standards of care in childhood diabetes mellitus recommended that the school must be involved actively in the care of children with diabetes. In Spain educational policies have the goal of inclusion and focus on student diversity. Even in the Extremadura Region there is a care protocol based on an agreement between the Ministries of Education and Health for promoting diabetes care for children and adolescents at school. In this study we asked about the divide between the diabetes care standards, the educational policies, the theory of health promoting schools, and the school practice in relation to diabetes care among children and adolescents. The objetives are: The school organization for diabetes care and inclusion. To know the reality of students with diabetes. The teachers' competences to promote care and inclusion of children with chronic diseases at school.

#### Theoretical/analytical framework

Our study is based on the bio-psycho-social health model. The educational policies and recommendations for health promotion in schools indicate the importance of education to promote healthy behaviors in the contexts, and to develop processes for equity, social justice and inclusion. Rights to health and education must be respected and further the objectives of the millennium.

Standards developed by international organizations for the care of diabetes in childhood and adolescence (IDF, ADA, ISPAD) based on evidence indicate the importance of diabetes education in all care settings, including schools.

The schools have responsibilities in relation to the organization of space and resources for health education and inclusion. Teachers, as health agents, must develop specific skills for this.

#### Methodology/methods

Descriptive analysis of school care of students with diabetes from 6 to 16 years. The mixed methods used include structured questionnaires for teachers (n = 268) and students with diabetes (n = 126), and focus groups (n = 4).

Teachers' competency, behaviours related to self control of diabetes, and school resourses are analysed. The study was approved by the Bioethics Committee of the Government of Extremadura, following the standards of the Helsinki Declaration for this type of study.



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#### **Key Results**

Most teachers within Elementary and Secondary Education (86.9%) are unaware of international recommendations for the care of DM in the educational context. Regarding care routines and procedures for emergency situations, 61.2% of teachers would not identify the symptoms of hypoglycemia. Only 9% know the medical procedure in an emergency situation such as hypoglycemia with loss of consciousness. Half of the educational professionals recognized their responsibility in relation to students with DM. A high percentage of the sample declined to answer regarding their availability to monitor specific treatment tasks in the classroom. However, 71.3% of professionals feel that their training is necessary for the care of students with chronic illnesses.

Most students with DM1 do not have a place to store their therapeutic resources and for self administration of diabetes treatment in the classroom or the school. Only half have glucagon in their school for an emergency. Only 29.4% said that their teachers know how to use glucagon.

Half the children indicate that their teacher has reported in his classroom about the diabetes characteristics and treatment. They believe that they would use ICT resources for information, and contact doctors and those involved in their care during school time.

#### **Conclusions**

National and regional administrations have made great efforts to implement specific policies and actions, but these remain insufficient in health promotion and diabetes care. Specific actions are needed to promote inclusion, safety and care of students with diabetes. This involves new commitments at every level of the education system, changes in school organization, and encouraging teacher training to focus on lifelong learning, health promotion and care of diabetes in childhood and adolescence. ICT tools can be used to promote health literacy and coordination between different care settings.

#### **Implications**

The results of this study provide information to improve and implement educational policies, and practices related to school organization and teacher training, in relation to health education, and especially the treatment of chronic disease. The aim is to promote inclusion, safety and welfare of children at school.

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## BACK-CARE EDUCATION IN SCHOOLCHILDREN: A SYSTEMATIC REVIEW

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#### Introduction/background

Back pain is considered a public health problem not only by its prevalence, but also from the perspective of personal disability, loss of work time and health costs.

In recent years, low back pain (LBP) is increasingly common in children, affecting around 25%, which is a strong predictor for occurrence in adolescence and adulthood. The epidemiological surveys have been followed by interventions targeting primary prevention in LBP.

The World Health Organization (WHO) in the Health for All document enounces health promotion and healthy lifestyles as a preferred approach in the school environment. Changes in knowledge, skills and attitudes may yield substantial public health benefits, sufficient promise exists to justify further development and evaluation of early back education. Thus, an early effective plan that supports back health programmes is necessary, implemented by a multidisciplinary team with education and health professionals in partnership with children and parents. The systematic review is the result of research literature focusing on back pain prevention and the promotion of healthy behaviour among schoolchildren.

The aim of this study is to understand the effectiveness of posture education programmes in schoolchildren up to 10 years and also sum up the evidence about this theme.

#### Theoretical/analytical framework

Given the high prevalence rates of back pain, already existing in childhood, there has been an alarm for early promotion interventions. However, the lack of evidence in this type of intervention affects the choice about which interventions should be used to prevent this public health problem. Thus arises the importance of this systematic review in order to summarize the evidence relating to back education in elementary schools.

A temporal limit was established in the literature search, searching for relevant articles published between 1994 and April 2012. The application of this filter is justified by the fact that the European Network of Health Promoting Schools has only been in operation since 1994. After this date they deployed an innovative programme with new ideas and approaches to school health promotion. This network has been focused on positively influencing the health behaviour of school age children (aged 4-18 years). On the other hand, the temporal point marks an open mind in terms of health promotion whereas the European Network of Health Promoting Schools influences the world organically in this area (Schools for Health in Europe, 2007). Notwithstanding, the search team is aware of the consequences of establishing a time limit as a selection bias.



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#### Methodology/methods

There was defined a free form review question and the structured research question according to the PESO form-Population: School Children (5-10 years), Exposure: Postural education programmes, Study design: Analytical and observational longitudinal studies and the Outcome: Postural education programmes and their Effectiveness/ Effects. The search syntax was introduced in PubMed and Scopus databases. The bibliographies of all included studies (backward tracking), many excluded studies, and some review articles for additional suitable studies were also searched.

The references were verified and excluded independently using a two-step procedure by two authors.

#### **Key Results**

473 articles were found in PubMed and 1322 articles in Scopus database. After eliminating the duplicate references, there was a total of 1727 references for first evaluation. After the 1st step selection, of 1727 initial articles, 32 articles were included in the second step.

Of 32 articles only 5 articles submitted eligibility criteria for inclusion in the systematic review after step 2. The 27 articles were excluded by exclusion criteria - Step 2 (table 1 attached). After the backward tracking there was included a last article that was grouped with the 5 articles formerly included, making a final number of 6 articles.

All results related to the research question in the six studies were included in table 2 (attached) - which made the presentation of the results in a more schematic way.

Generally, after analyzing the six studies, there seems to be some controversies in literature because although a lot of authors defend that intervention should be as early as possible, the lack of evidence in postural educational programmes for schoolchildren under 10 is apparent. The difficulty in measuring children, and in shaping the health message to, contributes to this. Nevertheless, these studies contribute to practice by presenting new assessment methods (filming, postural analysis), by the evaluation of the influence of posture in the cognitive abilities and by innovative concepts such as "Moving school".

#### **Conclusions**

According to the PRISMA protocol all the six studies respected the main methodological criterion that ensures global methodological properties. Their heterogeneity and methodological quality differences are discussed.

Researchers and practitioners in the six articles present different postural educational programmes with common aims and positive results in back-care related knowledge and behavioural changes. While it can be concluded that the intervention studies results show potential, the differences between the interventions and the studies' limitations state a need for careful interpretation and do not allow full recommendation of back-care education for prevention of LBP in school age. Furthermore, a follow-up into adulthood is missing and there isn't sufficient information to be able to specify which components are important to include in such interventions.

#### **Implications**

Posture being an intrinsic feature is too complex to fit inside drawers or theoretical concepts compartments. Moreover when dealing with children, these concepts into health and rigid rules make less sense. Their body calls movement, asks variability and experience. The posture is just that, using the body to experience the surrounding area. So posture education should not try to shape uniform postures, but help to understand the body's structural anti-gravity function, at home or at work so that each find their space and suits their comfort and well-being, alerted to the consequences of their non-balance. Postural promotional health programmes should progress in future in order to reach a balance between the methodological needs to achieve robust scientific evidence and the ability to adapt interventions to the individualization and specific characteristics of the intervention communities, an imperative for the health promoting field.

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#### A LOCAL NETWORK TO SUPPORT THE HEALTH PROMOTING SCHOOLS IN ITALY IN A PERIOD OF CRISIS, THROUGH THE SHARING OF AN ACTION MODEL, OF IDEAS AND EXPERIENCES

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Keywords: School, health promotion, evaluation, indicators, sustainability.

#### Introduction/background

Local Public Health Service Milano2 serves 53 Municipalities in the province of Milan, with 622,730 inhabitants and 348 schools with 69,033 pupils (age 3-14). In 2006, health professionals began to promote the HPS strategy instead of offering lectures on health related topics. School directors, teachers, parents, students and school staff were invited to build up a local model for a HPS. A handbook that describes the basic concepts, values and principles of the HPS, was tested in 59 schools. The results were positive, as could be seen by the changes that came about in areas like atmosphere, curriculum and health strategies. Since 2007 Public Health Service Milano 2 provides opportunities to help schools to develop the HPS programme. Through the Local HPS Network it offers occasions to share experiences in public meetings, training courses and conferences. Furthermore it published and provided handbooks to develop activities for health topics, a website and more recently a newsletter as well. In 2009 we compared health related changes in secondary schools, 13 HPS versus 20 NonHPS. The amount of health issues in the curriculum was the same in both, but HPS have a better whole school approach and more teachers were involved. All HPS have identified a coordinator, while only 70% of NonHPS had one; all HPS implemented a School Health Team (SHT) involving teachers, parents, school staff, health professionals and students, while only 42% of NonHPS had one, with only teachers involved.

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#### Theoretical/analytical framework

A local model of HPS has been set up in health and education partnership, developed within the European Network of HPS framework (Thessaloniki Resolution and Egmond Agenda). The local model is based on six pillars: school ethos and health strategies, organization and leadership, school atmosphere, curriculum, opportunities in the school environment, partnership with the community. The areas analyzed are referred to the 6 HPS pillars, each area includes 4 goals and a set of indicators to measure the achievement of the objective.

Curriculum and education methods are based on the life skills approach as described by WHO. Health strategies are analyzed on the basis of the social framework as described by Marmot in "The solid facts", focusing on school environment, hidden curriculum, good food and opportunities conducive to better health.

Our research questions now are: is HPS sustainable over a longer period, without additional funds and resources, in a context of crisis like the present one in our country and in Europe? Can health workers help the schools locally to realize a HPS model activating cooperation and networking? Is a scheme of indicators useful to help the schools to plan, implement and evaluate changes related to health?

#### Methodology/methods

A working team, including professionals from the Public Health Service, school directors, teachers, parents and staff, identified the core components of HPS approach and pointed at indicators. A scheme has been worked out and tested by 88 School Health Teams. SHT is the place where schools do planning, coordination, discussion and evaluation. Results have been discussed with the school coordinators and a definitive "HPS evaluation tool" was produced for planning, self-assessment and evaluation of health related changes in school environment. The scheme, under the supervision and advice of health professionals, has been used by every SHT for the local accreditation process.

#### **Key Results**

Since the pilot study done in 2007 by 56 schools, the HPS programme has increased reaching 91 schools in 2012. Each school developed skills in using the HPS scheme for planning, implementation and self-assessment. The goals evaluated with the "HPS evaluation tool" are 37. Since 2007 schools carried out the evaluation and achieved an increased number of goals, rising from an average of 7 goals in 2008 to 27 in 2012.

Average goals have risen in all the 6 areas: school ethos from 0.9 to 3.2; organization and leadership from 0.3 to 2.5; school atmosphere from 1.8 to 3.5; curriculum from 2.7 to 3.4; school environment from 1.2 to 2.9; partnership with the community from 1.4 to 3.1; environment from 1.4 to 2.

Nine health topics are discussed in the curriculum: hygiene, oral health, safety, addictions, nutrition, physical activity, environment, affectivity, mental and social well-being. The number of topics discussed in the curriculum rose in average from 5.1 in 2008 to 6.8 in 2012, however the debate on some issues, i.e. oral health and addictions decreased. This can be due to a reduced interest in topics given much more attention in the past, as well as to the rise of new needs, real or induced by the media.

The percentage of HPS which developed health opportunities rose from 2008 to 2012: smoke free environment from 44 % to 48%, piedibus from 13% to 36%, opportunities of practicing oral hygiene from 17% to 34%; serving fruit instead of other less healthy snacks from 61% to 81%.

#### **Conclusions**

The HPS programme is sustainable over a longer period, despite the growing difficulties faced by the schools, like the raised number of students per class, the reduction of human and economic resources, the lack of space for the activities. Despite these problems, many school directors expressed the importance of belonging to the HPS Network, in order to reorganize and use their internal resources more effectively, stressing that the benefit of being a HPS consists precisely in more effectiveness of actions, due to greater visibility and sharing. A SHT which unites teachers, parents, school staff, health workers and students, is essential to ensure support by health professionals, participation of the community, implementation and renewal, monitoring and evaluation of the programme initiatives. Health professionals can help the schools by providing motivation, advice and resources. Indicators can help SHT in planning and evaluating. A Network is helpful for sharing experiences and finding solutions. A certificate issued by the Public Health Service is useful for acknowledging the efforts of HPS.

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#### **Implications**

In 5 years, 12 schools have left the programme for the following reasons: lack of resources, excessive workload, change or absence of the school manager. Five schools interrupted the programme temporarily for the same reasons. Despite the benefits a HPS can obtain, a minimal amount of funding and resources is, however, necessary to the development and maintenance of the programme. Cooperative work by health professional and teachers is needed, policies are necessary not only at local level, but at regional and national level. These results are being used to promote HPS at regional level and to activate a Regional HPS Network in 2012.

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# USING THE FOOD RECORDS TO FOLLOW ADOLESCENTS' EATING BEHAVIOUR DURING THE IMPLEMENTATION OF THE EDUCATIONAL PROGRAMME 'PLANNING HEALTH IN SCHOOL'

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Keywords: Food record, eating habits, educational programme, adolescents.

#### Introduction/background

Children and adolescents learn about healthy eating habits at school and they know what these healthy concepts are but reality shows they do not put into action the practice based on these concepts (Ransley et al., 2010; Valente, Padez, Mourao, Rosado, & Moreira, 2010). Largely because of this, there is an exponential increase of prevalence of overweight/obesity in children and young people (Lobstein, Baur, & Uauy, 2004; Valente et al., 2010). In order to contribute to changing this current pattern, an educational programme called 'Planning Health in School' (PHS) was designed, implemented and evaluated for the expected positive changes on eating behaviours among adolescents. This PHS programme integrated healthy eating and active living issues with adolescents' participation and their motivation for healthier behaviours. The PHS programme was implemented during a complete academic year with grade 6 adolescents of 10 to 14 years old. It started with an initial diagnosis and followed with the implementation of a set of eight learning activities and the monitoring of the process with several assessment tools. To evaluate the dietary evolution among adolescents, a 3-day food records tool was used to assess their daily food intake. In this study we describe the methodological approach used with the food records (FRs) and the achieved adherence among a group of adolescents during the implementation of the PHS programme.

#### Theoretical/analytical framework

There is no single best method for assessing persons' food consumption as all have limitations (Thompson & Subar, 2008) because persons usually do not pay attention to the foods and beverages they eat and drink (Thompson, Subar, Loria, Reedy & Baranowski, 2010). However, there are three commonly used tools in such evaluations: food frequency questionnaire (FFQ) (Thompson & Byers, 1994), 24-hour dietary recall (24HR) (Beaton et al., 1979) and food records (FRs)(Fisberg et al., 2005).

The FFQ is suitable to assess the long-term eating behaviour over time, up to one year, providing general information about food intake (Thompson et al., 2010). The 24HR is often used to estimate usual food intake for 24 hours, but a single day evaluation gives reduced dietary habits (Dodd et al., 2006). The FRs are similar to 24HR, but give more registration days (3 to 7 days) allowing to record the actual intake of all foods and beverages with detailed information (Fisberg et al., 2005). Thus, FRs is the preferred method, especially when the main focus is raising awareness in eating behaviours to generate changes, as in intervention studies (Thompson & Byers, 1994).

The obtained information will answer the following research questions:

- 1. Are adolescents consuming adequate amounts of fruit and vegetables (F&V)?
- 2. How does the consumption of F&V vary with gender, age, day of the week, at school or at home?
- 3. What are the beverages that contribute mostly to adolescents' daily diet?

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#### Methodology/methods

This longitudinal study involved 240 adolescents (130 boys, 110 girls) of grade 6, aged 10 to 14 years old. The application of a 3-day food records tool allowed students to report all the food and beverages they consumed for 3 days in high detail: time and place, cooking method, quantity, the brand, and a space to comment anything else. Before starting the FRs application set, a briefing session was organized to give instructions on how to fill correctly the food record form and its deliveries. Seven FRs were applied subsequently to the training modules, carried out along the academic year. The effectiveness of each specific module was determined by the FRs in short and long term.

#### **Key Results**

The sample was constituted by 231 adolescents, aged 10 to 14: 121 (52.4%) boys and 110 (47.6%) girls. The mean age was 11.0  $\pm$  0.70. The 8 modules they selected were the following: 10 steps towards a healthier lifestyle; Water & milk help to grow up; Exercising every day to be healthy; 3 fruits a day, how much good it does!; F&V are essential to health; Start on moving!; Best snacks; Final game: who has learned about everything? A total of 1091 FRs were collected, making 3273 days of food reports. The summary of the collected data is the following:

- 70 students (30.3%) returned all their 7 FRs completely filled in, with greater involvement of girls (42 = 60.0%) as compared to boys (28 = 40.0%). Only 12 students (5.2%) did not deliver any food record.
- Most of the adolescents (71.4%) delivered 4 or more FRs and 25.6% delivered less than 4 FRs. Again girls had higher rates of delivering FRs (54.5%) than boys (45.5%).
- After each training module the return of FRs was always above 70% but this was not observed with the
  active living and sports module that occurred near the Easter Season and school holidays (return of 44%).
- Adolescents also gave their opinion about what they liked less about their tasks during the intervention: 116 (52.3%) reported the FRs as 'too much work to do' 'too many days to record', 'whenever I eat I have to record' or 'I do not like to write'; on the other hand they agreed that FRs helped them to pay attention to what they were eating."

#### **Conclusions**

Although the FRs were considered by the adolescents as a tedious task, the FRs recovery reached high rates along the relatively long period of intervention. Girls, as a group, proved to be more engaged than boys in the recording process, delivering more information about food and beverage consumption. The FRs tool allowed access to adolescents' food choices and eating habits patterns, identifying trends, drawing conclusions and providing information for future interventions. Therefore, the use of the FRs (as a tool to monitor behaviour eating habits and their changes) proved to be an efficient method for collecting information, enabling to assess the effectiveness of the different educational modules as well as the PHS intervention as a whole. This work shows the usefulness of the food dietary report but a subsequent content analysis study will give further information about it.

#### **Implications**

Like this work, other studies have discussed the most commonly used methods to evaluate dietary intake and the need to record it in a frequent and constant manner which can be tedious work (Livingstone et al., 2004) and because of this, the participants can make incomplete FRs or give up and even drop out the study, which may cause a low rate of adherence and insufficient collected data with consequent insufficient outcomes. A careful implementation of a FRs for accessing adolescents' dietary intake: (i) to explore the food and beverage consumption patterns more closely to real life, (ii) to identify dietary intake timings (place, time, frequency, variety, quality) and the variation over time, (iii) to assess the effectiveness of the PHS intervention. The FRs, as a tool to monitor changes in dietary habits, proved to be as an efficient method for gathering information that can allow inference on the outcomes of a programme of intervention in the area of healthy eating: the successful outcomes and those less positive that can serve as indicators for process improvement in the future.

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## A MULTIPLE CASE STUDY ON ACTION-ORIENTED SEXUALITY EDUCATION IN THE SCHOOL COMMUNITY

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**Keywords:** Sexuality education, action learning, action competence.

#### Introduction/background

Based on the WHO (1975) vision of sexual health, which includes the capacity to feel pleasure and control sexual behaviours in accordance with personal and social ethics, free of fears, shame, guilt, false beliefs and other psychological factors which damage sexual relationships, and free of organic disorders and diseases which interfere with sexual functions, this school-based multiple case study aims to contribute to the evidence based on action-oriented sexuality education using information and communication technology (ICT). In this sense, the outcomes and processes of a national project involving six schools will be discussed in order: i) to characterise young people's ideas regarding the participatory action-oriented sexuality education project; ii) to analyse how ICT can strengthen the reciprocal effect of participatory action-oriented learning and the collaboration between schools; iii) to analyse the visions of the students regarding the relation between their level of participation and the results of the project; iv) to identify the dilemmas and barriers faced by the teachers during the implementation of sexuality education in the school community.

#### Theoretical/analytical framework

This participatory and action-oriented sexuality education project and the didactic material provided to the schools to support them are inspired by the democratic health education paradigm (Jensen, 1995, 1997, 2000) and the Danish critical health education theoretical framework (Simovska & Jensen, 2003, 2008, 2009; Simovska, 2007, 2012). Therefore, this project is characterized by a positive and broad vision of sexuality, where it is not the educators who indicate to students what the lifestyles and life conditions are that they need to change to solve sexual problems, but rather the students who investigate them, creatively thinking of their visions for the future where they want to live, planning and carrying out actions to reach these visions, identifying barriers to overcome, and evaluating if these actions resulted in the desired changes. As a consequence, starting from a broad concept of sexuality, students develop their abilities to influence their own lives and life conditions and act as active citizens. The pedagogical approach is democratic and participatory and its goal is the development of student action competence. It is argued that this objective is achieved with the genuine participation of the students (Simovska, 2007, 2012) in democratic sexuality education projects that develop student action competence within a broad concept of sexuality, through the IVAC (Investigation - Vision - Action and Change) approach (Jensen, 2000; Simovska & Jensen, 2003, 2009).

#### Methodology/methods

This qualitative research was anchored in a constructivist and interactionist paradigm, set up as a case study with interpretive and evaluative aims. Six schools were selected to attain a broad variability in the conditions in which action-oriented sexuality education should be carried out. For data collection in the natural context were used: observation; student, teacher and parent semi-structured group interviews; online class-diaries; e-forum discussions; and contents of the project website. All data were printed, and analysed in a system of categories based on a hybrid inductive and deductive approach, inspired by Grounded Theory and theory-oriented.



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#### **Key Results**

In all schools the majority of students considered that the most important aspects they had learnt during their action-oriented sexuality education were that they should postpone their first sexual relationship; be ready for their first sexual relationship; and feel at ease to go to the Health Centre to obtain condoms and use them. In the project, what the students most liked was the planning and implementation of actions. Most of the students in all schools considered that the acknowledgement of the projects by several schools on the website allowed them to analyse the continuity of the project and show what people their age were capable of doing to contribute to sexual health promotion. The effect of this website as a change instrument at school and in the community was only valorised as a consequence of the students' action to maintain the sustainability of the project. There were three fundamental participation aspects for almost all the students in all schools: having had the responsibility of choosing the themes and activities to carry out; having given lessons to their own class; the great freedom they felt when suggesting the visions and deciding on the planning and development of the actions. The main barriers mentioned by the teachers were the continuity of the project; the shock between home and school learning; the lack of collaboration from unprepared class teachers and the incomprehension of the school community regarding sexuality education.

#### **Conclusions**

In all case studies the principal problems worked on by the students were linked to their own personal life and generally included the four dimensions of action-oriented knowledge (effects and causes of the problem; strategies of change and visions). Most of the students considered that the website already educated people their age, because the projects reflected the doubts and concerns they felt and were common to most of them. According to the students' opinions, their influence regarding reality as part of the learning process was only achieved with their action experiences and the website was only a continuation of such action. The students talked about participation essentially regarding the viewpoint of who chooses and not who suggests, and pointed out that these were the aspects that most contributed to liking the project and gaining self-confidence to solve their personal problems in the future. The barriers faced by the teachers included teachers' concerns regarding the parents' and students' myths and fears and the sustainability of the project.

#### **Implications**

The conclusions from this research suggest implications regarding teacher training, the organisation of the curricula and curricular management. The efficiency demonstrated by the IVAC methodology in the development of student action competence, suggests that this should be integrated in teacher training, as well as the democratic health education paradigm and the broad and positive concept of health within a methodological approach which creates conditions to build the four dimensions regarding action-oriented knowledge. Action-oriented sexuality education activities should be integrated in the School's Curricular Project and developed according to the context of each class. The Students' Support Office should support the school as a health promoting school and enable students to solve their personal or group problems and guide them to external school appointments whenever necessary. The results of this investigation also suggested that the programmes regarding the various school subjects should have some flexibility so as to collaborate with these action-oriented projects.

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# SPENDING MONEY IN THE SCHOOL CANTEEN OR BRINGING FOOD FROM HOME? FOOD PURCHASING BEHAVIOR OF LOWER EDUCATED ADOLESCENTS IN THE NETHERLANDS DURING SCHOOL TIME

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**Keywords:** School canteens, healthy eating, adolescents, food choice motives.

#### Introduction/background

Recently, different public private partnerships were launched in the Netherlands, focusing on school health promotion in general and healthy school canteens in particular. However, insight in the food purchasing behavior of adolescents during school time and their motives for purchasing food in the school canteen is limited. As overweight is especially increasing among lower educated adolescents, it is important to gain insight in the food choice behavior of this important target group. Therefore, the aim of this study was to investigate where lower educated adolescents buy their food during school time, and what are their food choice motives for purchasing food in the school canteen.

#### Methodology/methods

A total of 581 adolescents completed a semi validated questionnaire during their classes or breaks at two Dutch lower vocational schools in March 2013 (response rate 90.6%). The questionnaire measured adolescents' purchasing behavior during school time and their food choice motives (health, mood, convenience, taste, price, weight control, familiarity, peer influence and hedonism). Chi-square tests, t-tests and logistic regression analyses were performed.

#### **Key Results**

A total of 59.1% of the adolescents purchased food in the school canteen less than once a week; 67.9% reported bringing food from home every day. 'Canteen shoppers' (≥ 1 time a week purchasing food in school canteen) had significantly less breakfast, brought less food from home and spent more money on food during school time than 'non canteen shoppers' (< 1 time a week purchasing food in school canteen). The food choice motives 'importance of price' and 'being familiar with the food in the school canteen' were positively associated with purchasing food in the school canteen.

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#### **Conclusions**

As the frequency of purchasing food in the school canteen was quite low and most adolescents brought food from home every day, further research should investigate the healthiness of the home food environment in order to improve the dietary behavior of adolescents. Furthermore, we recommend schools and caterers to pay attention to the price and familiarity of healthy products offered in the school canteens, and to investigate the feasibility of offering healthy breakfasts.

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## THE DESIRE TO LEARN. GARDENING, COOKING AND PASSION IN OUTDOOR EDUCATION

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Keywords: Outdoor Education, Desire to Learn, Health Development.

#### Introduction/background

An evaluation of an adventure education and outdoor learning programme (Wistoft et al., 2011) has showed that dedicated teaching in the outdoor learning environment promotes a desire to learn in students, irrespective of gender, social background or school grade.

Research on Green Education and School Gardening has long demonstrated the positive effects of outdoor settings on learning outcomes. Pupils who are taught in a school garden achieve better results at both an academic and a personal level than pupils who are not (Rickinson et al., 2004; Blair, 2009). Moreover, the school-garden children have improved self-esteem (Hoffman et al., 2007), a higher degree of motivation and environmental awareness, and an understanding of the way different aspects of nature correlate with one another (Bowker & Tearle, 2007; Klemmer et al, 2005). It is generally agreed that school gardens create a feeling of ownership, improved social interaction within the class group, an increased level of physical activity, and an increased level of parental involvement. But what is less well-understood is exactly how a school garden improves the students' desire to learn. The objective of this paper is to present a systems-theoretical re-interpretation of certain findings of the Danish evaluation report focused on health promotion in schools. The research question is: how can an outdoor learning programme improve students' desire to learn and develop health promotion in schools?

#### Theoretical/analytical framework

The paper shows how a systems-theoretical approach (Luhmann 1995; Anderson & Born 2001) can improve our understanding of how outdoor environments motivate students to learn what is intended in health education in schools. More specifically, it presents an analysis of a Danish school garden programme called 'Gardens for Bellies' (Haver til Maver), based on a completed research-based evaluation (Wistoff et al., 2011). The evaluation showed that dedicated teaching in an outdoor learning environment promotes a desire to learn in pupils and, indeed, improved learning outcomes. However, the experience-focused, qualitative approach left evaluators with little more than praise for the programme's results — no wiser about how the garden environment fostered a desire to learn. It is here that systems theory can be of great help. Using it to distinguish between experience and communicative action we come to understand how the students' personal commitment to learning is confirmed in decisive ways in an outdoor setting. Indeed, it can be convincingly shown that this confirmation is achieved through a particular semantic code, namely, "the passion of love" (Luhmann, 1986, Andersen & Born, 2001), which gives a strong and precise sense to what is often vaguely invoked as a "desire to learn". After grounding this claim in an empirical analysis of the Gardens for Bellies project, the paper concludes by drawing out the most salient implications for educational practice.

#### Methodology/methods

The evaluation of 'Gardens for Bellies' relies on data that were collected by means of primarily qualitative but also quantitative methods. The qualitative data were based on: field observations (8 months); individual interviews with principal organizers and municipal consultants (N=6); focus group interviews with teachers and students (N=98), the instructors (N=6) and parents (N=18), and workshop observations (N=8). The quantitative data were based on questionnaire studies among parents (N=193(135)). In the questionnaires, the parents were mostly asked about their specific experiences and to provide an evaluation of the programme, including the benefits gained by their children.



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#### **Key Results**

A number of competencies developed by the participating pupils can be set in relation to the objectives for the school subject of health education in relation to pupils' physical and mental health. The learning benefits achieved by the students are confirmed by the parents, who view the outdoor programme as a unique supplement to the standard school curriculum. The students are invited into an environment where they can act and where their experiences are the central element; in addition, the teaching to which they are exposed here is full of passion and love symbolism. Although the results of the evaluation may not be immediately transferable to other contexts, these can hopefully inspire more generalized didactic analyses as well as provide grounds for reflection regarding other learning theses.

The element of passion is a central one and cannot be ignored. Either there is passion or there is not; passion cannot be staged or organized. But it can be reflected, both didactically by the instructor (which could require support) and in a more abstract/theoretical way, as the paper will show. Nevertheless, outdoor teaching is a 'living entity' which is shown here by the instructors' passion and the conscious dissemination of this passion. The more general message is that the motivation of the students strongly depends upon the reflected passion from the instructors. Health educators must strive to educate in order to provide experiences for the students.

#### **Conclusions**

The evaluation showed that dedicated teaching in an outdoor learning environment promotes a desire to learn in pupils and, indeed, improved learning outcomes. However, the experience-focused, qualitative approach left evaluators with little more than praise for the programme's results – no wiser about how the garden environment fostered a desire to learn. Gardens for Bellies is a targeted, pedagogic and didactic strategy. Among other things, the evaluation has shown that the project's teaching instruments and its intrinsic vocational and professional competencies support the active participation of pupils in an outdoor learning environment relevant to their own healthy lives, their own values and their own ideas and actions. We can conclude that students who participate gain a desire to learn. Moreover, it is the concept as a whole rather than any particular aspect that has shown itself to be the explanation for how the students' desire to learn is strengthened. Indeed, we have seen that communication and experience are integrated in what systems theorists call a "passion of love".

#### **Implications**

For researchers and educational practitioners alike, it is important to verify the stability of these findings and interpretations and to provide more explanations for motivational teaching and learning attributes. Equally, it is important to provide differences between these explanations and those in other studies. Such research includes both qualitative data such as field observations of both teacher and student participants and theoretical, perhaps philosophical analysis. Moreover, our observations and analysis verify descriptions of existing motivation and learning attributes that have been found in earlier studies. While the explanation of the teachers' passion for showing their passion and the code of love might be similar in different learning environments, it might very well be that their passion is based on different educational programmes, or connected to their reflection on different educational core beliefs and values.

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## EVALUATION OF THE 'DOLL PROGRAMME' AND PARENTAL AND SEX EDUCATION IN GREENLAND

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Keywords: Intended pregnancy, Baby Dolls, Sex and Parental Education.

#### Introduction/background

A Real Care doll is a baby simulator and the Doll Programme in Greenland intends to learn students the amount of responsibility involved in caring for a baby. The programme consists of sex education, competence development in relation to establishing a family and prevention of unintended pregnancy. More than one thousand of predominantly eight- and ninth-grade students in Greenland have been provided with an experience of being the parent of a newborn infant using Real Care baby simulators. The programme requires students to become the sole caretaker of the baby simulator, whose appearance and behavior imitates a real infant. The experience is intended to demonstrate the demands of caring for a new born baby. Throughout the 2 or 3 days, the students typically are responsible for the 'baby'; an internal computer collects data about the students' performance. Accompanying education helps students explore the physical, emotional, social, and financial consequences of parenthood.

Along with a new family and sex education programme for the oldest pupils in Greenland's state schools, caring for the dolls will qualify students to make the basic decision of whether and, if so, when they are ready to have a baby. In addition, the programme will strengthen students' personal judgment and actions in relation to protected and responsible sex. The educators are healthcare assistants, health visitors and midwives. Learning and teaching takes place in classrooms at public schools.

#### Theoretical/analytical framework

The evaluation study is empirical. The general objective is to determine the short-term impact of the family and sex education including evaluating the effectiveness of Real Care Baby simulation as a strategy to influence Greenland teenagers' perceptions of pregnancy and parenting. The theoretical framework is health education theory, existing evidence from parental education research and sex education research as shown in the list of references.

#### Methodology/methods

The evaluation is an account of the effects observed in the Doll Programme partly through an extensive survey of students and parents (N = 1068) and partly through interviews and observation of the teaching. The study is a pre-/post-test questionnaire survey design supplemented with observations of teaching in Nuuk and at selected towns on the west coast of Greenland. The sample includes 802 answers to the questionnaire from Greenland students predominantly aged 13 to 16 years and 266 parental answers. Classroom observations have been supplemented by personal interviews with the educators, statistics by Greenland's official Statistics Bank and the Rural Doctor Reports 2008-2012.

#### **Key Results**

Significant gains were found on the impact of the students' perception of how early parenting affects their social and emotional life, and apprehension of the amount of responsibility involved in infant care. Parents and grandparents are to follow the students more prepared to having 'early children'. On a post-test measure, the students report significant differences before and after carrying the doll with regard to the age at which they wished to have a child, their education plans and social life. Unfortunately, the self-esteem of some students is lower after facing



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parental duties. So, even though the project's objective is to support parenting, there is also a slight tendency towards a negative effect on students' self-confidence and belief in their own parental skills. This is linked to the lack of discussion in the teaching about the difference between caring percentage (digitally scanned after the doll care) and parenting. However, for most students this is not enough to rob them of the long-term desire to have a child. There are significant differences between several monitored parameters in Nuuk and in selected towns on the coast, as Greenland is in this area divided into two separate parts.

#### **Conclusions**

A significant effect of both doll care and family and sex education is that students were significantly more motivated to use contraception than they were before. Almost no students, who prior to doll care had sex without using contraception, alleged that their habit would continue. We can thus conclude that students' awareness of contraception has been intensified. Just how far this increased awareness of the importance of using contraception leads to altered behavior patterns has not been studied. It can be concluded that the doll care affects students' self-evaluated parenting both positively and negatively, and that some of the students connect the score directly to a self-image of parental suitability. This is inappropriate, since it is not a given that the doll care percentage gives a real picture of whether or not a student would make a good parent. The Doll Programme education places great demands on the teachers. This applies to both the choice of teaching materials, teaching reflection, empathy, relational skills, and professional and personal safety.

#### **Implications**

The evaluation study's results show a substantial need for further competence development among the educators: Changes in the students' attitudes and values often occur, when the teaching method is based on discussion, and when students have the opportunity to take an active approach to their own life situation and their own ideas about having a baby, also if the teacher does not come over as over-authoritative. In places where the teaching is done in accordance with the doll project's educational guidelines, and where discussions are attitude- and assessment-related, rather than factual, the students' approach is more exploratory and meaningful. The benefits for the students are significantly greater in places where both students and teachers play an active role: for example, where group work and discussions take precedence over traditional blackboard teaching. This implies discussion-based teaching based on the students' current attitudes, interests and values.

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## HEALTH PROMOTING SCHOOLS MADE A DIFFERENCE TO THE SCHOOL HEALTHY EATING POLICY IN POLAND

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**Keywords:** School meals, facilities for eating, school nutrition policy.

#### Introduction/background

School is a place where young people spend a substantial proportion of their lives. During school hours they should drink and eat at least one meal. Eating at school should be considered more than simply satisfying physiological needs for nutrients and energy. Promoting healthy eating in school supports health education (nutritional education is its important component). The new challenge posed by the need to provide healthy food in schools is rapidly growing due to the increasing prevalence of overweight and obesity among children and adolescents. In Poland 16.7% children aged 7-18 years are overweight (1). The organization of school meals as well as participation of schools in obesity prevention is not satisfactory (2). Over the 20 years of the existence of the health promoting school (HPS) programme many schools undertook activities in this field mainly by implementation of different educational programmes on nutrition offered to schools by various organizations. The aim of the paper is to present the results of the survey carried out in 2010 in HPSs and other schools (which did not implement this programme) concerning: (1) facilities, school meals and the availability of beverages and food at school; (2) school healthy eating policy.

#### Theoretical/analytical framework

School meals are a basic element of children's healthy eating; they support their well-being, the ability to learn and boost the effectiveness of health education.

#### Methodology/methods

An anonymous questionnaire 'School environment and health', based on HBSC 2009/2010 'School-level questionnaire' with a part concerning nutrition, was used as the survey instrument. It was sent by post to head teachers of randomly selected schools belonging to regional HPS networks and schools which did not undertake the HPS programme (control group). The final sample size was: 202 HPSs and 378 schools in the control group (response rate 76%).

#### **Key Results**

In comparison with control schools HPSs had better facilities for eating at school (canteen - 81% vs. 72% respectively; school store - 74% vs. 62%). HPSs offered lunches or other hot meals more often (87% vs. 81%) and organized second breakfast (drinks and sandwiches prepared at home or in school eaten together) for all classes (29% vs. 24%). Healthy products were offered in more HPSs (fruit, vegetables, whole-grain bread) but the availability of junk food (sweets, soft drinks, salty snacks) was similar in both groups. More HPSs had a written policy with the following objectives: to increase the consumption of healthy foods (48% vs. 23%); to limit the consumption of sweets, chips and soft drinks (23% vs. 6%). HPSs had information procedures about healthy eating policies for students, teachers and parents more frequently than in control schools (61% vs. 73%).

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#### Conclusions

Research results show that the infrastructure for organizing students' nutrition at school is relatively good. However, the majority of schools in Poland still do not appreciate the need for all pupils to eat a meal and healthy foods at school. So far, the postulate that each pupil should eat school meals has not been implemented. The situation concerning almost all the indicators used was better in HPSs than in schools which did not implement this programme. It can be recognized as a positive outcome of the long term health promotion programme in schools. In spite of these results the activities undertaken in HPSs still lacked coherence and continuous, systematic projects in the future are necessary.

#### **Implications**

The results of this survey were used in the development of the HEPS (Healthy Eating and Physical Activity in School) project in Poland. The official statement concerning the implementation of the healthy eating policy and practice in schools was signed by the Ministers of: National Education, Health, Sport and Tourism in 2012. Also the three-year pilot project 'Movement and Healthy Eating in Schools' has been implemented in 10 HPSs in 2012.

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## CAN PHYSICAL ACTIVITY IMPROVE THE EDUCATIONAL ATTAINMENT OF CHILDREN?

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Keywords: Physical activity, school health, educational attainment.

#### Introduction/background

There is a body of evidence which shows that regular participation in moderate to vigorous activity is an essential part of a healthy lifestyle. Active young people are more likely to report better general health and there is growing evidence that active children are more likely to become active adults.

Also, if young children are inactive there is evidence that this tends to persist into later childhood. There is also evidence that young people need support and education in these domains as inactive modern lifestyles are contributing to an increase in health problems in children and adults. These problems are not only manifested in obvious features such as the growth of obesity and related increases in type 2 diabetes, but also in measures of mental health and lack of satisfaction expressed by some young people in relation to their lives.

In addition to the health benefits, there is growing evidence on the value of physical activity for all ages and extra benefits to young people because of neurological changes which happen in children and young adults. A systematic review of physical activity and academic performance concluded that participation in physical activity is positively related to academic performance in children.

This paper will explore that evidence base in relation to the reality of physical activity opportunities in schools today. It will highlight a mismatch and suggest possible solutions within a health promoting school model.

#### Theoretical/analytical framework

This presentation is based on a theoretical model which rejects much traditional European thinking where there has been a tendency to separate cognitive processes from physical processes in a mind/body dualism. There is now clear evidence that the working of the brain is not separate from the processes of the muscles or circulatory system in any fundamental way and that the brain's efficiency is improved by physical activity experiences. This has great implications for learning and modern education policy in terms of the curriculum and all aspects of wider school life.

#### Methodology/methods

A literature review of the evidence of the health and educational effects of physical activity on school-age young people, in the context of physical activity and physical education opportunities in schools today. The literature review which was conducted mainly by a web search, considered both review papers and individual research studies and, where possible, considered study design, validity of measurements, analysis of data and validity of conclusions. Advice and comment from specialist colleagues was also sought on research relevant to the review.

#### **Key Results**

There is growing evidence that the importance of physical activity to health is broadly understood but that the benefits to children's brain function and educational attainment from physical activity is less understood by policy makers and that these benefits are under- estimated in many educational systems.

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#### Conclusions

There is a need to summarize the growing evidence on the benefits of physical activity on children's educational attainment for education policy makers. This needs to include evidence on the importance of parental support for children's physical activity and on a supportive physical and social environment both within and outwith the school.

#### **Implications**

It is not clear from research on the levels of physical activity which are required to produce measurable effects on educational attainment. In addition the varied measurements used of cognitive functions, academic achievement or educational attainment vary from study to study, making comparisons between studies difficult in terms of quantifying the effects.

Therefore there is a need for research which looks at the impact of specific qualitative and quantitative factors within physical activity on defined aspects of educational attainment.

It is suggested that educational attainment should be defined in broad terms and not merely in terms of specialised cognitive tests.

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## **Practice based ABSTRACTS**



## **Practice based ABSTRACTS**

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## OPTIMIZING THE TIMETABLE AS A WAY OF PREVENTING FATIGUE IN SCHOOLCHILDREN

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**Keywords:** Timetable, difficulty of subjects, prevention of fatigue.

#### What did you do?

The medical-sociological study was carried out by means of a specially designed questionnaire. The proposed questions were related to students' preferences of certain subjects, factors determining these preferences, academic performance, time spent on homework. A special place was given to subjective evaluation of the difficulty of subjects by students. The findings identified four important sets of indicators (factors) that form the concept of "lesson fatigue" and explain 80.6% of the total dispersion. The method of logical interpretation determines the difficulty related to the identified factors. The first set of indicators characterizes the actual difficulty, the complexity of subjects, which is closely associated with school achievements and duration of homework. The contribution of the first factor into the total dispersion is the highest - 33.8%. The second factor (20.5% of the dispersion) reflects the relationship to the lessons, the preferences of subjects with the child's gender, his/her emotional state, age, and, therefore, the class of learning. The third factor (15.3% of the dispersion) is associated with the conditions of learning. It included the parameters that define the specific objective and subjective conditions of each town, school, class collective. The fourth factor (11.1% of the dispersion) was interpreted as individual aptitudes and abilities in the preference of subjects.

#### Why did you choose to do this?

One of the methods of optimizing school loads is rationalization of the school timetable by means of the distribution of subjects during the day and week, taking into account the dynamics of the mental health of students. The increase in the volume and complexity of educational information, the introduction of new educational standards, intensification of mental activity and appearance of new disciplines actualize the problem of further studying lesson fatigue and the creation of modern scales of difficulty of subjects.

#### Who were the participants?

Respondents were more than 1,500 students at secondary schools in different cities in Russia.

#### What actually happened?

Thus, the methods of multidimensional statistical analysis confirmed the multi-component concept "lesson fatigue", which included the actual difficulty of the subject (the complexity, scope, novelty, etc.), the state of the child (age, sex, and individual personality traits, abilities and inclinations, the possibility of their optimal implementation, emotional state), learning conditions. From a range of factors shaping the lesson fatigue, the difficulty of subjects can be used to regulate the school load in organized school teams. During the study a new scale for the distribution of subjects for secondary school was developed. The degree of difficulty of each of them is represented in points, according to the place of the subject on the scale. The use of information and computer technologies significantly extends the application of the scales of difficulty.

#### What can we learn?

Using information about the difficulty points of school subjects allows to build the school timetable in accordance with the daily and weekly dynamics of mental health of students, which in turn will delay and prevent fatigue, and maintain students' optimal functional state.

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# IMPACT ASSESSMENT OF THE DANCE4LIFE PROGRAMME IN RUSSIAN SCHOOLS

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**Keywords:** Dance4life, reproductive health and rights, edutainment.

#### What did you do?

A large-scale international youth movement called dance4life has been introduced to schools in 22 Russian regions since 2005. The purpose of D4L is creating a critical mass of young people carrying changes through their involvement into active participation in promoting healthy lifestyles and HIV prevention. The movement aims to inform and educate school children and wider stakeholder groups - pupils' parents, school representatives, authorities, media. The Dance4life concept is unique as it attracts young people by means of using social marketing tools, cooperation with civil society organizations, by an incentive model as well as music and dance combined with training in life skills (the edutainment strategy - education by means of entertainment) for HIV prevention and combating stigma. Dance4life uses a unified method of social change when young people receive support from the organizers and volunteers of the organization and, in their turn, provide support to people from their social environment. Primary target group of the programme is young people aged 13-19 - high school pupils and younger university students. Secondary target groups are parents, teachers, young people over 19 years old, decision-makers and opinion leaders. Young people completing all 4 stages of the programme become agents4change and get acknowledgement and reward from regional coordinators. To evaluate the programme impact quantitative and qualitative research was implemented in 4 dance4life regions.

#### Why did you choose to do this?

In 2009 Dance4life process evaluation took place (Hermanns et al 2009) which revealed potential areas for improvement in terms of organizing the programme by countries' coordinators and role of dance4life international. However questions remained, such as: 'Does the programme contribute to changes in knowledge and sexual practices? Are the capacities of the young people sufficient to become leaders? Are their needs, wishes and innovative ideas taken into account sufficiently?' In this impact assessment those questions have been addressed.

#### Who were the participants?

Impact research was conducted in 2011 by Centre for Studies of Civil Society and Nonprofit Sector (HSE); the Royal Tropical Institute (KIT), Amsterdam was research coordinator ensuring quality and synthesis of studies. E. Alekseeva took part in research instruments development; FOCUS-MEDIA staff organized field work in 4 project regions. Research target groups:





- 1. agents4change (pupils passed all project stages)
- teachers-organizers of dance4life
- 3. volunteers that conducted skills4life
- 4. regional managers and FOCUS-MEDIA staff.

#### What actually happened?

We utilized qualitative methods - in-depth expert interviews and focus group discussions; quantitative data was collected by face-to-face interviews using a structured questionnaire. Field studies were conducted in four regions of Russia: the Republic of Udmurtia (the town of Izhevsk), Tomsk region (the town of Tomsk), Tver region (the town of Tver) and Chelyabinsk region (the town of Chelyabinsk). Qualitative research: in-depth expert interviews - 5 regional/Moscow managers; 4 teachers; 4 volunteer peer educators; and 20 with agents4change; 6 focus groups: 2 boys, 2 girls, 2 mixed. The sample of quantitative research is random and limited by quota. A random selection from the list provided by the local project manager was done; the quota is 50% of boys and 50% of girls.

The interview duration is 20-25 minutes. Sample volume: 105 respondents at the ageed 13-23. The majority of respondents aged 15-17. Face-to-face interviews conducted among participants and non-participants of dance4life. In total 105 interviews held in 4 regions: 82 participants/23 non-participants.

#### What difficulties were encountered?

Some city municipalities and school administrations had a negative impact on the project, mainly at early stages, prior to and during the launch. Some of them are sure such information corrupts pupils and provides knowledge absolutely unnecessary for life. This is a consequence of limitations, social stigma and taboos existing in society towards HIV/AIDS, sex education, etc. Among those who participated in the first stage of dance4ife only 25% took part in the next stage, and only 20% became agents4change. The most often named reasons for not participating are as follows: (1) lack of time (65%) due to high demand on behalf of school, other education institutions: sports, dancing, music and art schools (2) illness (26%) (3) domestic/family tasks (21%).

Another difficulty is sensitivity of the subject - school pupils are often not ready, not willing to talk about HIV/ AIDS, sex, contraception, etc. Besides, some boys don't like dance or don't believe dancing to be a 'masculine' type of activity, have negative attitude towards the heart connection tour (1st stage of the programme).

#### Which aspects went particularly well?

Target groups adequately perceived the essence of dance4life: its logically consecutive stages, values and mission. After launch of project they become more interested in SRHR, HIV/AIDS, tolerance; received information is often new for them. Teachers and pupils agree that dance4life is unique and universal social technology. The majority of respondents state dance4life really fits and is efficient for Russia. D4l programme developed based on social/cultural characteristics of young people. It offers to acquire knowledge and have fun at the same time. This differs from standard school lessons, makes it easier perceive information, pupils don't get so tired. They can ask most pressing questions on HIV and SRHR.

#### How do you know how successful it was?

The total number of young people that participated in the project during 2009-2011 was about 97 514 people. 24 047 pupils participated in 'Life skills' stage of the project. 18 418 young people become agents 4 change. Percentage of pupils participating in Life Skills is permanently growing: in 2009 year 13,84%, in 2010 - 29,66%, in 2011 - 39,49%. Effectiveness of attracting and engagement of pupils is growing. Research indicates D4L in Russia positively influenced the knowledge, empowerment, leadership skills and self-esteem of the youth involved in all stages of the project, positive influence on stigma and taboo. The most significant results are in increasing level of knowledge.

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#### What can we learn?

Establish efficient partnerships with education and medical institutions, authorities and NGOs; this can greatly simplify getting access to schools and arrangement with school administration. Set system of interaction with pupils' parents, it is key element of project success; motivate parents swap (to help) inspire and encourage their children to participate in dance4life. Organize experience exchange with colleagues from other regions; it is useful to find and exchange effective solutions to project in specific local conditions. Create a shortened version of the project for launch in small towns and villages; this might be used in situations of limited resources, both material and administrative or temporary. Develop incentive strategy; the best participants can go to a summer camp free of charge, or take part in the final event in Moscow or some other city. Introduce new education course in skills4life training i.e. how to express sympathy to opposite sex. Introduce changes in music and dance, adding new elements.

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#### **HEALTH 25**

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**Keywords:** Health promotion, training, programme, youth.

#### What did you do?

- A literature review and survey about health determinants, health promotion among young people between 16 and 20 years without a job and not in school education. The review was based on a desk research of relevant data in all partner countries which showed the health background of the target group, their social structure, embedding in peer group settings, motivational background etc.
- 2. Conducted a questionnaire survey among the potential target group based on the findings of the desk research.
- Developed a pedagogical/psychological concept to identify and define leading pedagogical/motivational
  psychological principles for the overall pilot action and development of action guidelines to be utilised
  by staff involved in the implementation of the intervention (youth workers, social workers, public health
  professionals).
- 4. Developed a short Health Training and Intervention Programme for the target group as a practical toolkit for staff/coaches involved in the implementation of the programme.
- Pilot action of the holistic Health Training and Intervention Programme in the 5 partner countries. The purpose is to test the acceptability and usability of the programme in different European countries (April -June 2013).
- 6. The programme will be adjusted after experiences and improvement potentials discovered under the pilot action. Feedback will be included from for example the target group, coaches and public employment services (Sep. 13 Jan. 14).

#### Why did you choose to do this?

The reduction of socially determined inequalities of health is one of the major challenges for the European health systems. Especially for young people this gradient exists for many relevant health topics (smoking, sports inactivity, adipositas and psychological appearances).

It is clearly proved that physical training and sport would improve the health situation among young people. Young people without a job and school education are an important target group - therefore there is a need for an innovative programme for health promotion.

#### Who were the participants?

The target group of the project is young people between 16 and 20 years of age who do not have a job, who are not in formal school education or vocational training in the partner countries. The project focuses equally on men and women.

The target group represents the strongest influence factors for health ineuality: very low income, low job status (unskilled), low educational level and school degree, living in socially disadvantaged areas.

The target group will be recruited through for example job centres and Production Schools.

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#### What actually happened?

The Training and Health Promotion Programme is being tested at the moment in the 5 partner countries. The testing period will finish in June 2013, therefore it is not possible to answer the next 4 questions. The expected outcomes of the project are mentioned below:

- Improved health situation of the target group: focus on physical health, healthier lifestyle, personal wellbeing and self-esteem (measured by a questionnaire). Health then becomes a means to reach another goal; starting an education, vocational training or getting a job.
- Better knowledge basis about the health situation of disadvantaged young people in Europe; health determinants as well as psychological issues around motivation and perspectives (based on the review).
- Improvement of health ressources in the partner countries: currently adequate and relevant concepts for health promotion in relation to the mentioned target group are lacking, the project will lead to a new and relevant offer for the target group in all partner countries (based on the effectiveness of the pilot actions in the partner countries).

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# ENETOSH - SUSTAINABLE NETWORKING FOR MAINSTREAMING HEALTH AND SAFETY INTO EDUCATION

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**Keywords:** Education, training, health, safety, network.

#### What did you do?

The European Network Education and Training in Occupational Safety and Health (ENETOSH) was founded in Bilbao, Spain, in 2005. The European Commission provided the start-up funding which helped ENETOSH to get up and running. The project started out with 13 partners from 10 countries. Today, more than 58 members from 26 countries are involved in ENETOSH. In 18 countries special ENETOSH-ambassadors are promoting the network. In addition to European exchange, it is becoming more and more important for ENETOSH to have international cooperation: this can be seen in context of the EU enlargement, where ENETOSH promotes the integration of health and safety into the education system of candidate countries and new member states but also in view of cooperation with international umbrella organizations like WHO, ILO, ISSA and traditional international partners such as the USA and Canada. Since 2005 ENETOSH collected 646 examples of Good Practice of mainstreaming health and safety into education from 41 countries on the ENETOSH Internet platform: www.enetosh.net. A standard of competence that serves the quality assurance for instructors and trainers of health and safety in Europe has been developed. The ENETOSH Standard of competence has been recognised by 14 institutions from 10 European countries. It is available in 11 languages. The network is coordinated by the Institute Work and Health of the German Social Accident Insurance (DGUV).

#### Why did you choose to do this?

The development of a prevention culture has to start early on. The foundation for a culture of prevention has to already be laid down in the family home, in preschool and in primary school. The 'implicit assumptions' for how we handle ourselves and deal with others are formed in this early stage of life. The current European Community Strategy on Health and Safety states that it is important to develop a risk prevention culture in training programmes at all levels of education and in all fields, including vocational training and universities.

#### Who were the participants?

ENETOSH addressees are lecturers and trainers from the policy area of work and health, educational staff in general and vocational education and policymakers. An evaluation of the ENETOSH project whilst on going, based on a model that distinguished between three target groups: network members, multipliers and end users from the different policy areas, ensured that multipliers and end-users from outside the core-network were involved in the work of ENETOSH from the very beginning.

#### What actually happened?

In Europe, we have been working for more than 20 years on 'Mainstreaming Occupational Safety and Health (OSH) into education'. The leading approach to this is what is known as the 'holistic approach'. This is a kind of management approach which encompasses the whole educational establishment: learning content, the learning and work environments, school management, advanced teacher training, the students, the parents and the entire community. But it's important to note that there's much more behind this holistic approach - namely a paradigm





shift: It's no longer just about education promoting health and safety but rather health and safety as a means of promoting quality in education. When taken from this perspective, health and safety has the opportunity to become part of the core educational establishment or put more simply: 'If you feel better, you learn better' (Peter Paulus). At the XX World Congress on Safety and Health at Work - Global Forum for Prevention, 2014, Frankfurt, this message will be distributed to a worldwide audience.

#### What difficulties were encountered?

In the first European Community Strategy on Health and Safety at Work: 2002 - 2006 mainstreaming health and safety into education was seen just as 'part and parcel of the school curriculum'. In such a view health and safety seems to be an additional burden especially for teachers and a mere 'add on' in general. It is still difficult to get the message across that developing a culture of prevention within a school contributes to the quality of an educational institute (a school, a university). As such, health and safety is seen as a tool that 'serves' the school and not the other way round. But it is especially difficult to get specialists on occupational health and safety excited about pedagogical programmes. And the major difficulty is a lack of cooperation between the policy fields of work and public health and education.

#### Which aspects went particularly well?

Today, mainstreaming OSH into education is no longer seen just as 'part and parcel of the school curriculum' as it was in the first European Community Strategy but rather education is understood as its own policy field with its own set of rules that must be followed if a common prevention culture is to be developed. Education is a pillar in its own right with equal weighting that can be used strategically to develop a prevention culture. ENETOSH - together with the European Agency for Safety and Health at Work (EU-OSHA) and the Section for education and training for prevention of the International Social Security Association (ISSA) - has been one of the main promoters of this development.

#### How do you know how successful it was?

The ENETOSH project was evaluated whilst on going. The evaluation covered both the collaboration between the members and the external perception of ENETOSH. On a scale of 1 (= very dissatisfied) to 5 (= very satisfied), the project partners' average satisfaction was 4.6. The answers to the question of what the project's biggest achievements were pointed to four areas: examples of good practice, website, the standards and the establishment of the network. 78 % of the multipliers and end users feel the project should be continued and 75 % would be interested in being involved. The ENETOSH web statistics showed 43.943 total visits and 25.782 unique visitors for the whole year 2012.

#### What can we learn?

At the policy-strategic level, an integrative approach is needed to mainstream health and safety into education. The policy fields work, education and public health must be dealt with together. This means there has to be common programmes for mainstreaming health and safety into education: An example of this is the work done by the WSH Council in Singapore on their Pre Employment Training (PET) programme which is part of their National OSH Strategy 2018. In this programme, the government, industry and educational institutions work closely together to 'help sow the seeds of a strong safety & health culture, by instilling the value of safety & health in students'. Another form of cooperation is the cooperation between different schools and universities. Susanne Ulk successfully implemented this type of project with school ambassadors in Denmark.

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# HEALTH PROMOTING EDUCATIONAL SETTINGS – PLANNING FOR SUSTAINABLE CHANGE

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Keywords: Pre-school, school, college, university, sustainable.

#### What did you do?

The Welsh Network of Healthy School Schemes (WNHSS) has been running in Wales since 1999, and over 99% of maintained schools are actively involved. In 2009 we decided to extend the WNHSS to pre-school settings to ensure sustainability of approach. The criteria and indicators for schools were carefully considered, and a similar set of indicators, more relevant to the younger age group of pupils, were agreed for pre-school settings. Over 350 pre-school settings are now actively involved in the pre-school scheme, and we have turned our attention to the other end of the educational spectrum, developing indicators for colleges and universities. Again, there are similarities with the approach and indicators for schools, but also significant differences, to take account of the differing age group, number of staff and students, and facilities offered by the further and higher education sector.

#### Why did you choose to do this?

Differing expectations between pupils from schools involved in the work, and those not yet involved; and the difficulties thus encountered at transition were identified. Primary schools noted that pupils arriving from pre-school settings with healthy school policies were better able to accept the healthy school policies in their new school. A pilot working with pre-school settings in one area, using the WNHSS criteria, highlighted some aspects to modify. By providing support and common criteria across the sectors, the work is more sustainable.

#### Who were the participants?

Task and Finish groups included Welsh Government officials, representative healthy school co-ordinators from across Wales and relevant people from the sectors. For the pre-school work the group included national representatives from various childcare organisations, and those involved with inspection and qualifications for the sector. The further and higher education task group included individuals from student services, the funding council, and representatives from both further education colleges and universities.

#### What actually happened?

Separate Task and Finish Groups were set up. In the first meeting members were given full details of WNHSS and considered if the general structure would work for their setting. Officials then worked up draft criteria based on the outline discussed at the first meeting. The second meeting was used to discuss the first drafts; with officials then working up detailed proposals to be discussed, and agreed, at the third meeting.

All sets of indicators are based on health topics as applied to aspects of setting life. The health topics needed to be modified slightly for each setting, eg personal development and relationships is not a major topic in preschool settings, and so was merged with mental and emotional health.

For colleges and universities, current thinking is that hygiene can be addressed as part of safety.

The aspects of setting life cover similar issues, but required differing terminology - eg 'curriculum' in schools translates to 'planning and delivery' in pre-school settings, and 'academic, personal, social and professional development' in colleges and universities.

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#### What difficulties were encountered?

The WNHSS National Quality Award is assessed locally at 1-2 year intervals, and then independently, after 9 years involvement in the scheme. This length of time for completion of work has emerged as the work has developed in schools, and links with IUHPE guidance. Both pre-school and further and higher education settings were daunted by this commitment. For pre-school settings, it was decided that each health topic will be assessed locally, usually annually. Customised local certificates have been designed nationally with Ministerial signature included. Accreditation for colleges and universities is still being discussed.

Getting all of the correct organisations represented on the Task and Finish group was a challenge. At the first meeting of each group we asked participants to identify any missing organisations; and these were invited to subsequent meetings.

For colleges and universities there is some apparent conflict between this work and a national workplace health award. We are discussing ways to address this, and will incorporate the solution into general guidance.

#### Which aspects went particularly well?

The success of WNHSS, with over 99% of schools voluntarily involved, was a key factor in the other settings wanting to be involved.

Government involvement is also seen as valuable to give profile to the work. Appropriate people were involved in the discussions and so have acted as champions for the roll out of the pre-school scheme. Discussions currently underway regarding colleges and universities indicate that the roll out of this will be supported by group members.

For healthy schools, networking has been a key to success - local networks of schools, and national networks of local co-ordinators. Similar networks are desirable for the other educational setings.

#### How do you know how successful it was?

Over 350 settings are already actively involved in the pre-school work which was launched in September 2011. Many of them have already been assessed for aspects of the work; with the national certificates being well-received.

The healthy further and higher education work has yet to be completed and launched.

Outcome indicators have yet to be developed.

#### What can we learn?

The approach and structure for healthy school work developed in Wales can be easily applied to other educational settings.

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#### ASSESSING SCHOOLS AS HEALTH PROMOTING

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Keywords: Assessment, accreditation, equity, indicators, quality.

#### What did you do?

The Welsh Network of Healthy School Schemes (WNHSS) National Quality Award (NQA) was introduced in 2009.

This has clear indicators for 4 aspects of school practice - Leadership and Communication, Curriculum, Ethos and Environment, and Family and Community Involvement - for 7 aspects of health (Mental and emotional health and wellbeing; Food and fitness; Personal development and relationships; Substance use and misuse; Environment; Safety; and Hygiene). In addition there are specific criteria for the development of the school as a health promoting workplace; and minimum standards for food in schools, linked to Appetite for Life - the Welsh Government programme for food in schools; for hygiene, linked to the publication Teach Germs a Lesson, and for grounds to be smokefree.

An independent assessment procedure was developed and tested, and has now been used in 36 schools which have successfully achieved the NQA. This assessment contributes to assurance of equity in provision, delivery and achievement in healthy school work across Wales.

#### Why did you choose to do this?

The WNHSS has been active in Wales since 1991, with local co-ordinators supporting schools in their locality. Alignment to the national criteria, and an assessment of the work of local schemes in supporting schools gave initial quality assurance regarding consistency of approach across Wales. As the work progressed, and schools were involved for longer periods, it was felt necessary to ensure excellence within individual schools, and equity and comparability of achievement across Wales. The NQA provided this assurance.

#### Who were the participants?

All healthy school co-ordinators in Wales contributed to the development of the NQA indicators, but the detailed work was taken forward by a small working group, comprising the national co-ordinator and two local co-ordinators. This group undertook trial visits to 3 schools who were identified as demonstrating excellent practice by their supporting co-ordinator.

The process was then refined, and has been used by independent NQA assessors.

#### What actually happened?

Schools apply for independent assessment for the NQA after 9 years involvement. They must assemble portfolios of evidence covering all criteria for each of the health topics.

An assessor is appointed; and visit dates confirmed, covering the afternoon of one day and the morning of the next.

The first afternoon is used to look at the portfolios. The second day includes a presentation from the school council or other pupil group, prepared by them, on 'What have you done to make this school a healthy school?'



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They are asked to cover as many health topics as possible within this presentation.

This is followed by a pupil-led tour of school; and an opportunity to speak separately to the headteacher and/ or other appropriate member of the management team; the in-school healthy school co-ordinator; various staff members, governors, parents, and other people/agencies as appropriate. The assessor should also have the opportunity to see breakfast and break-time provision, and to have a normal school lunch with the pupils.

Short feedback is given, and then a detailed report is written.

#### What difficulties were encountered?

The visit needs to be as concise as possible, but giving the assessor sufficient time to make an accurate judgement. Some assessors feel that they need to do more work in advance of the visit and ask to see school policies in advance.

We ask for the written report to be no more than 6-8 pages long; with an additional page of feedback to pupils, and a page of feedback to the local co-ordinator who has supported the work in the school.

Assessors see so much good practice that it is often difficult to limit their report to this requirement. Although assessors are trained in what is expected, and were accompanied on their first visit by one of the original development team, they still find it difficult not to emphasise aspects of particular interest to them.

Assessor training is used to address these issues.

Initially some schools came forward for assessment who were not ready, and so the award had to be deferred. Local healthy school co-ordinators have been offered the opportunity to accompany assessment visits, and are now better aware of the standards required.

Cost is an issue.

#### Which aspects went particularly well?

The assessment process is thorough. Assessors are able to make a sound judgement of the work in the school and their success in embedding health in the life of the school. Emphasising the views of pupils via the presentation and school tour gives a real picture of what is happening.

Schools generally report the visits to be a positive experience and are delighted when they are awarded the NQA. The NQA award plaque is usually presented to the school at a celebration event to which a range of people can be invited; thus providing another opportunity to demonstrate the embedding of health in the culture of the school.

#### How do you know how successful it was?

36 schools have been awarded the NQA by May 2013, and a number of others have asked for assessments.

The introduction of the NQA has provided a new focus for schools as there are now clear requirements of schools to build on the self-identified priorities of their earlier work.

Local healthy school co-ordinators also report that their expectations of schools have increased over the years as health becomes more embedded in the culture of schools in Wales.

#### What can we learn?

The WNHSS NQA criteria and assessment provide a way of defining exactly what a health promoting school looks like.

The NQA demonstrates the application of theory to practice by taking a theoretical model and identifying specific approaches for change. The whole-school approach is achieved by considering all of the criteria together, and schools awarded the NQA really do 'Think Health'.

There is some flexibility in the approach so although all schools meet the criteria, there will be some differences in what they actually do.

Even though schools are awarded the NQA, there is always more that can be done - and schools continue to identify new opportunities because good health is the cornerstone of their thinking.

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#### SCHOOL HEALTH IN MUNICIPALITY OF SØNDERBORG, DENMARK – A WHOLE SCHOOL APPROACH

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**Keywords:** Health, learning processes, whole school approach, planning.

#### What did you do?

A comprehensive action plan was implemented covering all the 21 municipal primary schools for a three year period 2009-2012. The action plan comprised ten action points: joint pool of knowledge, involvement of specialists, the schools could apply for funds, children and families with special needs, breakfast, free fruit, exercise, mentor programme, health coordinators, knowledge on the childrens's health and wellbeing. The plan had a particular emphasis on the facilitation of friendships and reduction of inequity. At each school, a health coordinator was appointed. It was a teacher who was freed from the ordinary teaching duties for 50-100 hours per year in order to keep track of health related activities at the national and municipal level and together with the teachers and leadership at each school to implement initiatives. The coordinators participated in network meetings four times a year, partly in order to get relevant competences based on tailored courses, and partly to coordinate and exchange experiences among themselves. The project has allocated funds that schools could apply for if they want to promote health and wellbeing initiatives. Schools must submit written applications processed by a project group. The members of this project group were located in school headmasters and people from the central administration. This team made the final decisions in relation to the action plan. A Steering Committee followed the project continuously.

#### Why did you choose to do this?

During 10 years children spend a large part of their waking hours in the school environment. That's why it is a good arena to use in efforts to create the best possible conditions for health education and learning processes.

We want to give children the best possible conditions and opportunities to make informed choices and shape their own lives. It is a common political priority for political committees in the Municipality to enhance efforts to improve child and adolescent health and well-being, to increase their opportunities for learning.

#### Who were the participants?

The initiative was taken and initially driven by the central administrations as well as dialogue and involvement of the schools. The participants are students, teachers, headmasters, school nurses. Groups of experts were associated on an ad hoc basis.

#### What actually happened?

66 applications for funds received from schools for activities related to health and well-being, diet, increased exercise, special interventions for children and families in exposed positions. Examples:

All pupils start the day with motion and fruit to discover the importance of exercise for improving well-being. Special course for selected group of students in achieving greater self-esteem, better social skills and increased body awareness and willingness to move. Promoting mental health for pupils. Classroom management, competency for teachers for better well-being in classrooms and focus on using proprietary access. Better school yards for





better movement in breaks and in lessons. Playmakers, competence for older students to play with younger ones. Establishment of movement and learning environment. Physical activity opportunities for special classes. Visit schools to evaluate the function of the health coordinator and have dialouge about the conditions working with health and well-being. The process is through dialogue and involvement.

#### What difficulties were encountered?

Initially the process was too top-down and driven by the central administration. This led to a lack of enthusiasm in the schools. The administration realized this and changed to a more participatory approach. Subsequently the project took off and a number of initiatives were suggested by the individual schools.

#### Which aspects went particularly well?

After a slow start, the project picked up and a number of concrete projects suggested by the schools have been launched.

Dialogue and involvement have created ownership. It is based on daily life at school and there is a focus on diversity in culture. Cooperation with health coordinators is a good link. It is important to have quality initiatives and efforts to realize the active plan. Focusing on development is another important skill in the plan.

#### How do you know how successful it was?

An internal, systematic evaluation was conducted in order to capture the lessons learnt and prepare for the second three year phase which is now on-going (2012 - 2015).

A new action plan for 2012-2015 is prepared based on feedback from schools and cooperation with Student Councils. Schools now include movement as a natural part of mainstream education and include health and well-being in school life and learning.

7 schools want to be movement and sports schools. They will receive competence development for teachers and educators about more targeted sports and movement in all lessons in schools to improve physical education courses and get more movement into the whole school.

#### What can we learn?

A number of key lessons have been captured. It has been a critical success factor that the project has been jointly managed by one civil servant from the 'social and health' department and one from 'children and education'. The participatory approach which allowed the schools to genuinely influence the project was vital. The fact that the plan was backed up by a budget was important partly to fund the various concrete projects suggested by the schools and partly to support the school health coordinators. It is essential with a long-term political commitment to ensure the project's development and adjustment based on lessons learnt. It is important to strike the right balance between an overall structure and flexibility in order to allow the individual schools to plan according to local needs.

As part of the new action plan an advisory board has been appointed which provides input on the key areas of expertise and serves as a body of quality control and access to the latest scientific insights.

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# "LA SCUOLA VA IN PIAZZA." THE SCHOOL GOES TO THE STREETS: HOW TO ACHIEVE COMMUNITY PARTICIPATION IN A HEALTH PROMOTING SCHOOL.

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**Keywords:** School, community participation, street theatre, health.

#### What did you do?

The Primary school "Molino Vecchio" in Gorgonzola, member of the Local HPS Network Milano 2, promotes health-related initiatives outside the classrooms. "La scuola va in piazza" (The school goes to the streets) is a project that involves parents, grandparents, teachers and students who have formed a theatrical company that performs in unconventional locations such as streets, squares, public spaces, etc. Their show, entitled "Ingresso nel vuoto" (literally "Entrance into the void") is a funny and magical performance inspired by a theatrical play by Peter Handke. In and out of the scene, more than 150 participants, including amateur actors, technical staff and collaborators perform in a single act that takes place at the sunset of an undefined day. In a large open space, real and fantastic figures attracted by the blankness of a deserted scene occupy the "empty spot". Each of them leaving his footprint, an image of himself, in a continuous flow of characters. Different ages of life and human diversity throughout history meet on the scene, sometimes clashing and colliding, but then eventually helping one another and uniting into one whole. Not a single word is spoken by the actors. It's a human parade where every person shares his own personal abilities with the audience.

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#### Why did you choose to do this?

The idea developed from the joint forces of teachers and parents of the Library Committee of the school. They gave birth to an initiative that not only favored social integration and improved relationships among the participants, but also allowed fund collection for new projects and school laboratories. Since the beginning, thanks to the generous contribution of a father-actor-director, the organizers realized that this show had the potential of being much better than the traditional school recital and of becoming an authentic theatrical play.

#### Who were the participants?

The families of all students were invited to join the project by post, email and press release to the local newspapers. The participation was massive, beyond any initial expectation: the show involves 150 people ranging from 6 to 80 year olds, including actors, technicians and collaborators performing in front of 150 spectators. The project is sponsored by the local Cultural Association Exlibris 12 and by the Municipal Culture Department of Gorgonzola.

#### What actually happened?

The school opened to all families, allowing the use of adequate spaces for project development and practice in the evenings. With the precious help, competence and abilities of teachers, parents and grandparents, the students made the costumes and objects to be used in the play. The project grew bigger day by day, empowering the participants and favoring the territorial and inter-cultural cohesion especially because of the East European and South American origin of many students. Everybody gave a positive contribution to the creation of a social theatre: a theatre centered around the community and that expresses itself through the direct contact among people, facilitating human interaction in pursuing a common artistic intent. With this theatrical representation, the school brought important themes such as ecology, respect for the territory, walking school bus, conscious consumption of resources like water, healthy lifestyle choices, safety, consideration for others, already discussed inside classrooms to the attention of the audience.

#### What difficulties were encountered and how were these overcome?

The massive participation implied some initial organizational problems: dealing with this amount of people on the scene was not always easy. However, the school gave its full support and help to the project providing rooms where the participants could meet weekly, cooperating, bonding and sharing practical and emotional experiences, establishing a constructive confrontation. Such a positive environment set the optimal conditions for the successful development of the project. Additional challenges arose when other schools and neighboring towns manifested their interest in the show and requested replicas in other locations. It became clear that the project was turning into an itinerary show reaching a bigger audience than initially expected. For this reason, the Municipal Culture Department of Gorgonzola provided buses to facilitate the transport of the entire company.

#### Which aspects went particularly well?

The marketing strategy has been particularly successful, as demonstrated by the interest of local and national press towards this project and the enthusiasm of the community for this new and fun way of spreading a health message. However, the most important achievement has been the active participation of many families who, under the guidance of the father-actor-director and of many motivated teachers, found the time and energy to meet up, practice, prepare the sets and the costumes using their individual talents. Everyone was encouraged to express their own artistic, athletic, practical or social abilities, choosing liberally what contribution he or she could give.

#### How do you know how successful it was?

The impact of this project can be quantitatively evaluated by looking at the participation of the whole school, families, audience and by the number of replicas of the show presented in neighboring towns and regions.

Something more difficult to measure, but surely just as important, is the perception of a new feeling in the community, a tangible change in the social interplay and a more open dialogue among families who have different histories and backgrounds. In this environment, children receive a positive stimulus for learning, parents show a more constructive attitude and the entire community feels unified by sharing such enriching and fulfilling experiences.

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#### What can we learn?

"La scuola va in piazza" is a terrific example of how school can effectively take its own responsibilities towards the whole community: by involving the students in appealing projects, the constructive interaction between school, families and community can be successfully achieved. Initiatives that are able to attract not only the students, but also other members of the society, stimulate actions that, implicitly or explicitly, affect the overall wellbeing of individuals and community. Moreover, enthusiasm, effort, passion, dedication, improved relationships and formation of a cohesive team pursuing a common intent strengthen the awareness that health and wellbeing can be achieved by bonding, sharing and building up a common ground for growth.

The result is a show that invites the audience to stop and look at their daily life in a different light, learning how to pay attention to the lives of others and acknowledge their value.

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# HEALTH PROMOTING SCHOOLS NETWORK IN LOMBARDIA REGION (ITALY) – INNOVATIVE APPROACHES TO SCHOOL-BASED HEALTH PROMOTION

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**Keywords:** Italy, network, Health promoting schools, Lombardia.

#### What did you do?

During the last years, in Lombardia (northern Italy), school authorities and health authorities worked together to develop a health promoting school network: in Lombardia there are 1.420.000 students (from 3 to 19 years old), 8.000 schools and 92.000 teachers. In 2011, they signed an agreement that provides the foundation and support of a regional health promoting school network. The agreement is inspired by the Vilnius charter principles (equity, sustainability, inclusion, empowerment and competence, democracy); an agreement that aims to make the schools leaders in the governance of their own health care. 400 schools (82 school boards) joined the regional network (grouped in 12 provincial networks); which also includes regional health authorities and school authorities. The network has a site where all activities are described: http://www.scuolapromuovesalute.it/. During the first years, the network has experienced collaboration and education activities, achieved administrative tools and developed a web-based software. Network provided many training events for teachers and health professionals about health promotion and edited a "good practice" manual. Regional health office allocated financial resources to support schools of the network.

#### Why did you choose to do this?

For several years, schools and health territorial agencies in Lombardia worked together on health promotion. According to the Vilnius charter, regional health office and regional school board acknowledged that schools have to be the leader in health promotion for students.

#### Who were the participants?

400 schools (82 school boards),1 regional school board, 12 provincial school boards, 1 regional school office, 15 territorial health agencies

#### What actually happened?

The network developed web-based software for the school's 'health profile' analysis and monitoring interventions. Web based software (http://sps.requs.it/) let the schools describe carefully their own health profile, they have to do a self-evaluation about 4 areas:



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- · develop individual life skills
- develop social environment
- empowerment school organization
- · empowerment community collaboration.

Every school could see its results and benchmarking with regional or national standards. Furthermore the network organized many meetings to define its structure and many interventions to promote teacher's education about:

- Life skills training
- Security at schools.

#### For 2013, the network aims are:

- · support the process of empowerment of every school in the network;
- help the schools in the network to define their 'health profile';
- contribute to the definition of "improvement plans" based on evidence-based interventions or best practices;
- spread the network by sharing evidence-based interventions and best practices with schools not belonging to the network.

#### What difficulties were encountered?

The principal difficulty was the traditional view that health promotion was an activity of health professionals. To overcome this difficult, in accordance with the new model of health promotion, schools and health authorities organized many training events for teachers and health professionals to inform and educate them about the new model of health promotion.

#### Which aspects went particularly well?

After more than 1 year of life, the network continues to grow: many schools want to enter in the network. Web based software is very interesting because in accordance with the new health promotion outputs and outcomes.

#### How do you know how successful it was?

The network is under evaluation, next year will help us to know if health promoting school experiences in Lombardia could represent a model for other regions.

#### What can we learn?

School and health authorities could work together to develop a sustainable model of health promoting schools where teachers become leaders in health themes and health professionals could assist them.

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# INDIVIDUAL INTERVIEWS WITH STUDENTS ON ADVANTAGES OF A HEALTHY DIET

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Keywords: Healthy dietary, habits, friendly approach, increase interest.

#### What did you do?

Health visitors and nutritionists from our department have been meeting high school students (14 to 19 yo) on a regular basis for 10 years. The service had been offered for free to high schools by our public health service. Most of the schools require our service every year. Students are made aware of the offer by teachers. Interested students book an appointment. One or two students at a time attend each meeting, as they like best. Usually each students has two meetings. In the first one, which takes about 45 minutes, we record a typical food diary for each student, and comment on their choices. In order to allow enough time for any change to happen, there are at least 2 months between the two interviews.

#### Why did you choose to do this?

This project was prompted by the increasing incidence of overweight young people in our country in the last decades. The aim of these meetings has been to provide the students a basic knowledge of healthy food choices and to help them in a very practical way, to change some unhealthy dietary habits. We gave them some easy and healthy recipes to cook.

#### Who were the participants?

Students interested in healty food were the participants. Most, but not all, are students from the first class. If overweight students chose to have an interiew with us, we used to meet them also the next years, even if they didn't book another appointment.

#### What actually happened?

In the meetings/interviews the focus is on the possible mistakes in their habitual choices, with plenty of explanation. The first meeting/ interview ends with a dietary project, where changes in the subject unhealthy dietary habits are agreed on. In the second interview, which takes about 15 minutes, the "outcomes" of the first meeting are registred, measuring the changes. Extra meetings are offered to students with special needs. Email contact with our team has also been allowed in particular cases. Parent's written consent is required when a special diet is advisable, for example in overweight subjects. In case of suspected or evident anorexia the subject has been offered psycological support provided by a dedicated public health department.

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#### What difficulties were encountered?

We have experienced two main difficulties. The first came from some teachers who probably didn't value the project as important and were somewhat reluctant to provide full information to the students. The second was the waste of time due to the location of the meeting room, sometimes unpractical, and the procedure for calling the students, often complicated.

#### Which aspects went particularly well?

The project has been embraced with great enthusiasm by students. We think the success depends on the friendly and informal approach we try to have with them.

#### How do you know how successful it was?

We have measured the effect of our job with the change in food choices from the first to the second interview. We had noticed a significant improvement in dietary habits every year. We write a yearly report for each school and each student fills in a "satisfaction questionnaire" at the end of the second interview.

#### What can we learn?

We can learn that students need to know more on about the 'world of food' and how they could be interested in this theme, if we are able to explain to them how their choices have a great influence on their own health. It's also important to show them that it is not so complicated to change some daily habits, giving them some practical ideas. In the last year we have started an experimental method, in some selected school, with the peer to peer technique. This technique involves students from 3rd class (16 yo "instructors") who are first trained by us and than utilized for spreading the information in the 1st classes to their "peers". The 2 main aims of this method being (1) activation of life skills in the instructors and (2) reaching as many students as possible. This peer to peer phase of our project is still under evalutation.

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#### HANDS-ON PEDAGOGY FOR HEALTHY HYDRATION: A CASE STUDY FROM CHINA

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**Keywords:** Hydration, pedagogy, health, interactive, curriculum.

#### What did you do?

A unique partnership was initiated between a global leader in water education - Project WET Foundation, and a leading obesity research center - International Chair on Cardiometabolic Risk (ICCR), for the purpose of raising awareness of a growing concern facing developing and developed countries that is obesity in children. Proper hydration habits are a clear action to improve children's health, and curricular materials were developed by Project WET to share these hydration messages using interactive pedagogy. The hydration lessons were piloted in several countries, and the implementation in China will be highlighted in this presentation.

#### Why did you choose to do this?

Studies have clearly shown that drinking sugar-sweetened beverages contributes to a passive over-consumption of calories, a factor which has been shown to increase not only the risk of obesity, but also of type 2 diabetes and even cardiovascular disease. Thus, drinking water (which contains no calories) rather than sugar-sweetened beverages would represent one simple solution to reduce the caloric intake of our children and improve their health. Applying Project WET's proven education methods to this issue has yielded positive results.

#### Who were the participants?

Teachers in grades 4 - 7 in Shanghai were used as the pilot field test for the hydration lesson plans. This teacher cohort is well-versed in Project WET's hands-on pedagogy, and have shown interest and capacity to expand their water education teaching to health-related topics such as obesity. China also has the distinction of having the highest number of people with diabetes, so the topic is both relevant and timely.

#### What actually happened?

A curriculum guide was created that focused on several aspects of the importance of hydration. Concepts included understanding water's functions in the body, the water balance of intake and loss, and understanding how our hydration beverage choices can affect our caloric intake. The lessons were then field-tested with teachers in Shanghai, China, as well as in several other countries around the world. These healthy hydration lesson plans are now being used globally through Project WET's international network of 60 countries.

#### What difficulties were encountered?

Many challenges exist when developing lesson plans on complex topics like hydration and caloric intake through beverages. Our first challenge was to ensure that, like all Project WET lesson plans, we were taking a balanced approach that represented all sides of the issue. This entailed collaboration with respected researchers like those at ICCR, including Dr. Frank Hu and Dr. Jean-Pierre Despres. Finding innovative methods for bringing these complex topics to life for students was the next challenge, and this was overcome through extensive collaboration and trial and error with teachers in the USA, China and abroad. Another challenge was balancing the nutritional





value of beverages versus the pure energy/caloric value. For example, pure fruit juice typically has more calories than soda, so we had to ensure that students understand that juice is a good choice, but only in moderation because of the high caloric content. We were able to successfully bridge these challenges through extensive teacher and researcher input and refinement of the lesson plans.

#### Which aspects went particularly well?

The interactive and whole-body pedagogy of the lessons has been very well received and implemented by both teachers and students. The lessons have been incorporated into the teacher's yearly planning, and the students have responded positively to the lessons.

#### How do you know how successful it was?

In many of Project WET's implementations, the evaluation and impact studies are as extensive as the research process that is used to develop the curriculum; for example our work on hand-washing and resulting behavior changes in developing countries. The opportunities for extensive evaluation of the hydration lessons has been limited, primarily by funding. Project WET, in partnership with the UN, is now developing a digital evaluation tool that works via mobile phone, and we see applications of this survey tool to be used as a follow-up with this hydration curriculum.

#### What can we learn?

Critical health messages can be delivered by teachers to students, and in many cases, this is one of the most effective methods of awareness raising and imparting knowledge to children. Many of these learned concepts can then be shared by children with parents, and in their broader communities. In the case of hydration, it is critical that children understand how their daily decisions and choices can impact or improve their health, and these lessons highlight those concepts. Finally, interactive, hands-on pedagogy is an excellent tool for ensuring learning is focused, effective, and even fun for students, leading to long-term retention of learned concepts. When applied to health topics, this can have a major impact on children's health and future actions.

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# HEALTH CULTURE EDUCATION OF SCHOOLCHILDREN AS A KEY DIRECTION OF HEALTHY SCHOOLS DEVELOPMENT

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**Keywords:** Schoolchildren education, health culture, interiorising and exteriorising determinants.

The present investigation considers health aspects of children and youth in social – cultural – medical – psychological – pedagogical contexts. The culturological context provides the basis for the health culture aspects to be elaborated not through separate problems of physical, psychological and spiritual health, but as a general cultural phenomenon assuming equity, mutual definition and interrelation of all the constituents.

A cross-country comparative analysis of children's and youth's health condition enabled to reveal the following facts:

- School-aged children's health in different countries is unequal.
- Health condition and health maintenance ability is directly dependent on educational level and overall health culture of a human being;
- An educational system contributes to elaborate adequate social behaviour of the oncoming generation and building a culture of the value attitude to their and surrounding people's health;
- An interdepartmental interaction is essential for organising events addressed to health preservation and strengthening in order to form stable stereotypes of wholesome forms of living;
- There are environmental and personal determinants of schoolchildren's health culture education which are a scientific and pedagogical issue.

It is impossible to solve the problems of modern society's progressive development with no support on culturological aspects. The cultural basis is the universal values and targets with historically established methods of their perception and achievement. The culture transition from generation to generation is accomplished by upbringing and education that happens not automatically but through the organisation of systematic interaction of the personality with culture. The cultural attitude to health is a deeply comprehended mode of existence of a modern human, and it's impossible to satisfy basic demands of a human being (physical, psychological, social) without it. A scientific approach to formation of health culture is a topical issue. In our opinion, the health culture – is an integrated part of the general culture of a personality that reflects the comprehended value attitude to his health; it is based on healthy lifestyle behavior which is expressed in a proper physical, psychological, moral and social development.

The health culture performance is charaterised by external (physical) and internal (psychical) sides. The external performance of the health culture is defined and adjusted by psychical activity: motivation, cognition and regulation. However there is an inverse relation, i.e. internal activity is guided and controlled by external factors. This reveals a measure of psychical models' adequacy and the degree of predictability of given results and actions. Hence, there are two processes taking place simultaneously: interiorisation and exteriorisation.

Studying the basic aspects and features of schoolchildren's health culture education, it is important to define fundamental determinants that influence the process organization.

Interiorising determinants of schoolchildren's health culture education – are the factors that influence cognitive aspects of the formation of health culture by means of acquisition, analysis, transformation and use of knowledge



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about health via adoption of external effects and social communication forms. The designated determinants comprise a degree of a personality's social and psychological centre formation, worldview, values system; orientations and sets for acquiring health culture; individual health potential of a schoolchild.

Interiorising determinants of schoolchildren's health culture education provide for schoolchildren's ongoing development starting from situational views of their own health issues up to a firm understanding of health's role in human's life and for the society in general. This results in formation of the following characteristics of the personality: physical, intellectual, possession of cultural norms and traditions, ability to realise the acquired knowledge about health into spiritual and material forms.

Exteriorising determinants of schoolchildren's health culture education – are the factors which influence the formation of creative and conative elements of health culture which are expressed in active, purposeful, self-controlling activity aimed at preservation and strengthening of their own and others' health. The creative element provides the possibility for schoolchildren to perform self-perfection and self-realisation in acquisition of health knowledge and skills in keeping a healthy and safe lifestyle.

The conative element of schoolchildren's health culture is defined as motor-will area of life experience regulation. Initially it consists of methods of non-critical contextual behavior stereotypes that transfer into a stage of conscious critical adoption of healthy lifestyle elements and formation of positive habits by schoolchildren. The emotional and motivation aspects are also important constituents of the component which is necessary for emotional and value formation of a schoolchild's personality with a high level of attitude to his/her and surrounding people's health.

The exteriorizing determinants of schoolchildren's health culture education consist of personal experience of the health culture adoption; individual lifestyle (exclusion of negative factors' influence, for example, smoking and drinking, sensible nutrition, personal hygiene, physical training, work-rest schedule etc.); behavior (attitude to studying and physical training courses, habits, mobility, quality and quantity of food consumption, interactions within society).

Studying at school is a period of growth and development for children. Their organism is especially receptive to the influence of any unfavorable environmental factors. It while at school that the most intensive self-development of the younger generation occurs. The health culture of a personality does not appear itself but it is formed and developed as the result of active and systematic self cultivation and purposeful interaction with surrounding people, especially with teachers. The pedagogical activity in the modern educational process must be represented as subject-to-subject interrelations, resulting in exchange of cultural values in the area of health preservation and strengthening.

Therefore, a prospective way of solving the health issues of school-aged children is the activity of educational institutions aimed at conscious value attitude formation in children and youth regarding their health. Health culture education ought to be emphasized in healthy schools.

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# SUPPORT FOR THE HEALTH PROMOTING SCHOOL PROJECTS IN ICELAND: A NEW NATIONAL CURRICULUM FOR ALL SCHOOL LEVELS

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Keywords: Health and welfare, New curriculum.

#### What did you do?

The Health Promoting School projects (HPSP) in Iceland have been implemented for both secondary schools and primary schools, and are currently under development at the preschool-level. These projects are long-term in nature and apply the whole school approach, which involves students, parents, and the surrounding community, as well as teachers and all staff at the school. The main themes for the projects are nutrition, physical activity, mental health and life skills.

Handbooks with recommendations and suggested menus have been published and distributed to the school canteens. A handbook for teachers in primary schools has also been published to promote increased physical activity both in the classroom as well as outside of it. Material that addresses healthy relationships and violence in relationships has been tested and will be published soon. Materials that offer preventative measures regarding tobacco, alcohol and illegal drugs are also available. Conferences and seminars are held every year for participating Health Promoting Schools and other schools that wish to become health promoting.

In 2011, health and welfare became one of six foundations in the Icelandic government's edition of a new curriculum for all school levels. These foundations are intended to permeate all school activities and education. The Ministry of Education, Science and Culture promotes the HPSP in their publications, as a suggested means towards success in the health and welfare foundation.

#### Why did you choose to do this?

The connection with the new curriculum, i.e. the health and welfare foundation, plays an important role in the Health Promoting School projects.

#### Who were the participants?

All 31 secondary schools (16 to 20 years) and about 50 primary schools (6 to 16 years) participate (which is approximately 30% of all primary schools in Iceland).

#### What actually happened?

Schools show more interest in the projects and the projects are more visible.

#### What difficulties were encountered?

Slight difficulties occurred developing a sound evaluation system for primary schools, but eventually a great solution was found. Currently, a website allows primary schools to fill out relevant checklists and make decisions regarding their next steps. The schools develop their health policy by making a project plan and evaluate their plan. The Directorate of Health thereby also has an overview over how schools are doing in their project through the website.

The national financial crisis in Iceland has had an influence on the progress. Schools have had more financial difficulties and have therefore been less willing to participate, but that appears to be changing for the better and the new curriculum helps with that.

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#### Which aspects went particularly well?

The positive attitude towards the projects helped schools make a decision to participate in the projects. Many of the schools were already doing many things that fit nicely into the project and could therefore easily amalgamate these things into the project.

#### How do you know how successful it was?

Secondary schools are competing to do as well as they can and in their evaluation they can aim for bronze, silver or gold. Most of them aim for gold in every theme, which is quite ambitious. Furthermore, the University of Iceland is also conducting a long-term study on the impact of the programme. An evaluation for primary schools is currently in development, but augurs well for the future.

#### What can we learn?

It is important that the national government supports the Health Promoting School projects, although whilst important, it is not enough to work just top-down. The work also has to be bottom-up, if projects such as these are going to fulfill their true potential.

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#### HEALTH AND WELLBEING; RESPONSIBILITY OF ALL

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Keywords: Curriculum for Excellence in Scotland.

#### What did you do?

Curriculum for Excellence aims to achieve a transformation in education in Scotland by providing a coherent, more flexible and enriched curriculum from 3 to 18.

The 3-18 curriculum is a forward looking, coherent curriculum that provides Scotland's children and young people with the knowledge, skills and attributes needed for life in the 21st century.

The development process has involved unparalleled engagement with teachers and practitioners. It has built upon the existing good practice across all sectors of Scottish education and takes account of research and international comparisons. It recognises the professionalism of teachers and the importance of this in exercising the freedom and responsibility associated with broader guidance.

The curriculum includes the totality of experiences which are planned for children and young people through their education, wherever they are being educated.

#### Why did you choose to do this?

The world has changed considerably in recent times, and it is essential that education not only keeps up with change but anticipates the future as far as possible.

If Scotland's children and young people are to gain the knowledge, skills and attributes needed for life in the 21st century we need a forward-looking, coherent curriculum that will inspire them to achieve at the highest levels.

#### Who were the participants?

Learning through health and wellbeing promotes confidence, independent thinking and positive attitudes and dispositions. Because of this, it is the responsibility of every teacher to contribute to learning and development in this area. Practitioners are the key to the successful implementation of Curriculum for Excellence.

The quality of learning and teaching in every setting and the inspiration, challenge and enjoyment which can come from practitioners' enthusiasm and commitment will be critical to achieving our aspirations for learners.

#### What actually happened?

The development process has involved unparalleled engagement with teachers and practitioners. It has built upon the existing good practice across all sectors of Scottish education and takes account of research and international comparisons. It recognises the professionalism of teachers and the importance of this in exercising the freedom and responsibility associated with broader guidance. Timeline of the process of change -2002 - National Debate on Education-2003 - Curriculum Review Group established-2004 - A Curriculum for Excellence-2005 - Research and review process-2006 - Progress and Proposals published and Building the Curriculum series begun-2007 to 2008 - Draft experiences and outcomes published-2008 - Analysis of feedback and responses-2009 - Publication of the new curriculum guidelines-2009 to 2011 - Planning and implementation. 2013 - third year of Curriculum for Excellence (CfE).

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#### What difficulties were encountered?

Implementing a national programme into 32 Local authorities that have devolved responsibility for education and how it is delivered at local level. This curriculum model has moved from a prescriptive, centralised model to a framework that offers greater professional freedom and responsibility at local level. This requires a very skilled, creative workforce to facilitate learning based on learner needs. Teachers know their learners very well. A national and local programme of support has been in place. Education Scotland as the National Agency for Learning has national objectives:

- Build a world-class curriculum for all learners in Scotland.
- Promote high-quality professional learning and leadership amongst education practitioners.
- Build the capacity of education providers to improve continuously their performance.
- Provide independent evaluation of education provision.
- · Influence national policy through evidence-based advice.
- · Improve our organisational capacity and invest in our people.

#### Which aspects went particularly well?

Health and wellbeing as responsibility of all accepted as a new curriculum area. The breadth of vision and commitment to both high standards and social inclusiveness of the Curriculum for Excellence programme.

The curriculum is being implemented by three partner organisations: Education Scotland, the Scottish Qualifications Authority (SQA) and the Scottish Government. The curriculum phase of the Curriculum for Excellence Programme has now been implemented. The Programme will continue until 2016 when the implementation of the new qualifications, which are being developed by SQA, is completed.

#### How do you know how successful it was?

Curriculum for Excellence accepted at all levels in Scotland. Broad acceptance of the values underpinning the curriculum and the area of responsibility of all HWB being embedded in Scottish Education. Policy has quickened the pace of change. Practice is developing and progressing across Scotland through exemplification, networking and professional learning.

#### What can we learn?

The implementation of a national programme based on consultation, research and recognition of the needs of children and young people in 21st century.

The opportunities and challenges in implementing a national programme.

The rationale for embedding (as opposed to promoting) HWB in the curriculum. Exemplars of how schools are doing this.

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#### READY, SET - HUSUM: SPORTS CAMPAIGN FOR STUDENTS

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**Keywords:** Sports campaign, students, local clubs, athletics clubs.

#### What did you do?

We began the process of the sports campaign by doing workshops for the students at the schools. Here the students gave us input in regard to the contents of sports activities and ideas on how to register sports activities via a card, our home page and an iOS application tested over a two month period. The students proposed prizes and entered into competitions by registering their sports activities via activity codes on the card. Most registered sport activities won prizes.

We have had 4 campaign periods, each with a kick-off where we invited local sports clubs to the schools. All grades of students participated. We had sports clubs doing the teaching where students could test different sports in the class. We have conducted 4 sports campaigns for students in Husum, where we have offered 2 months of free exercise in 17 local sports clubs for students to test different sports and street activities after school, e.g. basketball and girls soccer.

The sports campaigns have resulted in new local sports clubs (parkour, basketball, girls soccer, soccer tennis) and events to motivate all students to test sports. We have also helped local networks to start up street events and arrangements for the students in the local area like soccer tournaments and cricket events.

#### Why did you choose to do this?

In 2011 only about 44% of 1300 students were enrolled in sports clubs, and there was very little information available about the possibilities of enrolling in sports activities in the local area (except for soccer and handball).

There were many girls who were not sports club members and there were very few sports clubs which focused on girls, ethnic girls in particular were left out of the loop.

The purpose of the campaign is to motivate students and girls to be more physically active and to get to know the local sports clubs.

#### Who were the participants?

During the campaign periods, two schools with 1300 students in Husum, 17 local sports clubs, local sports companies, and the school's sports coordinator participated.

#### What actually happened?

We had sports clubs come to the schools to teach in order to motivate students. Each campaign offered 2 months of free testing in which students could try out different sports activities. More than 200 students have participated in the sports campaign and more than 170 students have joined local sports clubs as members after the campaign. As a result, 5 new sports clubs in the local area have emerged; Parkour, Dance, Basketball, Soccer for girls and Soccer-tennis.





From 2011 to 2012, the number of active members in sports clubs has increased by 7.7% (100 students). For the girls, physical activities have increased by more than 14,7% (Danish girls) and approx. 4 % for ethnic girls. We have developed an mobile app and SMS service for students to get news and information on where they can find sports clubs in the local area. We have approximately 100 active users.

#### What difficulties were encountered?

The challenges have been to motivate school teachers to support the students in getting information on physical activities during the school day. We have also had challenges in getting the teenage students involved in the campaign. There was an issue with the registrations of campaign cards, because the kids needed help from the teachers and parents to register.

We overcame this issue by letting the students use the home page for the registrations.

#### Which aspects went particularly well?

Letting the local sports clubs teach in the schools proved very successful. Many students have joined street activities and local sports clubs as a results of the campaigns. The app and our home page have worked effectively for registrations of sports activities. The campaign competition in which the students could win prizes for being physically active was highly motivating.

#### How do you know how successful it was?

During the sports campaign, we could see from our surveys and registration that here were 215 physically active participants. There are over 100 students who have started sports activities after our campaign (based on student surveys) We have more active girls in the local area and several sports clubs report that they have gotten new members as a direct result of the sports campaigns.

#### What can we learn?

Our surveys tell us that there is a need for more visibility and information about the local sports clubs and their activities. Better relations between sports clubs and public schools would increase the students' motivation to become more physically active. The digital tools we implemented showed better results than the physical cards when it came to registering activities. The competitions at the schools were a good motivation to catch unmotivated students to try out the various branches of sports. Our motivational campaign concept could easily be adapted to other targets groups, e.g. adults, families and seniors, as well as other city areas.

Our project has strengthened the collaboration between municipal departments and the local community.





# READY, SET – HUSUM: ON THE JOB TRAINING FOR PHYSICAL EDUCATION TEACHERS

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**Keywords:** PE teachers education programme Concept: On The Job Training.

#### What did you do?

A one year programme for PE teachers where they could gain tools to help improve motor skills, didactics and motivation for physically vulnerable students. The training programme for PE teachers was based on theoretical and practical classroom exercises. The programme had 3 steps: a basic programme, a second programme and follow-up workshops.

18 teachers have completed the basic programme and 12 PE teachers have completed the second programme. Both programmes counted on the participation of representatives from various local sports clubs, who were brought to the school to teach their respective branch of sport to the students. This worked as a source of inspiration for the teachers.

The focus was to include all students in the teaching with the help of motor skill exercises, motivation and didactics.

The goal was to give PE teachers the right tools to both motivate the physically vulnerable students and to differentiate the teaching method according to the needs of the individual student.

Additionally, it was a priority to create a relevant exercise schedule for the students.

#### Why did you choose to do this?

There are too many PE teachers who lack both skill and the necessary education to teach proper PE. In 2011, only 44% of the 1300 students were enrolled in a sports club.

#### Who were the participants?

18 teachers participated in the basic programme which lasted 8 weeks, (basic PE teachers from two public schools in Husum).

The second programme included 12 PE teachers and went on for 8 weeks in 2012.

We will be setting up workshops for 2 school leaders and 12 PE teachers in 2013.

#### What actually happened?

18 teachers have completed the basic programme. 12 PE teachers have completed the second programme. The third programme (Workshops) is in progress.

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#### What difficulties were encountered?

The school leaders fail to take time out to support the PE teachers. There is no allotted time for the PE teachers to create educational plans for the respective classes.

PE teachers actively support having allocated time to professionally discuss the contents of the PE classes. We have spent a year surveying the PE teachers and school leaders and have now created an active plan for the physical education. The active plan is going to focus on the structure and the contents of the physical education and includes setting up a network for PE teachers in the local area.

#### Which aspects went particularly well?

We had 18 teachers in the programme, and we had the support of the school leaders to start a one year programme at the school. We also had a good relationship with the local sports club whose representatives came to teach at the school.

We had 12 PE teachers who were very happy with the educational contents of the second programme.

#### How do you know how successful it was?

Through the results of the surveys completed during the education programme.

#### What can we learn?

The schools need to upgrade the level of their physical education classes. The schools need to have more focus on the contents of the physical education. The schools need more educated PE teachers to help the vulnerable students. The schools can gain much from having a positive relationship with the local sports clubs.

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**HPS: ACCELERATING EQUITY** 

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**Keywords:** Accelerate equity, family wellbeing, educational outcomes.

#### What did you do?

Cognition Education has been contracted by the New Zealand Ministry of Health as the New Zealand National Health Promoting Schools (HPS) leadership and coordination service. Cognition's role has included the development and implementation of the New Zealand HPS National Strategic Framework. This has been developed through a comprehensive research, advisory and consultation process based on national and international literature and best practice change processes within school communities. The framework empowers school communities to develop solutions for their own transformation in partnership with health, education and social services.

#### Why did you choose to do this?

The objectives of the service are to:

- · provide national leadership, direction and support for the HPS sector in New Zealand
- facilitate the implementation of a nationally consistent approach for the delivery of HPS including evidencebased best practice in line with the HPS national strategic framework. The impact of HPS is measured in terms of improvement in whānau (family) wellbeing, equity and educational outcomes in school communities.

#### Who were the participants?

Health and Public Health Ministry and sector, Maori and Pasifika Health and education providers, Education Ministry and sector, National Reference Groups, HPS National Leadership Team, social service providers, health and wellbeing providers in school communities.

#### What actually happened?

The NZ national HPS strategic framework that was developed is a values driven methodology. It takes a socioecological and school community(1) development approach. This framework recognizes the interactions between individuals, their behaviours/lifestyles, and the impact of the wider physical, social and cultural environment in a school community.

The framework acknowledges the complexity and interaction of a broad range of variables in supporting positive educational and health outcomes in a school community. The values drive practice at every level of HPS delivery.

Key elements of this model include:

a bi-cultural partnership with Māori, where indigenous knowledge and approaches have been integrated into the framework

- an explicit focus on Māori, Pasifika and vulnerable whānau/families and or those experiencing the greatest inequities in the school community
- a theory of change based on international and national evidence about how improvements in health and educational outcomes are best achieved in New Zealand school community settings
- an inquiry(action research)

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#### What difficulties were encountered?

Difference in terms and language between health and education too often describe the same thing (Overcome with backwards mapping and professional development).

Understanding and appreciating that health is a determinant of education and education is a determinant of health. The same could be said for social status, health and education.

National health, education and social policies to address the needs of those experiencing the greatest inequities in NZ society are aimed at the same social groups (Maori, Pasifika and those who are vulnerable) webinars, mailing list.

The principles that are fundamental to effective health promotion, community development and school improvement are the same (done "with" rather than "to", where the school community - including parents and children - identify their prioritised needs rather than the local health board) website.

Utilising best practice research on how to best affect change within a New Zealand school community theory for change, intervention and improvement and transformational learning, PD, webinars, online mailing lists.

#### Which aspects went particularly well?

In alignment with the HPS framework, the role of health promoters/ facilitators (within Public Health Units) is to support school communities to implement an on-going cycle of inquiry (Action Research Model). This inquiry process builds on what schools already do and integrates the actions and outcomes into schools' planning, review and reporting mechanisms.

#### How do you know how successful it was?

Formative and summative evaluations-national database, planning templates, best practice case studies, logic models. The impact of HPS is measured in terms of improvement in whānau (family) wellbeing, equity and educational outcomes in school communities.

#### What can we learn?

The framework acknowledges the complexity and interaction of a broad range of variables in supporting positive educational and health outcomes in a school community. There is no silver bullet. What is needed is a collaborative inquiry based approach that is driven by the whole school community.

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# EDUCATIONAL AGENDA SPORT, EXERCISE AND HEALTHY LIVING; A DUTCH NATIONWIDE CASE

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**Keywords:** Health promoting schools; healthy living; Sports; Exercise.

#### What did you do?

Since 2012, the Educational Agenda Sports, Exercise and Healthy Living (SBGL in Dutch) encourages schools to create a healthy learning environment and structurally include health goals in school policy in primary education (PO), secondary education (VO) (secondary) special education (VSO) and secondary vocational education (MBO).

#### Why did you choose to do this?

An effective school health programme can be one of the most cost effective investments a nation can make to simultaneously improve the level of education, decrease the number of drop outs and contribute to a healthier population.

A healthy and stimulating school environment supports quality of teaching. It promotes the health and wellbeing of pupils and school staff, leads to higher job satisfaction and less sick leave.

#### Who were the participants?

The Educational agenda is prepared by the Primary Education Council, the Dutch Council for Secondary Education (VO-Raad) and the Netherlands Association of VET Colleges (MBO Raad), working closely together with national and regional partners.

#### What actually happened?

The Health promoting school approach is based on the whole school approach including signaling the problems, the teaching and learning in the classroom, the school environment and policies/regulations in school. This has demonstrated its effectiveness over the last 20 years (see www.schoolsforhealth.eu). The health promoting school concept supports the discussions on EU 2020 for smart, inclusive and sustainable growth.

Promoting sports and physical activity in schools is a good entry point to a whole school approach with regard to healthy lifestyles. The needs and demand of schools are central: the Education Agenda SBGL is for, by and with the schools.

#### How do you know how successful it was?

One of the targets of the Educational Agenda is that in 2016 25% of the schools have a written Healthy Schools policy on board-level and at least 850 theme certificates Sports and Exercise have been granted.

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#### What can we learn?

During the presentation we show the genesis of the Agenda and the process of the nationwide introduction of the Agenda as well as first results and experiences of participating schools and other actors during implementation.

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#### IMPLEMENTING THE HEALTHY SCHOOLS PROJECT IN KYRGYZSTAN

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**Keywords:** Healthy schools, implementation, sustainable development.

#### What did you do?

In 2002 the implementation of the 'Healthy Schools' project in Kyrgyzstan started. In each region 2-3 pilot schools were chosen, which created a national network of 21 healthy schools. In March 2003 Kyrgyzstan became a member of the Schools for Health in Europe network. The main strategy based on the joint activities of the Ministry of Health and the Ministry of Education and Science was to promote a national policy on improvement of health of school students and creating a culture of health. The aim of the project is establishing the conditions allowing children and adolescents to realize their full potential in health and development. The objective is to preserve and enhance the health of children and adolescents, and to form health values and a healthy life style. In each pilot school a school team was created including a coordinator, school director, teacher, psychologist, medical worker, parent and a student. Two consultative and methodological centers were established in 2 pilot schools in Bishkek. Training materials on creating a healthy school environment were developed for school coordinators.

Next the subject 'Culture of Health' was introduced and taught by trained teachers. Funding was provided from the school budget. The subject has been integrated into the school curriculum with the support from teachers, parents and students. Simultaneously the training programme 'Culture of Health' was developed, including a guide for teachers.

#### Why did you choose to do this?

Since independence of Kyrgyzstan the economy has suffered. The quality of education and health has deteriorated. Because of low wages many specialists left schools and health care institutions. The school infrastructure is outdated, in many schools drinking water and toilets are lacking. School canteens do not always provide healthy meals. Students have little knowledge about hygiene. Many schools are poorly heated. Children are most affected. The project can help to improve the quality of education and health.

#### Who were the participants?

In each of the 21 pilot schools a school team was created that consisted of a coordinator, the school director, a teacher, a psychologist, a medical worker, a parent, a representative of the school parliament (student).

#### What actually happened?

The subject 'Culture of Health' was developed and introduced in the pilot schools. The subject can be integrated into the school curriculum and gets support from teachers, parents and students. Also a training programme was developed and a teacher's guide. The school guide provides information about the programme and on developing lessons for teachers. Also included are a scenario for extracurricular activities, integrated lessons into all school subjects, a glossary of terms, tests, exercises, dictations and a health passport. Drawings and essays of students from the pilot schools were used in the design of the guide. The method of conducting a seminar for teacher-student-parents was used for the first time. The dividing lines between teachers, parents and students were removed.

#### What difficulties were encountered?

During the project there was a change of national government structure, and in the structure of districts and local communities concerning the education and health systems. There are frequent changes of leadership at





all levels, therefore creating a lack of continuity. Literature is lacking on health-promoting teaching methods, and resources are lacking to make sufficient copies of the teacher training guide. Due to a lack of financial resources schools in remote regions are insufficiently reached. There is a lack of international projects that address the problems of schools and no sufficient funds for the national healthy schools project. To overcome the difficulties, the experiences of the Russian healthy school project, the SHE Network and WHO documents were used. Members of families, friends, and community volunteers were actively involved in the project. Also free training seminars were conducted. Ongoing communication of the National Coordinator with the district education offices and school coordinators of the project was available in the form of reports.

#### Which aspects went particularly well?

A positive result of the project was the step by step implementation into all schools in the country. A system approach was used, an outline for training seminars was developed and successfully implemented, the curriculum was adopted by the school management and teachers. The views of school children, their parents and the public on health issues have been positively changed. Schools are moving from authoritarian to democratic rules. Teachers could learn new teaching methods. The 'School Health' programme is mentioned in scientific journals. There is regular information in the media on the progress of the project implementation.

#### How do you know how successful it was?

The success of the project can be judged by the interest from the Ministry of Health, Ministry of Education and Science, teachers, students, parents and the general public. Baseline and follow-up studies were conducted to assess the health of school students and factors that affect their health. To get quality and reliable data students from the same school of different ages were studied. The study results showed that awareness among school children about health topics has improved. The successful implementation of the project was due to the highly qualified project team. Also in the 21 pilot schools, strong, authoritative management worked, and innovative teaching methods were included.

#### What can we learn?

The introduction of the Healthy School project in Kyrgyzstan is a relevant example and learning experience of developing and implementing an educational innovation in a middle income countrie in Central Asia. The timing of the project coincides with the need for educational reform and for improving the health and wellbeing of the young generation. The Kyrgyzstan experience shows how the health promoting school approach can support these needs in a sustainable way. Despite the economic challenges and lack of governmental support and resources there is now an active national health promoting school network in Kyrgyzstan. Other countries in the European region and worldwide can learn from our experiences and we want to collaborate more with the SHE network countries in the future.

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#### **HEALTHY SCHOOL PLANNER**

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Keywords: Healthy School Planner, Online Assessment Tool.

#### What did you do?

The Healthy School Planner (HSP) was developed to assist schools in assessing the health of their schools and in making plans for improvements. The HSP is an initiative of the Pan-Canadian Joint Consortium for School Health (JCSH). Established in 2005, the JCSH is a partnership of federal, provincial, and territorial ministries of education and health from across Canada working together to promote the health of children and youth in the school setting. The HSP was developed for the JCSH by the Propel Centre for Population Health Impact (Propel) at the University of Waterloo, under the guidance of an Advisory Committee formed by the JCSH. As a monitoring and evaluation tool, the Planner allows a school team to self-assess through both Express and Detailed modules in 4 key school health areas: tobacco use, physical activity, healthy eating and the Positive Mental Health Toolkit.

With the HSP, schools receive results immediately, tailored recommendations based on their results, and a list of action-oriented resources. Schools can share their results and achievements with staff, students, parents, and the broader community. The HSP assesses the health of a school using the four pillars of comprehensive school health championed by JCSH: social and physical environment, teaching and learning, healthy school policy and partnerships and services. The Healthy School Planner is a free, online tool - no paper surveys required. See it here:http://www.healthyschoolplanner.uwaterloo.ca.

#### Why did you choose to do this?

The HSP was developed with a Pan-Canadian Advisory Committee to assist educators in assessing the health of their schools and in making plans for improvements. Self-assessment tools for schools are needed to develop, monitor, and make improvements in school health that are in line with WHO's efforts to ensure that all students have safe and healthy learning environments.

#### Who were the participants?

Any school in Canada, whether public, private or charter, can use the HSP at no cost. The HSP, which can be accessed online at any time, guides schools through a step-by-step process that includes: a series of questions to determine the school's current health status, a rubric of the school's results, recommendations for taking action, a planning template to help develop goals, an action plan for making improvements, and links to resources to help develop and implement the action plan.

#### What actually happened?

From 2011-2013, Propel Centre for Population Health Impact (Propel) at University of Waterloo in Ontario, Canada and the JCSH collaborated on content and process revisions of the HSP (including a pilot study) to enable the tool to fully meet the needs of its end-users. The revision process involved researchers, policymakers and practitioners. Propel and the JCSH completed an improvement-oriented evaluation to help understand stakeholder reactions to the HSP. The evaluation findings confirmed that the HSP is a valuable tool to provincial and territorial stakeholders that could be made more relevant and accessible to different jurisdictions. These findings guided the HSP revisions and have resulted in the current version of the HSP. Revisions have included iterative development with stakeholders, face and content validation across multiple jurisdictions and with different groups of stakeholders, and a 3-jurisdiction pilot study. Stakeholders from across Canada had input through face-to-face consultations or provision of web-based feedback.

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#### What difficulties were encountered?

A systematically planned and evidence informed approach incorporating multiple factors and stakeholder support is an ongoing work-in-progress in order to increase the use of the HSP.

As well, collaborating across the health and education ministries of 12 different provinces and territories, one federal government agency and a team of university-based researchers remains challenging.

Gaining consensus and moving the tool to the dissemination phase has taken additional time but has proven worthwhile. The HSP is evidence based and highly valued by schools, educators and other key stakeholders across Canada. Being a free, online, publicly-available assessment and planning tool, use of the HSP and its results to inform school-based change can be challenging as some educators and administrators may begin the registration process but not complete it. The key is keeping people interested and encouraging them to continue to evaluate their results as they see improvements in their school's health.

#### Which aspects went particularly well?

Several different modules (healthy eating, physical activity, tobacco reduction and positive mental health) are available in the Healthy School Planner. School health can be assessed by examining the four pillars of the Comprehensive School Health framework: social and physical environment; teaching and learning; healthy school policy; and partnerships and services. Regardless of the topic identified, when all four pillars of the comprehensive school health framework are addressed, students are supported to realize their full potential as learners and healthy, productive members of society.

#### How do you know how successful it was?

School health coordinators from 12 provinces & territories have become much more involved in the Planner since the major revisions began. The HSP Advisory Committee has engaged in countless meetings to analyze & discuss every item on the survey - including the questions, feedback report, recommendations, & resources. The dedication of stakeholders across the country has been consistent for the past two years with all 12 provinces & territories awaiting the opportunity to use the new Planner. Monitoring and evaluation of the HSP is ongoing & promotional plans to market it for the 2013-2014 school year are underway, with the Advisory Committee suggesting innovative uptake strategies.

#### What can we learn?

Comprehensive School Health works to: promote health and well-being for all members of the school community, enhance learning outcomes; uphold social justice and equity; provide a safe and supportive learning environment; encourage student participation and empowerment; link health and education issues; collaborate with parents and the local community; integrate health into the school's ongoing activities; curriculum and assessment standards; set realistic goals built on data and sound scientific evidence and seek continuous improvement through ongoing monitoring and evaluation. The HSP, as an assessment and monitoring tool of the JCSH, focuses on environments that influence health and guides planning and action with specific recommendations for school-level policy and environmental changes. The HSP offers potential as a research and evaluation tool since it has been validated, and incorporates indicators that are being promoted for use in research and surveillance across Canada.

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# THE PAN-CANADIAN JOINT CONSORTIUM FOR SCHOOL HEALTH: COLLABORATION ACROSS HEALTH AND EDUCATION, ACROSS JURISDICTIONS

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**Keywords:** School Health, Canadian government collaboration, policy.

#### What did you do?

In an effort to formally commit to collaboration of school, local community, and the larger provinces and territories, the Canadian provincial, territorial, and federal governments partnered in 2005 to form the Pan-Canadian Joint Consortium for School Health. In 2010, the same governments made a second five-year commitment to continue dedicating efforts from Education and Health Ministries to resources and initiatives to optimize student achievement and student wellness across the country. In 2013, the JCSH took the commitment from the government ministries one step further and, demonstrating the reality of and the potential for innovative multi-sectoral partnerships, held a roundtable meeting of senior government officials from each of the 13 provincial, territorial, and federal jurisdictions and from each of the Health and the Education sectors. This first-ever meeting of members from each sector and jurisdiction brought forward the ongoing commitment to student health and learning outcomes and the challenges involved in bringing the Education sector more directly into the work of school health.

#### Why did you choose to do this?

Cross-sector and cross-jurisdictional collaboration is easier to consider in theory than to implement and maintain in practice. However the health and learning of Canadian children and youth is of vital importance to the Health and Education ministries in this country and the cost of not combining strengths in order to achieve these outcomes is high. Schools are in the business of educating students, but they are also a positive setting for instilling behaviours related to lifelong health and wellness.

#### Who were the participants?

Representatives of the Ministry of Education and the Ministry of Health from 12 of Canada's 13 provinces and territories make up the members of the Pan-Canadian Joint Consortium for School Health. The federal (Canadian) government is represented by the Public Health Agency of Canada. The 2013 Cross-Sector Management Meeting brought senior level directors from all member jurisdictions. National priorities and local issues were equally referenced and discussed.

#### What actually happened?

The 2013 Cross-Sector Management Meeting of senior representatives of Education and Health in every representative province and territory was a significant recognition of the commitment to student achievement and student wellness. It was the first time since the two levels of government (federal and provincial/territorial) created JCSH that such a meeting was held to ensure that each sector/ministry (Health and Education) fully understood school health issues and the other sector's response to them. After seven years, this government school health team is moving its focus slightly to incorporate student achievement more fully. School health efforts have been less on education than on health perspectives, this is particularly the case in Canada, where health is a shared federal, provincial, and territorial responsibility but education is solely the purview of the province/territory. The JCSH is the only means where broad educational issues around student achievement and youth engagement can be debated and resourced along with student and school health initiatives.

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#### What difficulties were encountered?

The diversity of mandates, geography, and cultural and health issues are complex and varied in this large country. In addition, some provinces have significant resources for schools while others, including the northern territories, face serious health and education outcomes challenges, making issues of equity and school-based health particularly onerous. Further, Canada has two official languages, English and French, while one of the territories has Inuktitut as its third official language. One consortium must balance multiple needs and interests in applying leadership roles, knowledge development and dissemination of resources, and building capacity of each sector and each jurisdiction to make consistent and measurable improvements that meet their unique contexts. One of the outcomes of the 2013 Cross-Sector Management Meeting was to provide monitoring and evaluation of the commitments made by the 13 jurisdictions to the JCSH. In addition, it was discussed how the Consortium aims to have each jurisdiction not become the same but to improve equitably.

#### Which aspects went particularly well?

Each of the 13 jurisdictions was represented at the major Cross-Sector Management Meeting in 2013. Almost all jurisdictions sent senior directors from both the Education and the Health ministries. All attendees at the meeting participated fully and discussed important school health issues in their jurisdictions and the differences and similarities of student achievement and student wellness issues throughout the country. In addition, strategies were initiated to enhance the role of the education sector in comprehensive school health and more clearly define student achievement to integrate wellness and self-determination into the definition.

#### How do you know how successful it was?

A survey was emailed to each participant following the February 2013 meeting. Among the feedback received by the JCSH was that it was invaluable to hear Health and Education leaders explain to one another their definition and understanding of school health priorities. As well, it was deemed important for senior directors to hear about various school health initiatives across the country and also to find out which jurisdictions had similar challenges or offered models that were successful at impacting school health.

#### What can we learn?

Collaboration remains a silver-tongued devil – beautiful to contemplate and difficult to justify, particularly in the daily workings of government departments that have faced financial cuts to major initiatives. It is important to remember that the broad 'comprehensive' picture of lifelong wellness and achievement for children and youth often is seen as 'nice to do' by overworked, yet committed politicians and policymakers faced with acute problems. The balance is tenuous between defending and/or justifying the time and resources needed while still making a strong case for the value of this broad 'promotion-prevention' work.

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## POSITIVE MENTAL HEALTH TOOLKIT: A RESOURCE FOR THE ENTIRE SCHOOL COMMUNITY

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Keywords: Positive Mental Health; Toolkit; Comprehensive School Health.

#### What did you do?

Recognizing that for many students school is a source of social connection, safety, and belonging the Pan-Canadian Joint Consortium for School Health (JCSH) develops resources on Positive Mental Health (PMH): From a Mental Resilience Quick Scan, to Positive Psychology Themes in School Health, to a literature review and better practices document of schools as a setting for Positive Mental Health, to a Positive Mental Health Toolkit. The Toolkit, launched in 2011, is the signature resource of the JCSH's PMH storehouse and has been disseminated to schools, educators, health professionals, community groups, and students and parents. The JCSH, a partnership of Health and Education Ministries in 12 of Canada's 13 provinces and territories, worked with a research team from University of New Brunswick and an advisory committee of education and health specialists throughout Canada to create an interactive, free, online tool that is accessible to anyone - from an expert to an interested student, parent, or community member.

#### Why did you choose to do this?

Schools play a critical role in the mental health development of every student. The JCSH, as a singular partnership of Ministries of Education and Health throughout Canada, is committed to fostering and supporting a holistic learning and wellness environment in all schools. The Consortium members recognize that Positive Mental Health is an overarching and foundational component in student achievement and student wellness throughout school and throughout life.

#### Who were the participants?

The JCSH worked with researchers W. Morrison and Associates from the University of New Brunswick, Canada to develop a resource that anyone can use: teachers, school administrators, health professionals, guidance counsellors, students, parents, community members. The advisory committee was composed of researchers, school health coordinators from provinces and territories throughout Canada, and members of the JCSH Secretariat. Key stakeholders comprised experts from research, policy, and practice across the country.

#### What actually happened?

The JCSH had partnered with W. Morrison and Associates from the University of New Brunswick on a number of resources focused on Positive Mental Health in the school setting, Following an extensive review of the literature and key stakeholder interviews, the research team developed a framework of indicators of positive mental health in the school setting based on the four pillars of comprehensive school health: teaching and learning, social and physical environment, partnerships and services, and healthy school policy. The Toolkit is an evidence-based resource, built from the work in the partner document: School as a Setting for Promoting Positive Mental Health: Better Practices and Perspectives. It uses a strengths-based approach, recognizing that all students and schools have strengths and gifts that can be supported and nurtured. Since its release, the Toolkit has been piloted across Canada in schools, provided to guidance counsellors in conferences and workshops, and introduced to educators and health professionals in presentations made around the country.

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#### What difficulties were encountered?

Positive Mental Health touches on numerous aspects of school health, incorporating student self-determination - competence, autonomy and connectedness - but also broadening to social elements, including relationships, student achievement, and school climate. Development of one online, easily accessible, and user friendly toolkit that offers a comprehensive and holistic strengths-based approach to mental fitness is a challenging assignment.

The team was composed of policymakers (the Consortium members), researchers, and practitioners (educators and health professionals in the provinces and territories). Each group, and stakeholder brought individual and professional opinions about positive mental health, needs of students and schools, and activities, theories, and supports that must be included. The result toolkit required hundreds of hours of meetings and networking to ensure key elements were included.

#### Which aspects went particularly well?

The collaboration has paid off in a free online resource available to anyone who speaks either English or French. The researchers and the JCSH have worked very well together over a period of years on a number of Positive Mental Health projects and trust has helped in bringing the two groups through the anxieties and stresses that accompany major projects. In addition, the concept for the toolkit had grown out of the earlier iterations of the better practices literature review; as a result, the Ministry of Education and Health in the provinces and territories were very supportive and committed to this resource, providing funding in some cases and pilot testing contacts in others.

#### How do you know how successful it was?

In the past 18 months, members of the JCSH including the Executive Director and school health coordinators, have presented on the PMH toolkit to numerous educators and health professionals across the country. JCSH representatives from Health and Education Ministries in the 12 member provinces and territories have disseminated the resource widely to schools, school boards, and health regions. There is universal praise of the resource as a foundational element in a school community. Among the responses is this: that the PMH Toolkit 'provides many correlates of positive mental health that are in line with many of the outcomes that the education system is striving to reach' (view of educator).

#### What can we learn?

A focus on Positive mental Health as an overarching theme enhances the opportunities for a school and a school community to respond in an integrated way to student achievement and wellness through application of initiatives in comprehensive school health: social and physical environment, teaching and learning, healthy school policy and partnerships and services. It is possible for a collaboration of representatives from distinct sectors (Education and Health) and diverse geographical regions (provinces and territories across Canada) to work with researchers and achieve a goal of an evidence-based, practical, user-friendly resource. This end product, the result of the hard work and collaboration is one that celebrates the strengths of all students and schools and 'brings to the surface factors or issues that have gone unnoticed or left to 'fall by the wayside' (view of educator).

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#### POSTURE AND PHYSICAL EDUCATION OF STUDENTS

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**Keywords:** Posture, diagnosis, correction of disorders, schoolchildren.

#### What did you do?

The device Flexiscan was developed to carry out a video recording and record biomechanical indicators of the pose corresponding to different phases of the functional test. The device consists of a 3D-scanner and a computer with appropriate software.

A computer programme analyzes 3D camera findings, determines ankle-joints, knee and hips joints, three points of spine (lumbar-sacral, lumbar-chest, cervico-thoracic), the joints of the upper extremities, and builds a three-dimensional model with 20 reference points (8 paired points of upper and lower extremities, and 4 central).

Central vertical is calculated mathematically against the defined points of ankle-joints. Furthermore, the analysis of the symmetrical position of 16 paired control points of the extremities and 4 central reference points in three-dimensional space regarding the central vertical line at the different phases of squats in the frontal and sagittal flatnesses. We measured the operating amplitude of movement in the ankle and knee joints, the position of the pelvis.

Analysis of the findings of functional testing allows us to evaluate a functional muscle balance. In identifying deviations of the quantities of joint angles and position of the central reference points from the normative values the recommendations for correction of functional state of the muscles and ligaments are being formed.

#### Why did you choose to do this?

Posture is one of the integral characteristics of schoolchildren's health, since its formation is influenced by many external and internal factors. The high prevalence and high medical and social significance of violations of posture define the priority of research studies on the foundation and development of new diagnostic and health technologies that are integrated into the educational process in physical education students. Physical means of prevention and rehabilitation are natural and the most appropriate to age development processes.

#### Who were the participants?

We carried out the evaluation of students in grades 2 (52 students), 7 (42) and 10 (21) during the functional test. We determined the state of muscles of foot, shin and thigh of both extremities on the degree of their deviation from the vertical axis and formed a group of children and adolescents for the correction of violations at Physical Education lessons.

#### What actually happened?

The surveys found that an imbalance of muscle tonus is connected with the weakening of the muscles of leg and foot in 75% of students in grade 2, 62% - in grade 7 and 76% - in grade 10. 25%, 38% and 24% of students respectively had an increased muscle tonus of the muscles of the ankle joint.

Strengthening the muscles of the front of the thigh (FT) of the right (left) foot is recommended for 54% (40%), 45% (33%) and 71% (14%) of students in grades 2, 7 and 10, respectively. A clear regularity was also stated in the examined children of different ages - weakened muscles of the FT of the right foot were revealed more often than of the left leg. Moreover, this difference was especially pronounced in the students of the tenth grades. The



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largest frequency of occurrence of weakened muscles of the FT of the right foot compared with students of junior and middle classes was determined in these students. In order to explain these facts, it is necessary to carry out a comparative analysis of the findings with the prevalence of posture disorders and spinal deformities in these children.

#### What difficulties were encountered?

Such a study would be done in the future with the use of computer-optical topography providing an objective examination of posture and spinal in the mode of screening test. The bilateral strengthening the muscles of the FT was shown on the survey findings of 6% of students in grade 2, 21% - in grade 7, and 14% - in grade 10.

It should be noted a high frequency of the occurrence of enslaved muscles of the back surfaces of both lower extremities. Stretching these muscles is recommended for almost all surveyed children and adolescents in grades 2, 7 and 10, 94.2%, 90.5% and 100% respectively.

On the basis of the findings the groups of students were formed for Physical Education lessons with corrective exercises for relaxation and strengthening of different muscle groups differently according to their state determined with Flexiscan. The corrective exercises were included into each Physical Education lesson (3 lessons per week). The first positive changes in the muscles were already observed after 12 regular lessons.

#### What can we learn?

These findings allow us to consider this method as a promising way for the objective assessment of the individual posture and correction of its inclinations directly at Physical Education lessons. The introduction of this method is aimed at improving students' health functional reserves by means of physical education in educational institutions.

Promising directions of the methodical approach are the evaluation of health effectiveness of different healtheducation programmes and technologies of physical education, development and substantiation of individual programmes providing child and adolescent healthy lifestyle.

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# INTERACTION OF HEALTH SCHOOLS AND EDUCATIONAL INSTITUTIONS IN IMPLEMENTING NETWORK PROJECTS ON PROTECTION AND STRENGTHENING STUDENTS' HEALTH

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**Keyword:** Health school, network interaction, network projects.

#### What did you do?

The main activities of 21 educational institutions of the network in the preservation and promotion of students' health are the following:

- selection and justification of the network project based on priorities and available positive experience in health-keeping
- development of the project, mechanisms of its implementation and the creation of the product in the chosen direction
- monitoring health indicators and environments for the evaluation of the effectiveness of prevention and health technologies
- transfer of network project results to other educational institutions.

At stage 1 of the network interaction of Health School and educational institutions we conducted a synthesis and analysis of health-keeping activity of schools in the network. We justified the priorities of private network projects combined into 4 groups according to their orientation: the conditions of the learning environment, technology and learning modes, the organization of motor activity, health education. Group I - network projects to optimize the conditions of the learning environment. Group II - network projects on psycho-pedagogical support for lessons. Group III - network projects to increase physical activity of students. Group IV - network projects to promote a culture of health. Stage 2 of network interaction of Health Schools and educational institutions was focused on t-analytical support for content development and design of the product of private network projects.

#### Why did you choose to do this?

To create a preventive space in school we should generalize and evaluate innovative technologies. The purpose of the network interaction of educational institutions is to improve the scientific and practical developments. The aim of the resource center is to coordinate the activities of educational institutions for the implementation of network projects and methodological support for monitoring their performance, design assistance, and distribution of activity in the network and out of network educational institutions.

#### Who were the participants?

We developed the principles of the combined option of using different types of student's furniture in the classroom to prevent academic and static fatigue, disorders of posture and spinal deformities among students. Several kinds of student's furniture designed to exercise the muscles, providing working position directly at the lesson: student set with the seat "paperweight" and trim balancing seat. The previous studies found that their use makes high demands on the body of students and recommended reducing running time up to 5-7 minutes.

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#### What actually happened?

It was found that the perspective option was a combined version of the use of different types of student's furniture that promoted change of working postures, increase in physical activity and training of muscles of the trunk to prevent violations of the musculoskeletal system in children at the lesson.

#### What difficulties were encountered?

Compilation, analysis and scientific examination of health technologies in order to transfer to the practice of educational institutions should be recognized as efficient and cost-effective. The priority for the implementation of these provisions is the creation of an appropriate mechanism to organize the interaction of the various educational institutions with positive results in the health-keeping of students. Conceptual positions of forming preventive space for the educational institution provide the network interaction of educational institutions and their resource support for the development, review and standardization of disease prevention technologies, protection and promotion of students' health, as well as the system monitoring of students' health and the environmental conditions of education with the subsequent evaluation of these technologies. The priority direction of modern schools is the development, testing and introduction of innovative technologies of students' health on the basis of the network interaction of educational institutions and resource support.

#### Which aspects went particularly well?

One of the examples of the private network projects, the implementation of which was carried out in a network interaction of Health School and educational institutions to establish preventive space, was the project "Introduction of preventive school furniture and the combined use of its different versions".

#### How do you know how successful it was?

Non-traditional kind of student's school furniture is the student's desk, which prevents static fatigue and maintains the performance by reducing the axial load on the spine, maintaining the physiological curves of the spine and increasing physical activity. Further development of the concept of networking and its resource provision is related to the formation of resource centers Level 2 on the basis of those network educational institutions that have achieved the most significant results in the development and implementation of technologies for shaping preventive space in school.

#### What can we learn?

The priorities for networking Health Schools with educational institutions are: (1) the development of the conceptual and legal background of networking educational institutions and its resource support, (2) the development of standards of health-forming technology space in secondary schools, and (3) systematic monitoring of students' health. The findings show that the networking of schools with public health agencies is an effective preventive tool for creating spaces within the modern school.

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# THE RUSSIAN EXPERIENCE IN CREATING A HEALTHY LIFESTYLE FOR CHILDREN AND ADOLESCENTS

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**Keywords:** Fruit consumption, alcohol use, smoking, sexual behaviour.

#### What did you do?

The purpose of this study was to evaluate the changes in the prevalence of parameters affecting positive and negative health in dynamics of years.

6 indicators were selected from the International Report of the HBSC Programme: a positive perception of the school, fruit consumption, tobacco use, alcohol use, cannabis use, sexual intercourse. Each indicator was considered in the dynamics of years from 2001 to 2010. We used the method of comparative analysis.

#### Why did you choose to do this?

Courses for a healthy life and the formation of citizens' healthy world outlook are currently identified among the main priorities of the national policy of the Russian Federation. Questions of a healthy lifestyle are reflected in the concept of long-term socio-economic development of the Russian Federation until 2020, in the draft of the Concept of Health of the Russian Federation until 2020. Since 2009, a new priority has been introduced - a set of measures to promote healthy lifestyles and reduce alcohol and tobacco use.

#### Who were the participants?

15-year-old Russian students participated in the study "Health Behaviour in School-aged Children" (HBSC).

#### What actually happened?

Positive perception of school life is a resource for health and well-being, whereas a negative perception may be a risk factor affecting the physical and mental health of students. In 2001 and 2002, 12% of 15-year-old boys liked school; in 2005-2006 - 15%; by 2009-2010 this had increased to 20%; among girls - 13%, 14%, 21% respectively.

Nutrition plays an important role in normal growth, development and effective education. The consumption of fruit in childhood and adolescence is one of the positive factors influencing health. Fruit consumption among children becomes a habit in adulthood, which reduces the risk of coronary heart disease, stroke and cancer. The proportion of children consuming fruit daily had increased since 2002: 18% of boys in 2001-2002; 27% in 2009-2010; 25% and 30% of girls, respectively.

The prevalence of weekly smoking was: 27% of boys in 2001-2002, 27% in 2005-2006 and 19% in 2009-2010; 18%, 21% and 15% of girls, respectively. The percentage of weekly drinkers was 28% in 2001-2002; 27% in 2005-2006; 13% in 2009-2010; among girls 17%, 21%, 9%, respectively.

#### Which aspects went particularly well?

Cannabis is the most common substance used by both adults and teenagers, after alcohol and tobacco, despite the fact that its use is illegal in most countries and regions of Europe and North America. Teens are using this narcotic substance for improvement of the mood, to facilitate communication, to please their peers and for relaxation. The proportion of young men and women respondents who have ever at some point cannabis was:





19% of the young men in 2001-2002; 17% in 2005-2006 and 11% in 2009-201; and among women 9%, 13%, 6%, respectively. Adolescents who have at some point had sexual intercourse among young men were 41% in 2001-2002; 44% in 2005-2006; 37% in 2009-2010; in girls - 16%, 24% and 18%.

#### How do you know how successful it was?

As a result of the complex measures aimed at promoting a healthy lifestyle, there is a tendency to increase the proportion of adolescents who have a positive attitude to school life, and daily consume fruits, and to decrease the proportion of young people who smoke every day, drink alcohol, have used cannabis and had ever had sexual intercourse.

#### What can we learn?

Promoting a healthy lifestyle for children and adolescents must be continuous; constantly adjusted on the basis of these studies; conducted through large-scale, comprehensive mass media campaigns. Effective education in the field of healthy lifestyle will lead to: re-evaluation of life values, the appearance of the necessary skills, behavior change and lifestyle of children and adolescents and, as a result, reduce the risk of developing diseases.

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#### INTERESTS OF CHILDREN IN RUSSIAN STATE POLICY

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Keywords: National strategy, health, children, adolescents.

#### What did you do?

The national strategy of actions in the interests of children for 2012-2017 was approved by the Decree of the President of the Russian Federation.

Implementation of the National Strategy is meant to be performed in the following directions: family policy for childhood protection; accessibility of quality education and up-bringing, cultural development and child safety information; child-friendly healthcare and healthy life-style; equal opportunities for children in need of special state care; creating a child rights protection system and child-friendly justice. The main objectives of the strategy are:

- state support for the development of new pre-school educational institutions and secure pre-school education;
- · development of abilities of each student;
- provision of quality psychological assistance;
- resource provision for upbringing and control of safe conditions of education;
- provision of complex prevention of negative phenomena in children's environment;
- extension of the network of creative corporations, domiciliary clubs, educational and recreational camps for children;
- creation and implementation of training programmes on safety rules for online behavior;
- introduction of systems for monitoring the educational environment;
- creation of portals and sites accumulating the information for children and parents.

#### Why did you choose to do this?

In a number of subjects of the Russian Federation there is not enough financial provision of regional targetoriented programmes in the field of protection and promotion of children's health; medical examination and immunization of children are arranged inproperly; students' rights for protection and promotion of health are not observed in educational institutions.

#### Who were the participants?

Adolescents aged 10 to 18 years are often without sufficient attention from the state. The challenges they face in this difficult age period often lead to the most tragic consequences. The prevalence of suicide among teenagers in Russia takes a leading place in the world, infant mortality rate is much higher than in other European countries. Adolescent alcoholism, drug addiction and non-medical use of narcotics, psychotropic and other toxic substances by children, require special attention especially at school age.

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#### What actually happened?

To solve these problems the following are necessary:

- creation of conditions for healthy development of each child, ensuring all children with qualitative services and standards of health care system;
- · development of adolescent medicine, child-friendly clinics, promoting healthy lifestyles;
- development of the modern model of the organization of rest and health improvement for children;
- formation of the needs of children and adolescents in a healthy diet and the improvement of the system of ensuring qualitative nutrition for children in educational institutions.

#### What difficulties were encountered?

Measures to create child-friendly healthcare are:

- improvement of the regulatory framework in the field of health of children, medical care for women and children;
- introduction of efficient organizational and medical technology based on the current methods and standards of care for children;
- development of technologies for complex diagnosis and early medical and social care for children with disabilities;
- development of Adolescent Medicine, the creation of youth consultation centers, adolescent reproductive health centers and centers of social care for adolescents;
- · conduct of outreach activities to prevent early pregnancies and abortions among minors;
- to support successfully implemented projects of friendly clinics for children and young people in the regions;
- to restore medical offices in educational institutions;
- to increase responsibility of medical personnel of medical institutions for the poor-quality healthcare for children.

#### How do you know how successful it was?

The Strategy sets up measures aimed at development of a healthy lifestyle policy of children and adolescents.

The use of effective social advertising aimed at the formation of healthy lifestyle and prevention of suicidal behavior among minors, information about the activities of support services and emergency psychological, social and legal assistance, including the Internet, and anonymous phone counseling, which are an important components of these measures.

Involvement of civil society, the development of the volunteer movement, the need for a healthy lifestyle and getting support and aid in situations related to a risk of injury are extremely essential in modern conditions.

#### What can we learn?

Implementation of programmes on hygiene education aimed at the provision of the opportunities to make informed choices in a healthy lifestyle is an important factor in the formation of the child's personality. Introducing a regular state monitoring of the major behavioral risks to the health of children and adolescents; revitalizing the work on implementation of relevant departmental regulations of psychological tests in educational institutions for the consumption of narcotics, psychotropic substances and other toxic substances will allow to set up a lifestyle management system for children and adolescents.

Implementation of activities of the strategy will ensure the access of all categories of children to quality and standards of the healthcare system, the means for treatment and rehabilitation of health.

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# MODERN STUDENTS IN MEGAPOLIS: MORPHOFUNCTIONAL FEATURES AND LIFESTYLE

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**Keywords:** Lifestyle of schoolchildren, morphofunctional status.

#### What did you do?

Studying the dynamics of the physical development of children and adolescents in the first decade of the 21st century against the background of socio-economic transformation and changes of lifestyle of adolescents has a great importance at the present time. The objective of the study is the analysis of the morphofunctional development of pupils aged 8-15 years regarding their lifestyle. Decrease in motor activity, the use of new technologies (computers, laptops, PSP, iPad, etc.) leads to a change in the morphofunctional status of schoolchildren.

#### Who were the participants?

3500 students were examined. Physical development was studied by the unified anthropometric technique. Lifestyle was studied by questionnaire method.

#### What actually happened?

New trends in the physical development of modern students aged 8-15 years were stated: an increase in total body sizes, earlier puberty, increasing the thickness of the folds of subcutaneous fat and waist circumference, a sharp decline in muscle strength of hands. The study of today's students revealed that 100% of girls and 99,1% of boys regularly used the computer; 39,8% of girls and 36,4% of boys spend from 6 to 15 hours per week at the computer; and 6.2% and 13.1% respectively spend more than 30 hours per week. 42.5% of girls and 45.5% of boys watch TV up to 5 hours per week, from 6 to 15 hours a week - 39.8% and 31.3% respectively. 66.4% of girls and 63.2% of boys attend lessons not related to physical activity 2-3 times a week. Sport and dance sections were indicated by 40.7% of girls and 66.7% of boys, from 1 to 5 hours a week. The survey on behavioral risk factors identified that 12.7% of girls and 15.1% of boys among 15 year olds smoke regularly, while 54.6% of girls and 48.1% of boys have tried smoking. The most common age for starting smoking among boys - 14 years old, among girls - 13 years old, with the earliest ages 6 and 8 years old respectively. 32,0% of boys and 29,1% of girls used alcohol once a month or less.

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#### Which aspects went particularly well?

Statistically significant associations were found between reduced manual strength and smoking (p <0.01), as well as the time spent at the computer (p <0.05).

#### What can we learn?

In spite of the increase of somatic sizes in all age groups (8-15 years old), the findings also showed a significant reduction of the functional parameters (carpal dynamometry) compared with peers of the 20th century. This phenomenon is associated mainly with a sedentary lifestyle and bad habits of modern students. The findings allow us to adjust the directions of preventive work in schools.

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# OPPORTUNITIES FOR GENDER APPROACH IN EDUCATION

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**Keywords:** Adaptation, gender, separate schooling, boys, girls, school.

#### What did you do?

The nature and timing of adaptation to school was explored among students of mixed and single groups during the so-called critical periods associated with the beginning of school (grades 1-3 - 215 girls and 125 boys) and the transition of children to subject teaching in educational institutions with high school loading (grade 5 - 55 girls and 43 boys). During these periods, according to many authors, schoolchildren show a significant decrease in performance and stress of all the functions and systems of the body.

We studied mental health with the help of special tests, concerning emotional state and level of neuroticism in students. For grades 1-3, girls in single gender classes were compared to mixed gender groups and the following differences were identified: reduction of acute morbidity (a full functional relationship was found (r = 1) in girls between acute disease, as assessed by the index of absenteeism (4.1 c.u. - in 1st, 4.8 c.u. - in 2nd and 0.8 c.u. in 3rd grade), and uncomfortable emotional state at the end of the school day (30.9% - in 1st, 33.6% - in 2nd and 18.7% - in 3rd grade) in a three-year dynamics); lower prevalence of functional abnormalities in cardiovascular activity, digestive and nervous systems, as well as underweight; optimization of vegetative provision of mental performance at the stage of adaptation to school; and reduction of the neurotizing effect of training activities on the girls' bodies, increasing resistance to the "educational" fatigue during the day and the school week, etc.

#### Why did you choose to do this?

Currently, the system of education in Russia is under reform. Innovative forms and methods of training are introduced, advanced educational technologies are developed, most of which proclaim personality-oriented health-keeping approaches to the organisation of training of the younger generation. Almost every institution has its own identity through a variety of innovations in educational activities. This meets the requirements of the new federal education standard (2010).

#### Who were the participants?

Schoolchildren.

#### What actually happened?

There are radically changing conditions for teaching of primary school children - they have to adapt to the "cabinet" system, a different style of teaching activities of subject teachers, greater self-organization of educational activity. Typically, the adaptation in the basic school lasts 2-4 weeks of study.

As criteria for evaluation of the adaptation process among fifth-graders - boys and girls, students in mixed and single gender groups - we estimated the time of stabilization (or a positive dynamics) of a number of indicators of mental health, emotional state, level of neuroticism, which are largely consistent with the technology of assessment of adaptation of pupils to educational loadings of many authors.

During the four-week follow-up (September - the beginning of the school year), girls in single gender classes (G/G) showed a significant increase in the speed and accuracy of mental capacity. The number of cases of strong and pronounced fatigue had decreased by almost half (from 41.8% to 25.2%) by the 4th week. Similar trends were observed among boys in single gender class.

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#### Which aspects went particularly well?

The speed of work was not significantly changed among the boys (B/M) and girls (G/M) in mixed gender classes during the same period of observation. The prevalence of a strong and pronounced fatigue remained stable at a high level - 43.1% and 43.9%, respectively.

The study of the emotional state of students allowed us to divide the students into three groups: experiencing at the time of the study comfortable, balanced or discomfort states. The analysis of these indicators among students of girls' classes and mixed classes showed that 20-25% of girls (G/G) were in a balanced emotional state for 4 weeks of observation that was more favorable for successful learning.

#### What can we learn?

Different terms of adaptation of schoolchildren to school requirements determine the feasibility of a differentiated approach to the organization of their learning in the elementary school, and a more favorable and effective flow of the adaptation process in the basic school demonstrates the effectiveness of this approach, which is particularly important for educational institutions with high school loading.

The findings allow us to recommend further development of educational technologies of the gender orientation, as the account of the special cognitive activity of boys and girls contributes to greater efficiency of the educational process and has potential health-keeping (preventive) capabilities.

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#### RUSSIAN PROGRAMMES "SCHOOL MILK" AND "FRUITS AND VEGETABLES AT SCHOOL"

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**Keywords:** Schoolchildren, nutrition, health, nutrition programmes.

#### What did you do?

Among 9th grade students, 72.4% of boys and 77.9% of girls consume fresh vegetables, fruits, juices only 2-3 times a week with 4.7% and 2.4%, respectively doing so just once weekly. Moreover, in the process of learning the proportion of adolescents is increasing, especially among young men (to 12.1% in grade 11). Among students in grades 9-11, only 22.4% meet the WHO recommendations for consumption of fresh fruits, juices, vegetables. Among today's teenagers a significant proportion have inadequate consumption of meat, dairy products, fresh juices, fruits and vegetables, with eating disorders, over the period of study increasing from 2.5 to 5.3%. Unhealthy eating habits in early school age have been found to have a negative effect on emotional and vegetative status. Thus, the rare use of fresh juices, fruits, vegetables, and meat and dairy products correlates significantly with increased levels of anxiety in the early school years. It was found that a frequent consumption of canned food (3 times a week or more) was accompanied by a violation of the vegetative reactivity - hypersympathicotonia, the most pronounced in boys, which was the risk of the formation of arterial hypertension and other functional disorders of the cardiovascular system.

#### Why did you choose to do this?

According to numerous studies, the diet of most children in Russia is unbalanced. Among today's students there is a decline of consumption of products of animal origin (meat, milk, fish), vegetables and fruits while increasing the consumption of bread, cereals and pasta. Such a poor diet is not able to satisfy vitamin and mineral requirements. The World Health Organization recommends consuming fresh juices, fruits and vegetables every day (at least 400 g). However, only 75.4% of junior school children consume the necessary amount.

#### What actually happened?

In late adolescence a significant association was established between eating disorders and individual disorders in health status, so rare use of fresh vegetables and fruits (1 per week and less) lead to the development of functional cardiopathia, delayed puberty, underweight, and arterial hypertension. Among the students there is a high prevalence of various eating disorders, which is a risk to their health.

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#### What difficulties were encountered?

Important role of nutrition should belong to the state regulation of social relations in social sphere. This is due to the fact that the development of positive trends in catering prevents differences in the economic situation of families with children and adolescents. Not all the students and pupils, as shown by studies, get fruits and vegetables (sources of vitamins and minerals) and can pay for healthy nutrition. This gap can be resolved on the basis of coordination of budget, intergovernmental and family relations to ensure healthy school meals.

#### Which aspects went particularly well?

The essence of the programme "School Milk" is a regular provision of milk as an additional nutritional product to children in educational institutions. The main objective of the programme is the promotion of health of the younger generation and the formation of the pupils' conscious attitude to healthy eating. In Russia, the programme started in the spring of 2005, and it is currently being implemented in 46 regions of Russia. Milk is the best product for the prevention of nutrient failure in children and adolescents, the ideal product for their enrichment with vitamins and microelements, the deficit of which is observed in the diet of children.

#### How do you know how successful it was?

The purpose of the other school programme, "Fruits and vegetables in school" is a broad awareness among children and their parents about the role of fruit and vegetables in nutrition and health promotion, the formation of the need for daily consumption of fruits and vegetables, increasing the proportion of the diet to meet the needs of students and development of healthy nutrition. With further promotion and adoption at the Federal level, these programmes will protect and enhance the health of the younger generation of Russians.

#### What can we learn?

Low intake of fruits and vegetables in children at school and at home requires the development and implementation of special governmental programmes "School Milk", "Fruit and vegetables in school", "School food." Such programmes are common in many European countries. State regulation and public control solve the problem of financing and provide a more rigid mechanism for monitoring and controlling the activities of state and commercial structures to ensure the achievement of programme objectives.

The programmes developed in accordance with Federal documents and taking into account the "Principles of state policy in the field of healthy nutrition for the period up to 2020" dated 25.10.2010. 1873-p are aimed at ensuring the health of students and the prevention of vitamin and micronutrient deficiency in children and adolescents.

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#### HEALTH PROMOTION CLUB: CULTIVATING YOUTH HEALTH AMBASSADORS

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**Keywords:** Peer-led advocacy, health co-curricular activity/club.

#### What did you do?

This project is an expansion of current youth-led health advocacy efforts. Health Promotion Board (HPB) Singapore first started its youth heath advocacy initiative in 2005 with the Youth Advolution for Health (YAH) programme targeting youth aged 17 to 25 years old. The YAH programme is led by a group of YAH exco to organise seminars, street outreach as well as campus health activities reaching out to their peers. In addition, the ExCo members also administer a grant to help youth embark on peer-led health projects. Riding on the success of YAH, this peer-led strategy is extended to secondary schools targeting students aged 13 to 16 years old. All secondary schools have co-curricular activity (CCA) clubs to supplement the academic curriculum.

These clubs could be sports clubs, uniform groups or performing arts groups. Based on the club structure, a Health Promotion CCA Club was piloted in one secondary school in Sep 2012. HPB worked with the school and a teacher is in charge of the management of the club. Preparation work included the recruitment process, curriculum and activities planning for the club as well as the implementation timeline. The Ministry of Education is also consulted before the setting up of this club in the school. In addition to the pilot school, another five to seven schools were approached as well to seek their interest to set up similar clubs.

#### Why did you choose to do this?

Peer advocacy is a widely adopted approach in youth health promotion. Research shows that peer influence can start as early as preschool years. Peer health education has positive impacts on both the educators and the students. The CCA club structure in secondary schools is well established and can further enhance the peer advocacy strategy for this target group. With the health promotion CCA club, the importance of good health can be emphasised with members (students) of the clubs trained as health ambassadors.

#### Who were the participants?

The Health Promotion (HP) CCA Club is open to all Secondary schools (about 170 in Singapore). All students from Secondary 1 (13 years old) to Secondary 4 (16 years old) will need to participate in at least one CCA Club. They can choose to join the HP CCA Club. On average, every club has between 30 to 50 students as members. There is also the option for students to participate in more than one CCA club. Hence, HP CCA club members could be also members of other CCA clubs.

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#### What actually happened?

Preliminary preparation work for HP CCA Club started in March 2012 with the work group developing the club structure and directions. From May to July, discussions were conducted between schools, Ministry of Education and HPB. The pilot school was finally chosen to be Canberra Secondary School. To start off, 3 secondary students were selected to be the first batch of health ambassadors in the HP CCA club. A total of about 12 students were selected based on their interest in health promotion. The teacher in charge worked with these students to brainstorm for a name for the club and the design of the club notice board. Health Nexus was chosen as the name of the club. The club was officially launched on 24 September by the Parliamentary Secretary (PS) of Ministry of Health. At the launch ceremony, PS toured the schools to view various health related activities carried out by students and club notice board. PS also had a discussion meeting with all the Health Ambassadors on their future plan for health promotion.

#### What difficulties were encountered?

There are a range of CCA Clubs established in all secondary schools. Many of these clubs such as performing arts groups (drama, instrumental music, dance, choir, band), uniformed groups (girl guide, national cadet group, scouts) or even sports groups appeal to the students and are able to attract a large group of participants. It is therefore challenging to introduce a new CCA club into the schools. Setting up a new club also means the need for additional manpower, resources and funding for the schools. Basically schools are generally not keen to start any more CCA clubs. To overcome these barriers, a few strategies are used. First HPB needs to work with schools that are pro-health and already have some form of health ambassador initiative. These existing ambassadors could be converted to HP CCA club members easier especially if they are both focusing on health promotion. Second is to provide additional resources and incentives to schools with partnership. Third is the strategic collaboration with established CCA groups in schools. HPB is working with St John Ambulance.

#### Which aspects went particularly well?

The HP CCA club concept started as a part of the co-curricular requirement of the school. For the last six months, the clubs have implemented a range of school-based and community-based activities beyond the requirement of the schools. The health ambassadors of the club have created their own brand of peer-led advocacy including name of the club, design of a club member t-shirt. The students are very much self-motivated and have great enthusiasm in promoting health. Recently these students were roped in to support a community pest control project as part of their role as health ambassadors in HP CCA club.

#### How do you know how successful it was?

Since the launch of the Club in Sep 2012, the members of the club have implemented a couple of health promotion activities in and outside the school. Although HP CCA club was just piloted last year, more than five schools have already indicated interest to initiate such clubs in their schools. Many more schools are also receptive to the concept of training students as health ambassadors which is the first step towards building a HP CCA club. The health ambassadors concept has already expanded to pre-school and primary schools. This is a strong indication of the success of the programme.

#### What can we learn?

A structured HP CCA Club can enhance the impact of youth health advocacy. The formation of such clubs does require strong partnership and support from schools and Ministry of Education. The most crucial factor is the effective engagement of students and teachers. Hence, strategic partnership is important for the establishment of these clubs. Health promotion activities that can be implemented in such clubs can be of a wide range allowing creativity and flexibility. It is also important to bear in mind the slight difference in the needs and requirements of the different target groups of schools. The student population in the schools represents a huge potential pool of manpower resources for promoting good health habits and values. To be able to engage this group of health ambassadors effectively, the clubs should remain fun, interesting and enjoyable for students to participate.

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#### CHERISH JUNIOR AWARD: HEALTH PROMOTING PRE-SCHOOLS IN SINGAPORE

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**Keywords:** Holistic health promotion framework developed for pre-school.

#### What did you do?

The CHERISH Junior Award is modeled after the Health Promoting School concept of World Health Organisation. The Award framework incorporates the six components of World Health Organisation's Western Pacific Regional Office's Health Promoting School Framework: healthy school policy, physical environment, social environment, community links, action competency for healthy living and health care and promotion services. A pilot project was first carried out in 2009 with 15 pre-schools attaining the Award status in 2010. Following that the Award was opened to all pre-schools for a two year Award cycle. Participating pre-schools were provided consultation and resources to support their implementation of this holistic health promoting school framework. A range of health programmes were also available for pre-schools to take on as part of the comprehensive approach. These pre-schools have access to staff at the Health Promotion Board for any further assistance necessary for the Award. In addition to programmes for students, there are also programmes for the well being of teachers and parents. Funding in the form of a grant on co-sharing basis is given to pre-schools which want to organise extra customized programmes. All participating schools were required to submit a report on their health promotion efforts. This is followed up with a validation visit and interview to determine their Award status. In 2012, a total of 94 pre-schools participated and achieved the Award status.

#### Why did you choose to do this?

Health habits which are inculcated from young can prevent many chronic lifestyle diseases in later years. There is therefore the need to start health promotion among pre-schoolers. The CHERISH (CHampioning Efforts Resulting in Improved School Health) Junior Award was piloted in 2009 in 15 pre-schools (9 child care centres and 6 kindergartens) to encourage a holistic and comprehensive approach towards health promotion. A pilot project was carried out to allow fine tuning of the Award structure.

#### Who were the participants?

The participants of the Award are all the pre-schools in Singapore. Currently there are about 1500 pre-schools (1000 child care centres and 500 kindergartens) in Singapore. All pre-schools are private schools. Students in these pre-schools are aged from 2 years old to 6 years old in child care centres and 3 years old to 6 years old in kindergartens. All educators and non-teaching staff, parents (care givers) and community members around the pre-schools are also participants of the Awards.

#### What actually happened?

At the CHERISH Award Ceremony 2010, announcement of the fifteen CHERISH Junior Award pre-schools was published to share and invite all pre-schools to embark on the journey building a health promoting pre-school. CHERISH Junior criteria brochures were sent to all pre-schools. The brochure included a guide to Award participation as well as the six criteria in a checklist format. Interest forms were submitted by pre-schools which intended to participate. Capacity building briefing sessions were conducted for these pre-schools. These sessions





were attended by principals and teachers. During the Award cycle of two years, pre-schools could apply for the Grant to organise relevant health promotion programmes in support of the Award. At the beginning of 2012, all participating pre-schools submitted their completed reports for evaluation purpose. Health Promotion Board (HPB) staff conducted evaluation in two phases: marking of report and a validation cum interview school visit. These school visits were essential for document verification as well as confirmation of school efforts.

#### What difficulties were encountered?

Pre-schools in Singapore are private schools hence there is limited resources from the government for these schools. They are also smaller in scale with students number ranging from about 30 to 300 and teachers number ranging from less than 5 to not more than 30 per school. Hence, health promotion may not be the top priority of these schools. Due to the limited resources and support, these schools may not be able to focus on health promotion. To overcome this issue, it is crucial to ensure participation and implementation of the Award is hassle free and easy to follow. Generally, many pre-schools in Singapore have a basic foundation of health promotion efforts. Working with existing efforts and building on these motivated the pre-schools to participate in the award. As pre-schools are private schools, there is a tendency for some of them to close when they couldn't meet the bottom line and new pre-schools constantly open too. To keep track, HPB worked with relevant Ministries to update the latest pre-schools list so that all pre-schools will be included in the Award.

#### Which aspects went particularly well?

A couple of positive factors have contributed to the rapid increase in participation rate: Firstly besides building awareness, capacity building support is crucial for acceptance of the Award. Next, with the limited resources in the pre-schools, a checklist format is used for the report format. In addition during consultation sessions with them, explanation and clarification are provided so that pre-schools are able to complete a check list. It is also not necessary for schools to submit supportive documents for the reports. The simplified process has encouraged participation in the Award.

#### How do you know how successful it was?

The sixfold increase in participation rate from 15 to 95 is an indication of the acceptance of the Award by preschools. All participating pre-schools are also able to meet the minimal standard of the Award. This reflects that these pre-schools are health promoting pre-schools meeting all six Award criteria. Following the 2010 Award cycle, in the current 2012/2013 cycle, about 200 pre-schools have indicated interest to participate in the Award.

#### What can we learn?

There are a few learning points:

- · it is important to establish healthy habits from an early age
- health promoting school concept needs to be customized for different school levels for easy implementation
- check list and simple report format is suitable for pre-schools to follow
- important to work with larger pre-schools as these may be more supportive of health promotion since they have more resources
- regular follow up and monitoring of pre-schools are necessary to provide constant support in their health promotion efforts
- CHERISH Junior Award criteria should be reviewed constantly so that these criteria remain relevant and current for pre-schools. Feedback from pre-schools is also important and should be included in review processes.

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# DEVELOPING THE SUPPORT SYSTEMS FOR CHILDREN WITH TYPE 1 DIABETES IN EDUCATIONAL SETTINGS IN ESTONIA

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Keywords: Diabetes, guidelines, educational setting, equal opportunities.

#### What did you do?

Estonia did not yet have a support system or guidelines to support children with diabetes in educational settings. The primary objective of the project was to guide schools in their understanding of diabetes and its management and to enhance opportunities for children with diabetes to participate fully in all school functions. Within the framework of the pilot project, a concept was developed for support services for children with type 1 diabetes and guidelines were prepared for the personnel in the educational settings (all employees, support persons, caterers). The service was piloted in pre-school institutions and schools.

When a child is diagnosed with diabetes or a child who has diabetes enrols in an educational setting, a diabetes health care team and the family determine the child's needs for assistance in managing the diabetes during the school day. The parent then contacts the educational institution and informs them of the possibilities to engage support services. Upon the consent of the educational institution, the nurse providing the service contacts the director and requests that a suitable support person is found.

According to the service model, the diabetic nurse will visit the educational setting three times in total. In the course of the training and counselling programme the personnel in the educational setting acquire the knowledge and skills needed to be able to follow the child's Diabetes Management Plan and support the diabetic child in coping well.

#### Why did you choose to do this?

The incidence of diabetes in children is increasing, with an average of 60-80 children newly diagnosed with diabetes each year in Estonia. The schools lack the knowledge and experience to manage diabetes. According to a study in 2010, out of all diabetic children, 26% stayed at home because they were refused acceptance to a pre-school, and for half of the children, parents had to visit the pre-school several times a day. Approximately 22% of the children required support in schools, but support by a school was provided to only half of them.

#### Who were the participants?

Support services for children with type 1 diabetes in educational settings are provided by diabetes nurses who have received special training. All of the personnel in the educational setting who come into contact with the





child, the support persons for the child, the caterers and, if necessary, the children in the same group or class participate in the training and counselling programme.

#### What actually happened?

In the first stage a working group was formed with members representing different stakeholders: endocrinologists, diabetic nurses, educational institutions and parents. Based on international experience and Estonian practice in management of diabetes, the service concept and guidelines were drafted for school personnel, and training was held for nurses who will provide counselling.

Four diabetes nurses participated in piloting the service, and provided services from September to November 2012 in 13 educational institutions. Fourteen support persons completed the training and counselling programme. The diabetes nurses trained and provided counselling to a total of 124 personnel. 14 children were provided with support in a school or pre-school.

Evaluation of the service indicated that suitable conditions for diabetes care had been created in all of the educational settings and the individual Diabetes Management Plan for the child was followed. The support persons felt that the amount of training and counselling was sufficient to provide support for children during the schooldays.

#### What difficulties were encountered?

One of the greatest challenges is influencing attitudes in educational settings. The management of some schools have expressed interest in supporting children with diabetes on their own initiative. But there are also institutions in which the initial position is that personnel cannot be required to serve as support persons. The nurses together with diabetes health care team and local government play an important role in convincing schools. The nurses require additional training on how to overcome opposition.

Continual provision of services would require the existence of nurses with the necessary qualifications. The number of nurses who can provide counselling must be increased if access to the services is to be ensured throughout the country. To address this, the training programme for nurses will be developed and school nurses will be involved. One of the challenges revealed in piloting was cooperation with caterers. While the law requires that nutritional content of menus offered in an educational setting must be provided and accessible, this requirement is not always fulfilled in practice.

#### Which aspects went particularly well?

Estonia did not yet have a system to support children with type 1 diabetes in educational settings. The initiative to develop this service came from the Estonian Child and Youth Diabetes Association. Through a number of different activities (e.g. providing information to educational institutions) the association together with child diabetes care teams reached the conclusion that schools need a more individual approach. This bottom-up initiative has ensured that all stakeholders have actively contributed to finding solutions to potential problems. The pilot project showed that this service model could be effectively implemented under the present conditions in Estonia.

#### How do you know how successful it was?

An evaluation plan was developed together with description of the service. A process, outcome and impact evaluation was conducted. After provision of the service diabetes nurses completed a questionnaire in which they assessed different aspects of the child's ability to cope based on their visits to educational settings and interviews conducted with parents. An internet based feedback questionnaire was sent to all support persons to gather feedback on the training and counselling programme and the guidelines. Questionnaires for the physicians of the children and for their parents have been developed to evaluate the longer-term impact of the project.

#### What can we learn?

As the number of students diagnosed with diabetes increases each year, school personnel, parents and children face new challenges. Collaboration and coordination are essential to ensure a safe learning environment and equal access to educational opportunities for children with diabetes.

Our experience draws attention to the difficult and varied role nurses play in diabetes management in educational settings, including advocating for children with diabetes and training personnel.

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#### **RESULTS BASED ACCOUNTABILITY**

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**Keywords:** Health outcomes, accountability, results.

#### What did you do?

The Welsh Network of Healthy Schools needed a standardised reporting mechanism that both education and health could understand. Results Based Accountability was chosen as a disciplined way of embedding outcome based decision making into delivery and reporting for multi faceted schemes such as healthy schools. Local and national outcomes measures were needed that both education and health could assess and improve their capacity to promote health through schools. The RBA process starts with health outcomes and works backwards to focus on how pupils lives improve rather than just whether they get a service or a service that is efficient. The process has two types of accountability - population accountability which can be classed as all children in Wales or all children in a local region or even in a school. The second is performance accountability which measures health benefits for pupils.

Population outcome measures to which the healthy school schemes contribute were mapped across the seven health action areas of the National Quality Award document.

A set of performance measures were mapped against activities which are delivered by the schemes. A means of collecting, aggregating and disseminating performance management through report cards was mapped against the existing IT and data collection systems.

#### Why did you choose to do this?

Any measurements of effectiveness of health promotion in schools need to be sensitive to the local education authorities methods of assessment. If the method of measuring effectiveness of school health promotion can be closely linked to the methods and tools the local education authority understand, then the chance of the work in health promotion being sustainable and supported should be greatly increased. Increasingly healthy school coordinators are being asked to prove what difference healthy schools are making against health outcomes.

#### Who were the participants?

An initial two days training and planning with an external performance management consultant. Representation from Welsh Government, Public Health Wales, healthy schools coordinators from both education and health. Data collection will include teachers, support staff and pupils from school councils. Amendments to the existing web enabled data and storage will involve working with the external host of the database.

#### What actually happened?

The Population Outcomes were identified (e.g. Children are safe and feel safe) to which WNHSS contribute and then mapped these to the aspects of WNHSS work (e.g. Food and Fitness).

Possible Population Indicators were identified which would help quantify if the well-being of the population is improving. This included quite a lot from the Health Behaviour in School Aged Children Survey 2009/2010.

The purpose of these was to understand the link between Welsh Network of Healthy School Schemes activities and the well-being of the population.

What WNHSS actually delivers had to be examined to see how we might measure the specific benefits which derive from the work, including performance, under each of the 7 health aspects of the programme, for:





- · How much?
- · How well?
- Is anyone better off?

New questionnaires were needed for the updated and amended data. Guidelines including RBA report card templates needed to be produced.

Further training will be needed for all healthy school staff.

#### What difficulties were encountered?

The diverse and wide ranging interaction that healthy school schemes have with school populations, the wider community, partners and agencies makes it extremely difficult to prove the impact and contribution the schemes have on direct health outcomes. Its easier to measure how much we have done and how well but it proved extremely difficult to measure if anyone was better off. Where there was insufficient evidence for a direct health impact outcome an assumption from research evidence had to be made.

In terms of consequences for the time frame of the development of the outcomes, identifying existing data was less time consuming, but didn't cover all aspects of the programme. This meant that new data had to be developed and collected with the database having to be updated and amended. The new data had to be collated and will ultimately mean someone has to collect it which adds to the burden on coordinators and support staff.

#### Which aspects went particularly well?

Healthy school schemes are complicated and multifaceted which has made it difficult to know if the settings approach it utilises is making a difference. By using common sense measures as defined in the RBA process we can be honest with ourselves about whether we are making progress. The common language that both education and health recognise has managed to link the medical model of mortality and morbidity measures with the health promoting aspects of happy socially resilient pupils having higher educational achievements.

#### How do you know how successful it was?

When we can measure and make sense of a multitude of partnerships and plans what matters then will be the results rather than just the processes.

Reporting should become easier and showing how population and performance levels fit together will indicate the success of the process.

In today's fiscal focus on health with less money and less grants we will know how successful it is by continued funding and support from the partnerships involved.

#### What can we learn?

It would be a mistake to think that results based accountability would provide evidence on the effectiveness of the healthy school approach on its own. By looking at population outcomes and performance indicators the outcome results will hopefully show that a balance of universal and targeted approaches can result in increased healthy behaviour and less risk taking behaviour.

This is a work in progress and hopefully following the implementation of the RBA in September we will have more lessons to learn.

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# "WELCOME" – A PROJECT OF SOCIAL INCLUSION AND COMMUNITY DEVELOPMENT IN A HEALTH PROMOTING SCHOOL LOCATED IN A MULTI-ETHNIC NEIGHBORHOOD

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**Keywords:** Inclusion, community development, health promotion, school.

#### What did you do?

The project "Welcome", implemented in the multiethnic neighborhood "Satellite" in Pioltello aimed at involving the families, pupils and teachers of the school complex "E. Bontempi", which has a primary school with 414 pupils of whom 68% are foreign and a kindergarten with 223 children of whom 81% are foreign. The goal of the project was to increase the quality of school-life for families and their children. For this purpose many activities were started up: the welcoming and informing of the newcomers in the first class; creating a welcome-kit for all the pupils; extra-curricular activities; recreational/creative activities for cultural awareness (in the kindergarten); the project "Books with Wings" for the primary school; extra openings of the schools during holidays; updating of all the communication materials for families by translation into 7 new foreign languages; creation of a parents circle; updating the website and the intercultural library; educational practices exchange meetings, open to all the parents in the city of Pioltello; activities for sharing life-experience and improving skills (such as informal meetings

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at school in the afternoons, creative needlework activities, public speaking workshop, etc.); training sessions for teachers from all schools on how to include new pupils, how to deal with cultural differences etc.

#### Why did you choose to do this?

This neighborhood is densely inhabited by immigrants. Foreign pupils are 68% of the total in the Bontempi primary school, while this figure reaches 81% for the kindergarten. Therefore schools are strategic locations because they are not only a privileged and hospitable place for foreign citizens, but also they provide opportunities for people to meet and build up a melting pot culture. Only by social inclusion can ties of togetherness, trust and cooperation networks be created.

#### Who were the participants?

This project was born thanks to the collaboration between the teaching staff from the two schools and the partnership with the social cooperative "Milagro". It was financed by the Cariplo Foundation and the Ministry of Education. Relevant support also came from the strong network between the local government, the city library, the other schools and other local public agencies such as the church oratory, the sport associations and the Public Health Service ASL Milano 2.

#### What actually happened?

WELCOME is a project aimed at creating good practices between all the components involved: families, schools, public institutions. By this means a greater social cohesion can be promoted and achieved. The Bontempi School has chosen to make a strong point out of its multiculturalism. It has been the means for a better policy of inclusion between the school and the city, and also between families coming from many different cultural backgrounds. A well-structured process has been implemented in order to support the teachers' formation, to improve communication and to provide families with activities promoting cultural exchange and mutual respect. During the project, which lasted 3 years, a real intercultural experience has been possible, with the school being the key-place for the whole process.

#### What difficulties were encountered and how were these overcome?

The biggest challenge was to build a partnership between the family values of different ethnic groups and the practices of Italian culture and schooling. We had to face a reality of very low participation, distrust, added to the hardships of migration: difficult economic situations, health, social and linguistic difficulties, lack of babysitting, high turn-over of foreign students during the school year, long working hours for parents, etc. A solution was found by introducing a point of view open to dialogue, i.e. paying more attention to the position of the others, both for parents and for pupils, beginning a process of cooperation starting by planning together and sharing values and needs. We must underline the importance of commitment and motivation of the staff, the support and mediation of educators, the sensitivity of the authorities (providing special teachers and linguistic mediators), the participation of the whole network involved.

#### Which aspects went particularly well?

Parents' participation was really successful (the creation of a Parents Committee, attendance at workshops and at other initiatives). The project increased the knowhow of teachers to welcome the children and their families. A positive atmosphere created inside the school community (including temporary staff) has produced a sense of belonging among everyone.

Integration with existing projects was well done, both within school time (Swimming lessons and Project "Murales: we paint the walls of the school" for children with disabilities) and also in extra-curricular activities, which aim to prevent pupils spending too many hours alone at home.

#### How do you know how successful it was?

Evaluation was carried out according to the various components involved in the project. There was space for the pupils where they could express their thoughts on how they felt welcomed. Teachers and focus groups were interviewed about the difficulties they encountered and about what could remain with them from this experience.





The parent's point of view was taken into account through questionnaires distributed to them and wide-ranging interviews targeted for the more active parents. The results with the data concerning the participation in the project and the comments of the protagonists will be published and disclosed.

#### What can we learn?

Changing the perspective of the analysis, we could learn that it is possible to transform something that appeared critical into a positive resource.

Starting from a project shared with other educational and social bodies, new experiences and new approaches can be created. Building a network confirms the value of enriching interactions and synergies within a constructive dialogue. By offering the children the possibility of shared meetings they feel more involved and valued and this also improves parent's self-esteem and increases their constructive presence.

Opening the schools to the community became a means of support and strength for the staff: different points of view give a more true and complete picture, multiplying the power of actions thus giving them greater publicity and visibility.

The experience of these schools represents a positive experience for the community and an opportunity of sharing good practices in the HPS Network.

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# PROMOTING HEALTH AND LEARNING ENVIRONMENT IN DANISH PRODUCTION AND VOCATIONAL SCHOOLS

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Keywords: Vocational schools, Production schools, Health promotion, Learning, Physical activity.

#### What did you do?

In 2012 the Danish Federation for Company Sports founded a project to promote health and learning environment by providing students at vocational and production schools with positive experiences using physical activity. The goal was to develop tools and methods which could be used by the school employees and teachers to easily implement physical activity in learning situations. The tools should consider the vast number of different users and facilities in the schools.

The project is divided in 3 phases:

- 1. A development phase where the tools are created.
- 2. An implementation phase where the schools and teachers are introduced to the tools and project.
- 3. An anchoring phase. Entrenchment of the project in the local community. The clubs and schools work together on sporting events and the students participate in our campaigns and tournaments.

#### Why did you choose to do this?

Studies show that more students in production and vocational schools have an unhealthy lifestyle with regards to nutrition, physical activity, smoking, alcohol and drugs than their peers in colleges (Brink 2009). Furthermore, students in production and vocational schools will after graduation perform in jobs with much higher risk of injuries, sickness and early death. Health plays a central role in the student's ability to complete their education and to attend and hold down a job afterwards (Nielsen 2010).

Many of the members of the Danish Federation for Company Sports are working in jobs which demand a good physical condition and with risk of work-related injuries. Therefore the Danish Federation of Company Sports has worked to promote health in Danish workplaces for more than 10 years. This project offers the possibility of affecting the lifestyle of young people before they reach the labour market and introducing sport and health to the workplace through the new graduates.

#### Who were the participants?

All production schools and vocational schools in Denmark are invited to join. Until now 48,000 students and teachers in 46 schools have joined the project.

#### What actually happened?

The first phase of the project was used to develop the tools.

The tool to help implement more physical activity, increase well-being and improve learning situations is called "Aktiviteket". It is a cupboard, often placed in the teachers' lounge, containing accessories for icebreakers and



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"brain-breaks" during lessons. This tool is well received by the schools' management and teachers. Until now we have delivered about 80 cupboards.

Furthermore we developed a tool for the canteen personnel to help them communicate healthy eating habits in a fun, interesting and attractive way to the students. As a part of the tool, an analysis of the canteen's selection of food and beverages and how they are presented and prepared, is implemented. The tool is finally presented for the canteen personnel and the stakeholders

As a part of the concept, a school is automatically contacted by our local company club with special offers and activities for the students when it joins the project. In collaboration with our clubs we have held a national football tournament for the students and many schools are being taught in physical activity by our local trainers and volunteers.

#### What difficulties were encountered and how were these overcome?

The economy is a major barrier for the schools to join the project. In this project, the Nordea foundation decided to fund the development and subsidise the tools so the schools had easier access to the project.

With regards to the nutrition part, we found it difficult to access the decision makers regarding the canteen's appearance and selection, since canteens are often outsourced to a company or collaboration between management and canteen personnel. We are currently working on making the package for the canteens more visible and hopefully this will help in gaining currency among more schools. In addition to this, we must mention how we constantly work to renew the tools and develop new solutions to keep the schools in the project.

#### Which aspects went particularly well?

Our courses in icebreakers and the workshops about nutrition get very good feedback and are said to help motivate the personnel to work with the students' health and the learning environment. The main reason for the good feedback from teachers was the hands- on approach. Instead of being handed another inspiration catalogue, webpage with good ideas or crash-course with no follow-up, teachers got a cupboard full of interesting and inspiring tools for sport and icebreakers. It is easy to use and can be changed to fit the specific group of students and learning situation. Furthermore our consultants introduce it thoroughly and help the personnel to implement it in their daily work.

In the present project the school management can choose from a broad array of initiatives, ranging from professional guidance to acquirement of concrete tools in order to take steps to improve the health environment in their particular school. The combination of a national and local focus strengthens the intervention. The national level gives the project approval and visibility in the target schools. The local level, with participation of the company clubs of Danish Company Sport, gives the roots the students need in a sound and healthy environment. Furthermore the students are able to expand their network in the club, where many of the local workplaces are presented.

#### How do you know how successful it was?

The project runs until the end of 2014. Therefore the final results and outcomes have not yet been measured. Instead we have collected feedback during the development and implementation phases to exchange with others interested in working with health promotion at production schools and vocational schools.

We measure the final success of the project by looking at the following criteria:

#### Quality and Practicability:

We have, during the project, collected feedback from the participating teachers on the quality and practicability of the tools, and during the last period of the project we will collect qualitative data from focus group interviews.

#### Market Penetration:

Also the penetration of the tools in the schools network and market is a success criterion.

#### Participating students:

The number of participating students in our clubs, national campaigns and events

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#### Change in dropout:

It is our hope that we can reduce dropout levels at vocational schools to 15 % from 21 %. We will, at the end of the project, collect dropout data from participating schools and compare it to baseline data.

#### Changes in behavior:

It is our hope to improve the well-being and learning environment for the students in vocational and production schools. Furthermore we hope to see a change to a healthier lifestyle on a level with their peers.

#### What can we learn?

Practicability and a hands-on approach are important keywords in trying to change the behavior of the teachers and personnel handling the young students in production and vocational schools.

Local roots and commitment are important for the sustainability of the changes.

Working with the students in production and vocational schools, we have learned to plan the activities at the school during or in continuation of the classes. The school setting is important for the students' well-being and the teachers and canteen personnel are important figures in how the learning environment affects the students.

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## SUPPORT SYSTEM FOR HEALTH AND WELLBEING PROMOTION IN ESTONIAN EDUCATIONAL SETTINGS

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#### What did you do?

National Institute for Health Development participates in the development of national health policy and in the drafting of legislation that regulates health and security in educational settings. 2008-2011 regulations that establish the requirements for health promotion and territory, buildings and catering in pre-schools were amended, and national curricula for pre-schools and schools were updated.

We have developed various guidelines and tools for use in educational settings to assist in the evaluation, analysis and planning of activities in the area of health and safety.

We provide training for specialists on various topics relating to health and wellbeing.

We have developed an information system for specialists working with children and youth on our website www. terviseinfo.ee, where different information (including study reports, tools and evaluation materials, information on networks, etc.) is gathered. We have recently begun to gather and publish good practices on the website.

We organise campaigns and carry out projects involving youth. Development of Health Promoting Kindergartens (HPK) and Health Promoting Schools (HPS) networks in communities continues to be one of our key activities. As of 2013, 410 pre-schools and schools or 38% of these settings have joined the networks.

We have conducted studies to evaluate the effectiveness of these activities and to monitor the health behavior of youth, and have developed an evaluation system for the area of health.

#### Why did you choose to do this?

The number of deaths per 100 000 children resulting from external causes among persons aged 0-19 years is on a downward trend, while the rate of illness due to injuries and poisoning has remained steady. Creating a healthy psychosocial environment for children (friendly climate, development of social skills, prohibiting violence etc) is an important factor for child development.

An evaluation tool to be used in all educational settings needed to be developed to analyse the psychosocial environment and security to plan related activities.

#### Who were the participants?

Participants included employees of all pre-schools and schools (1080), community health promoters and specialists working with children and youth both at national and community level. An important part of our activities is the



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development of a network of educational settings and coordinators network, as well as a coordination system. Community pre-school and school coordinators (34) coordinate the educational settings' network and direct the (health)teams within the institutions in the area of health promotion in 15 counties and 4 of the largest cities.

#### What actually happened?

New activities over the past 3 years for pre-school institutions:

In order to create a web based tool to evaluate the psychosocial environment we developed separate questionnaires for personnel and parents based on international and local experience. Questionnaires were validated and piloted in 2 pre-schools. We developed and piloted a web-based tool in 3 pre-schools. We provided training for the directors, teachers and coordinators to support them in performing evaluations. The tool has been available for use since January 2013.

Injury prevention guidelines were developed. We participated in drafting of the regulation that establishes obligation to use the evaluation criteria in the guidelines when conducting risk assessments and drafting action plans in pre-schools.

Training was provided to raise the awareness and skills of personnel, coordinators and Health Board specialists. In 2012, we gathered examples of good practices (39) in addressing the issues of safety and security in the schooling and education provided by pre-schools and published them on the website.

#### What difficulties were encountered?

A number of problems became evident upon piloting the psychosocial environment evaluation tool, e.g. with the entry of e-mail addresses of the evaluators, participation of institutions with instruction in Russian, etc. We have made the tool more user-friendly, revised evaluation guidelines, advised evaluators and made plans for new developments.

Regarding application of injury prevention principles, problems include that risk assessment methodology is not always applied properly, including that guidelines are not read and not all employees are included in the process. There is also a lack of courage to point to problems and risks are assessed lower. Action plans are drafted, but large investments fail to be made due to a lack of finances. We have trained and directed Health Board specialists and pre-schools coordinators who then advise pre-schools. Specialists from Health Board monitor the conduct of risk assessments.

Development of networks is restricted by a lack of both financial and human resources. We work together with health promoters, direct and supervise the coordinators.

#### Which aspects went particularly well?

Psychosocial environment evaluation tool is available to all pre-schools. The number of institutions that have conducted an evaluation and can plan their activities based on needs continues to grow.

Representatives from Health Board, Rescue Board and Estonian Health Insurance Fund participated in drafting injury prevention guidelines. Quality of risk assessments and injury prevention efforts is supported by legislation and good cooperation with Health Board specialists and coordinators.

Work of coordinators in coordinating the networks and advising institutions, and good cooperation at community and national levels contribute towards implementation of health promotion principles.

#### How do you know how successful it was?

Use of the psychosocial environment evaluation tool is increasing. In April 2013, 58 pre-schools began conducting an evaluation. Risk assessments have been carried out in all pre-schools, and necessary activities have been planned to improve the environment based on the results.

More than 20 educational institutions join both the HPK and HPS each year. These networks offer support in the implementation of materials, methodologies, evaluation and other tools and innovations that have been developed at national level. The good practices of network members for the promotion of health and wellbeing in day-to-day work are worth following and provide inspiration for others.

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#### What can we learn?

Evaluation and other tools for use in educational settings must be drafted such that they are simple and easy to use. It is also important that they be specific, take objectives and functioning of educational settings into account and provide sufficient input for health promotion in everyday work.

Requirements for health promotion defined in legislation and resulting obligations and planned activities help to ensure that educational settings take health and safety into account and bring about real changes that will promote the health and wellbeing of children and staff. In order to implement injury prevention principles, conduct risk assessments and create a safe environment there is also a need for ability, will, time and initiative of all employees in cooperation with parents and local governments.

Networks and systems of coordinators are important for ensuring that information on new tools reaches everyone, and they can support implementation of these tools at community level.

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## RUSSIAN HEALTH SCHOOLS: PROBLEM AREAS AND PROSPECTS OF DEVELOPMENT

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**Keywords:** Health promoting schools, the Russian HPS network.

#### What did you do?

In 2010, the Russian Society for School and University Health and Medicine, the Research Institute of Hygiene and Health Care for Children and Adolescents, Scientific Center of Children's Health of the Russian Academy of Medical Sciences, the Federal Institute for the Development of Education in Russia with the support of the Ministry of Education and Science of the Russian Federation held the All-Russian competition of HPS. The motto of the competition was: "Health School of Russia: to promote health - to improve the quality of life." Stage I of the regional competitions were held during the first half of 2010. In the autumn of 2010 HPS - winners of the regional stages participated in All-Russian stage II. All information about HPS in Russia came in the Research Institute of Hygiene and Health Care for Children and Adolescents. To assess objectively the efficiency of HPS the Research Institute of Hygiene and Health Care for Children and Adolescents developed the documents: the evaluation criteria, the algorithm, the scale of conventional points, the protocol of self-control, the methodical documents and regulatory materials. 71 indicators of the efficiency of HPS were identified. The possible points for each indicator varied from 0 to 3. 0 points were awarded when the school did not work with the subject. 3 points were awarded; when the work was done very well and the result was better than the standards. The maximum possible scores was 213.

#### Why did you choose to do this?

Presidential Decree of June 1, 2012. 761 approved the "National Strategy for Action for Children, 2012-2017." One of the objectives of this strategy is the dissemination of healthkeeping technologies of training, technology "health school" among all the educational institutions in Russia.

In accordance with the concept of the European Network of Health Schools (SHE) the aim of the health promoting schools (HPS) is to increase academic achievement, because healthy students learn better. The aim of the study: to determine the amount of HPS in Russia.

#### Who were the participants?

Before the competition we had conducted testing of a set of documents in 27 schools located in different regions of Russia. 61 schools participated in stage II of the competition, self-assessed their effectiveness and filled a unified protocol with points-based assessment for each indicator.

#### What actually happened?

It is revealed that the number of Russian HPS is increasing: there were 3,708 in 2008, 5,663 in 2009, 13,375 in 2010. HPS operate in practically all regions of Russia. 995 Russian schools participated at the regional stages of the competition, 61 schools from 43 regions of the Russian Federation participated in the second all-Russian stage. The quantitative indicators are allowed to rank schools according to the quality and effectiveness of their work. HPS engaged in creating a healthy lifestyle gain up to 148 points. These schools were 31.1% of the total



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number of HPS participating in the competition. HPS undertaking comprehensive efforts to improve students' health gain from 149 to 199 points. Such schools are 65.6%. HPS have been working in improvement of students' health for 5-10 years and achieved lower morbidity rates and a strong health culture, gained more than 200 points. They are 3.3%. These schools are real "Health Schools".

#### What difficulties were encountered?

The competition has revealed problems in the Russian HPS network. To improve the efficiency, the following measures are necessary:

- improvement of the legal framework of Russian health care and education;
- financial support for prevention and health promotion in schools through federal and municipal budget funds and regional funds of the obligatory medical insurance;
- · improving the methodological support for HPS;
- · improvement of training school administrators and teachers on school health;
- ensuring all schools employ qualified medical staff and creation of conditions for their activities;
- cooperation between sectors of health, education, government, non-governmental organizations;
- expansion of the National Support Centre of the Russian network of HPS;
- dissemination of the positive experiences of HPS.

#### Which aspects went particularly well?

We developed a strategic plan for the Russian HPS network for 2013-2016 and a work plan for the Russian HPS network in 2013. Under the guidance and editorship of Professor V. Kuchma, the national coordinator of the RN HPS two collective monographs were prepared and published in 2009. "Health Schools in Russia (the concept, planning and development)" (2) and "Health Schools in Russia: principles and organization of work. Monitoring and effectiveness" in 2012 (3). The site www.schoolforhealth.ru has been operating since 2013. It provides the registration of HPS, methodological support for HPS, including the above-mentioned books, as well as the documents of the European HPS Network.

#### How do you know how successful it was?

We intend to develop regional websites on health improvement and promotion in school. Web sites of the RN HPS will be connected to the European sites, which will allow us to gain knowledge about achievements in Europe and other countries in the field of school health.

#### What can we learn?

Information and experience of the RN HPS are regularly reflected in the pages of journals such as "Issues of school and university of medicine and health", "Healthkeeping education" and others. They have been translated into Russian: Key documents of the European Network of Health Promoting Schools, the Strategic Plan of the Network "Health Schools in Europe", Memorandum of the research group, Ethic Code of SHE; tools programme "Healthy eating and physical activity in school" (HEPS), "Guide to the development of school policies on healthy eating and physical activity", "Quality assessment of school interventions on healthy eating and physical activity."

Regular workshops on HPS work are regularly held. The Russian HPS network is expanding. The interest of government agencies, the educational and medical communities, school children and their parents is increased in creation of the system of health promotion of children in educational institutions.

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#### 'GROWING UP' INTERACTIVE RESOURCES FOR DELIVERING SEX AND RELATIONSHIPS EDUCATION OF STUDENTS AGE 5-12 YEARS

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**Keywords:** Growing Up, Sex and Relationships, Education Resources.

#### What did you do?

As a Senior Healthy Schools Practitioner with an avid interest in sex and relationships education, I have developed comprehensive education resources suitable for students aged 5-12 years called 'Growing Up'.

The main aspect of the 'Growing Up' resource is an interactive, web based programme for delivering sex and relationships education as well as aspects of the Science Curriculum for students age 9-12 years. The topics covered within this resource are: the main organs of the body, puberty, relationships, conception, pregnancy and birth. There are additional downloadable resources, lesson plans and an information booklet for teachers which will support schools to plan comprehensive schemes of work. The downloadable documents allow for sustainability where schools are able to print and replenish everything as needed.

At present the 'Growing Up' resource has been developed bi-lingualy in Welsh and English and there are possibilities for further translations to other languages.

The other aspect of the 'Growing Up' programme is the body mat and supporting downloadable resources (suitable for students age 5 -12 years). It facilitates lessons on personal safety, it enables the students to learn about gender differences and it allows discussion on appropriate and inappropriate touching. It can also be used to discuss puberty changes as well as educating students on various health topics and aspects of the science curriculum.

#### Why did you choose to do this?

It was felt that sex and relationships education resources needed to be updated in order to be more suitable and interesting for the students' age and maturity. Teachers were therefore reluctant to deliver aspects of this programme. For these reasons I decided to develop a new sustainable interactive web based programme and additional interactive resources in order to support primary school teachers to plan and deliver comprehensive whole school sex and relationships education.

#### Who were the participants?

The 'Growing Up' web based programme and the body mats were developed for teachers to deliver whole school sex and relationships education for students aged 5-12 years. However, due to the fact that the resources are interactive teachers and students are able to be actively involved in the teaching and learning experience.

Sections within the 'Growing Up' web based programme encourage the engagement of parents in discussing sex and relationships with their children. An information booklet for parents was developed to promote this aspect.

#### What actually happened?

I planned and developed the resources by consulting with teachers, head teachers, advisory teachers, health and education professionals and primary students. Students from one school created and determined the images of the characters within the resources. The animation and artwork was undertaken by the local ITC Advisory Service.





Seven schools of various sizes, different regions and cultural background piloted the resources. Following the pilot stage the supporting documents and resources were developed. These included the lesson plans, interactive lesson ideas, worksheets and a comprehensive information booklet for teachers. Extended lesson ideas have been included in order to develop literacy and numeracy skills within sex and relationships education in line with the present requirements of the Wales National Literacy and Numeracy Framework. All lesson ideas have been trialled and activities have been evaluated and are evidence based.

#### What difficulties were encountered?

There were no significant difficulties encountered. What started off as a medium sized project during the spring of 2012 grew by the autumn of 2012 into a very large comprehensive project. This was due to positive responses from pilot schools and their enthusiasm in relation to their use of the resources. Their feedback and their optimism encouraged me to review my objectives and I decided that there was scope for me to further develop the themes within the project.

Developing a resource in two languages can also be challenging at times but they were overcome by proof reading all documents to check for consistency and accuracy.

#### Which aspects went particularly well?

The positive aspects were:

- · Piloting the resources and receiving constructive feedback from teachers and students
- Training teachers, education and health professionals throughout Wales and receiving excellent evaluation feedback on the resources was positive and reassuring.
- Having positive feedback from teachers and students following delivery of the programme at individual schools.
- Schools organising parents evening in order to share what is being delivered in school and to encourage parents to be involved in sex and relationships education.
- Some schools have arranged parents evening sessions where students present what they have learnt to their parents.

#### How do you know how successful it was?

I presented my work nationally in Wales and the positive feedback received resulted in the resources being available for every school in Wales. Due to the fact that the 'Growing Up' resource is web based the cost of enabling this was minimal. I have trained teachers, education and health professionals throughout Wales on how to use the resources and I have received excellent feedback.

Some quotes from the training:

'I am very pleased that this subject is being taught at school and that it is done in a sensitive manner using age appropriate resources'.

'at last we have a comprehensive programme to deliver high quality sex and relationships education in primary schools'.

#### What can we learn?

If primary schools are to deliver effective sex and relationships education, adequate and relevant up to date resources should be available to them. The 'Growing Up' resources respond to this need.

Providing adequate and effective training is an important factor in enabling teachers to be comfortable and confident in delivering sex and relationships education.



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I have many years experience in delivering training on sex and relationships education and the positive feedback obtained in relation to these resources exceeded my expectations and have resulted in schools growing in confidence in their ability to respond to the Wales National Guidance.

I have also had a great deal of experience in developing bi-lingual resources and I am aware of the issues that may arise. At present the 'Growing Up' resources are available in Welsh and English. However, they may also be translated into any language and due to it being a web based resource it could also be made available internationally.

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#### READY, SET - PLAY: EDUCATION PROGRAMME FOR KINDERGARTEN EDUCATORS

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#### What did you do?

Ready, Set - Play is an education programme for kindergarten educators to ensure an increase in daily physical activities for 3-6 year olds. The course is of 55 hours duration, with activities spread over 12 months. During the first 8 weeks, the educators participate in a 25 hour theoretical course including child physiology and development, senses and motor skills, playing, and adaptation of activities to ensure motivation both for children with well developed motor skills as well as children with less developed motor skills. The educators also participate in an additional 10 hours of practical teaching, where they get inspiration for games that can be played to improve the children's motor skills by challenging their senses - particularly the labyrinth sense and proprioception. As part of the practical activities the educators are introduced to a test that assesses the level of motor development in relation to the biological age of the child. The practical activities are held at the kindergarten, where educators are already familiar with the surroundings and the children. At the end of the 8 week course, the educators are challenged to organize a plan of activities which can improve the kids' level of physical activity on a weekly basis. After the main part of the course, the educators participate in workshops, where they get a chance to exchange experiences and get ideas to overcome the challenges of improving the physical activity levels of children.

#### Why did you choose to do this?

The National Institute of Public Health reveals that approximately 30% of kids in the first school year present some degree of problems relating to their level of motor skills. Furthermore, a national survey of Danish schools reported an 8% occurrence of significant motor difficulty. The Copenhagen Municipality estimates that 10-20% of all children living in Copenhagen are raised without the recommended amount of physical activity and stimuli to ensure a healthy development of the senses and motor skills.

#### Who were the participants?

The participants in the education programme were educators from 12 kindergartens in the Copenhagen area of Husum. Husum has a high percentage of immigrant residents, a low average income and a high level of unemployment when compared to the rest of the city. The 12 kindergartens serve approximately 650 kids in the age range of 3-6 years. The total number of educators who have attended the education programme is 32.

#### What actually happened?

The education programme for educators in the Husum kindergartens is part of the strategy of the project Klar, Parat - Husum (in English: Ready, Set - Husum) to improve the daily level of physical activity for children at the

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kindergarten age. By developing the skills of educators so they can introduce pedagogically organized physical activities, it is likely that both groups of children, motor skilled or not, get a better chance of participating on an equal level, and thus become more motivated to be physically active. All activities were introduced as games to increase the likelihood of all the children participating. In a section of 45 minutes, the children could be introduced to up to three different games depending on their abilities and involvement in the activity. The motivation to continue playing was improved by adjusting the games to suit their motor abilities when necessary. In addition to this practical pedagogical tool for conducting a play section, the educators got access to knowledge about specific games which can be used to improve a specific motor skill in a child.

#### What difficulties were encountered?

A significant challenge to overcome is the time, man hours and resources it requires of the respective kindergartens to have their educators attend the programme. The education programme has had to minimize the time the educators were away from their job functions in order to minimize the pressure on the educators that stay back at the kindergarten with an extra load of work. Furthermore, the educators in training were replaced by temporary employees paid by the Klar, Parat - Husum project to ensure that the kindergartens would not be short on personnel. The time the educators spent at their own kindergartens while in the education programme has also shown that the participants could more easily shift the theoretical knowledge to a real working situation. This has given them the opportunity to evaluate what has to be done to ensure more physical activity in the daily life of the children in the kindergartens.

#### Which aspects went particularly well?

32 educators in 12 kindergartens have been enrolled in the education programme. The education programme has received great support from the kindergarten managers, who saw an opportunity to improve the qualifications of the educators and improve the level of physical activity in their institutions. One educator from each institution is now enrolled in a network to ensure a cooperation between the 12 kindergartens to promote a continuous exchange of experience on how to increase the physical activity level of the children. Course activities held at the kindergartens have contributed to the educators' awareness on how to increase children's physical activity levels.

#### How do you know how successful it was?

Cross data between motor skill testing and the children's socio-economic background reveal that there is a relation between motor skill level and the socio-economic background of the kindergarten children. This highlights the need to expand opportunities for physical activity for the children from a neighborhood with a high number of unemployed and low income residents. More than 80% of the educators who have been in the programme report that they believe they are now contributing more to physical activity in the children's lives. 60% of the kindergartens have adopted the tools for conducting organized playing sessions which the educators have been introduced to during the course.

#### What can we learn?

At the age of 3-6, children are already vulnerable to inequality in the development of their motor skills according to the social and economic factors they are subject to. By improving the opportunities of the kids to be more physically active during their time in kindergarten, we expect to improve their development and consequently reduce the health inequality they are exposed to. The Klar, Parat - Husum project has improved the level of physical activity in kindergartens and the educators' ability to improve the opportunities for all children to participate in those activities. Kindergartens have adopted the pedagogically organized games to ensure that both motor skilled and not skilled children have an equal chance to experience motor development. The educators' abilities to adjust the games to the individual child can increase success during the activity by reducing the stigmatization of the less skilled children and help them to achieve a more advanced level of movement.

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#### YOUR HEALTH IN YOUR HANDS PROGRAMME

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**Keywords:** Education, medicine, parents, private business collaboration.

#### What did you do?

We created and implemented the Programme 'Your Health in Your Hands' which consists of:

- Establishing a child's level of fitness which includes a) the cardio respiratory system; b) the musculoskeletal system and its disorders. This was achieved by examining children during PE lessons at school.
- Setting up groups of Health Aerobic programmes for kids with levels of activities linked with their age, gender and level of fitness. The aerobic exercises were structured in such a way that they were easy to perform either at school, at home or in a gym with the means to increase levels of activities.
- Creating a training programme for people responsible for checking the fitness levels of children and choosing the level of activities for each group/each child. We focused on working with people who are involved in working with children already - teachers, fitness trainers, health promotion practitioners etc.
- Developing a software programme for working with the data from the testing of children and finalising the research and results.
- Informing parents and getting them involved.
- Working with local authorities, public organisations and private companies to establish the necessary funds
  During six months of testing we had 8459 children and their parents involved in the programme.

#### Why did you choose to do this?

In Europe the Ukraine has the highest level of children with health issues. Also Ukrainian school children have high disorders of their musculoskeletal system. Recently there were reported accidents of children dying at schools during PE lessons. However, there are no effective programmes offered by either the government or by the private sector to address the situation. As a result there has been an urgent need to look for effective ways of improving the situation.

#### Who were the participants?

We achieved collaboration between schools, Government bodies, local authorities and communities, non-profit organisations, private businesses: Ministry of Education and regional education departments, schools headmasters, teachers and school personnel; sport medicine professionals and authorities; heads of School Parents Committees and parents; managers and coaches of children's sports clubs and fitness clubs. The main participants were school children of Dniprovsky region, the biggest region of Kyiv, the capital city of Ukraine.

#### What actually happened?

In April-May and October - November 2012 we tested 8459 schoolchildren.

Based on our test results we found the following:

- 73% of children had musculoskeletal system disorders.
- Of this group and from additional tests (by orthopedists and x-rays) a further 23 % of children were identified with serious problems of their musculoskeletal system.





- 32% of the total number of children involved in the Programme were identified with disorders of their cardiovascular system.
- Of this group, by running additional tests (electrocardiography and echocardiography) we found that 36% of children had structural abnormalities of the heart.

We found specific ways of attracting children to health-enhancing physical activity and an active lifestyle. We also worked with different specialists and created a special set of exercises which are both interesting for children and have good effect on improving their health. We created effective methods of working with parents and getting them involved.

#### What difficulties were encountered?

We had the following difficulties:

We discovered that both educational organisations and parents were not proactive and not open at first to preventive activities leading to an early detection of defects in children's health and addressing them through physical activity. We overcame them by getting local authorities involved, working with school Principals, running educational and informational seminars for parents, sharing information about the Programme and its results on the website and by other means of communication.

We also found that school children, particularly teenagers of 12 - 16yo, had little interest in physical activity and healthy lifestyles. This has been overcome by using modern technology, computer games, etc by which children became involved in real physical exercise. To get children interested in the Programme we also arranged different competitions involving famous sportsmen and role models from different fields.

Funding was another difficulty. This has been overcome by working with non-profit and private sector companies and getting them involved

#### Which aspects went particularly well?

During this work we created, tested and improved the method for testing school children. The method is simple and easy to implement and as a result can be used by health professionals, school personnel and parents. The training method is personalised and children can train at school, at home, in fitness clubs or in the gym. The results of the training are measured on a regular basis by simple and affordable sets of equipment. Both children and parents can see the improvement which helps them stay motivated.

#### How do you know how successful it was?

Since we started the Programme we have increased the number of parents contacting us directly. The percentage of parents who signed the Consent for Testing form after educational seminars we ran increased dramatically. We have growing numbers of schools participating in the Programme. The number of school children participating in Health Festivals (health competitions we organise) is growing. Our belief in the Programme is based on the positive dynamics of the results of repeated tests. Attending health aerobics lessons regularly during 8 - 12 weeks leads to a fitness level increase for 86% of children. We also experienced a 30% reduction in musculoskeletal disorders among children.

#### What can we learn?

Based on the work we have done so far we can show that the 'Your Health in Your Hands' Programme helps improve children's health. The Programme is simple and can be easily implemented in any school. It can be run by teachers, parents and health professionals. The test method we use is simple and straightforward. It establishes the level of fitness of an individual child and shows any disorders. Our Programme enhances a child's functionality of the cardiovascular and musculoskeletal system. It helps create a series of exercises matching an individual's level of fitness with an ability to increase the level of difficulty as required. Involvement in the Programme leads to normalization of weight, reducing the level of illnesses and improving children's health. As a result children are more active, more engaged at school and their lifestyle becomes healthier. The collaboration model we use really does work and the Programme brings measurable results.

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# STRENGTHENING THE HEALTH OF CHILDREN AND ADOLESCENTS IN FULL-TIME SCHOOL

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**Keywords:** Full-time school, students, mental performance.

#### What did you do?

Recent studies show a negative situation with the organization of children's leisure: the vast majority of them spend their free time mostly in front of the television or computers. Only 39% of students are able to attend the institutions of additional education. The urgency of problems of the functioning of these schools is also connected to the lack of the necessary normative-methodical base regulating the hygienic aspects of their life. For this purpose, we studied a number of different types of full-day schools and carried out an expert assessment.

The studies were conducted in 5 full-day schools in Moscow. The observation covered students of grades 1, 4, 5-7 (584 students). Full-time mode in all the observed schools included training in the first half of the day, a walk after lessons, self-study, additional education during the second half of the day, 2 or 3 meals a day. In addition, FDSs had a varying learning organization, class sizes, the introduction of daytime sleep into regimen for first graders, a set of rooms for additional education, the number of clubs and sports groups, development of school grounds, etc.

The analysis of the efficiency of the educational process in FDSs provided the study of the functional state of children and their health, the educational process, the scope and nature of educational and extracurricular loading, the use of health-keeping technology of training, the organization of sports and recreation activities and meals.

#### Why did you choose to do this?

Full-day schools (FDS) are a new kind of educational institution, allowing fuller integration of academic and extracurricular activities, creation of conditions for the harmonious development of children and to improve their health, and more appropriate and effective use of the material base of educational institutions.

The appearance of FDS should be viewed as a social order, since more than 65% of parents are busy all day at work and cannot devote enough time for raising children.

#### What actually happened?

The studies have shown that teaching children in FDSs, mainly corresponds to their age opportunities, as evidenced by the improvement in all the indicators of mental efficiency, functional state of the respiratory system and power capabilities from the beginning to the end of the school year.

A comparative analysis of the various options for the educational process in FDSs showed that the most favorable indicators of mental health, emotional, psychosomatic states and physiometry were identified in primary school children. Their mode of training and education included: dynamic pause in the open air in the middle of the

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school day and walk after school with special games and exercises, 35-minute lessons (Grade 1), and daytime sleep (1 class).

#### Which aspects went particularly well?

It was shown that the more favorable nature of mental health, positive annual dynamics of psychosomatic and physiometry were observed in students in grades 5 - 7 classes of FDSs with reduced class sizes (10-12 people), implemented student-oriented pedagogy, enriched educational process with a variety of motor-active lessons throughout the day, the steady alternation of study and holidays. Along with that it was found that a significant positive contribution to the development of health among primary school children and students of grades 5 - 7 made a quality health care and psychological support during the period of children's staying in school and a full 3-course meal.

#### How do you know how successful it was?

The implementation of these conditions provides a favorable nature of the dynamics of the studied parameters of the functional state of the pupils' organism, reduces the incidence of acute morbidity, reduces the number of children with excessive body weight and increases their strength qualities and functional possibilities of the respiratory system.

#### What can we learn?

In general, the findings of hygienic assessment of different models of FDSs not only demonstrated their effectiveness in creating optimal conditions for maintaining students' health and reducing their congestion, but also allowed to justify the basic hygienic requirements for the organization and operation of FDS.

The most important of these requirements are reflected in sanitary rules governing the activities of educational institutions.

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# MOTIVATING CHILDREN TO MOVE, BOTH AS INDIVIDUALS AND GROUPS: IDENTIFYING STRATEGIC PARTNERS AT THE MACRO AND MICRO LEVELS

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**Keywords:** Physical activity, self efficacy, practice based learning.

#### What did you do?

With a team of colleagues, I developed attractive user-friendly manuals and calendars within a programme called The Class Moves, to encourage (1) increased physical activity, (2) related cognitive improvement and (3) overall well-being among children in classrooms. My central interest was to enhance children's self efficacy through movement and relaxation especially in classroom situations.

#### Why did you choose to do this?

My exposure as a trained physiotherapist taught me that health issues could be addressed pro-actively through exercise and relaxation, rather than reactively through medication and surgery. It became clear that 'prevention is better than cure,' and as early a start as possible should be made. This indicated that it would be best to begin such an approach to health with young children.

#### Who were the participants?

It proved logistically easier and more economic to work with children in classrooms rather than with individual children scattered across homes. For an early start in life, The Class Moves initially addressed children aged four to eight years. It was necessary to work with teachers as well as children, and school principals and adminstrators also had to be convinced. Since schools were embedded in neighbourhoods and cities, educational officials and health professionals needed to be brought on board. Policy makers who allocate budgets required convincing as well. Parental involvement was very important.

#### What actually happened?

The programme was remarkably successful -- see below -- and involved major challenges that my team and I continue to address (also see below). The Class Moves was widely adopted in the Netherlands, Scotland and Wales. New materials were also developed, for example a family activities calendar distributed in schools that attempted to give children a voice in the use of their time and thus to increase their self efficacy as well as their physical and social activities.

#### What difficulties were encountered and how were these overcome?

In order to help children develop through physical activity that stimulated cognitive development and overall well-being, we encountered creative tensions between working at the level of groups of children and attending to the specific needs of individual children in the classroom. This difficulty was addressed by trying to work at both levels, and integrating the different strategies required to make the classroom a vibrant place with enjoyable physical activity at the same time that specific children were supported through individual attention.

Another difficulty was that in order to reach children, we had to engage with many different categories of adults – teachers, parents, school principals and administrators, educational officials and health professionals, policy makers in local and national government... We learned to operate at both the micro and macro levels, and to approach each of these different kinds of adults in appropriate ways.

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#### Which aspects went particularly well?

The children by and large enjoyed the structured physical activity in class, and this in turn improved both the cognitive performance of children and the overall atmosphere in the classroom. Many teachers were enthusiastic and continued to use The Class Moves and related materials for years. School administators too were supportive of the programme, as were local educational and health officials. Successes can be reported with local and national government as well.

#### How do you know how successful it was?

The study given below provides a recent example of how the success of The Class Moves has been measured. Local officials, school administrators, teachers and children also provided anecdotal evidence to support these studies.

A Mixed Methods Process Evaluation of the Implementation of JUMP-in, A Multilevel School-Based Intervention Aimed at Physical Activity Promotion' (Judith S.B. Mei et al in Health Promotion Practice, 27 November 2012).

#### What can we learn?

The following lessons are put forward from the experience described:

- It is best to work from both ends from the bottom up as well as the top down, with individuals and also with groups, attending to physical well-being at the same time as cognitive development, from practical knowledge plus theoretical support rather than emphasizing one at the expense of the other.
- New initiatives are best attempted step by step, building on what people do and what they wish for, and following different trajectories depending on the particular situation.

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#### HEALTH IN EDUCATION SYSTEM: LITHUANIAN EXPERIENCE

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Keywords: Health, Promotion, School, Health in All Policies.

#### What did you do?

This year is dedicated to the 20th anniversary of the health promoting schools movement in Lithuania. It is not only the anniversary of this movement, but also of collaboration between the health and education, with encouraging and productive results. Cooperation between these two sectors started in 1992, when the Ministry of Health of the Republic of Lithuania and the Ministry of Education and Science reached common agreement that from 1 March 1993, Lithuania starts to develop a programme "Healthy School" supported by World Health Organization, Council of Europe and the European Commission. This programme was piloted in ten secondary schools from 1992 to 1996. In this period of time, this programme was accepted by Lithuanian school communities, it developed an institutional system, and it became one of the main strategic goals of the Lithuanian health and education systems. From this year Lithuania has a national health promoting schools network, which has over 400 schools.

Activities of these schools are regulated by public health offices located in municipalities at the regional level, and at the national level by a corporate commission which consists of experts working in Health and Education sectors.

#### Why did you choose to do this?

In order to improve public health it is necessary to address factors which are mediated by other sectors and are beyond health sector regulations. Lithuanian health policy has to be redirected to other sectors. The health in All Policies approach considers children and their welfare as the foundation of national wellbeing, necessitating health policy integration within the educational system. Lithuanian children start school from age 7, until then they participate in preschool education. Health and life skills competence are introduced in educational steps.

#### Who were the participants?

At first, only the secondary schools and their communities were participating in this process, later kindergardens, vocational schools and universities have joined. In this process, institutions which work at the national level play a key role: Health Education and Disease Prevention Center, Lithuanian Students of Non-formal Education Center. Health promoting schools are coordinated by public heath bureaus which communicate with educational centers at local level.

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#### What actually happened?

The health promoting schools were included in health and education strategic documents, in which it was highlighted that children of Lithuania have to study in schools where their own health, welfare and life skills are being learned as life competence. It works perfectly at both the localized - municipal level, and as national institutional framework. During 20 years of intensive work, we have prepared extensive methodological material for new schools / members, and for permanent members to evaluate themselves and improve their activities. The health promoting schools are exchanging positive experiences, and thereby involving new member schools. In school society, the main function goes to public health specialists working in schools.

#### What difficulties were encountered?

As government in Lithuania changes every four years, its important to ensure continuity of actions. Due to well organized and active collaboration between Health and Education ministries, strategical documents of common business continuity were organized. In Lithuania, there are 60 municipalities, and almost all educational institutions depend on them. Working with municipalities, the challenge was to convince the health and education managers of the programmes' reliability, and that it is acceptable in Lithuanian schools. It should be acknowledged that not all municipalities worked equally well; in Lithuania there are certain differences between municipalities. In the future, it is expected to minimize the differences between municipalities, by developing public health strategies and public health functions within municipalities.

#### Which aspects went particularly well?

Regardless of changing government, the success was working on continuity by adding this activity to health and education strategical documents. Another positive aspect was that a new institutional structure was created - Bureau of Health Promoting School in the State Environmental Health Centre, which coordinated and developed this activity on national level. The Lithuanian National Health System reform influenced that from 2006, new public health offices started to develop in municipalities, whose main aims include a focus on community health promotion and the creation and implementation of local health programmes.

#### How do you know how successful it was?

The Lithuanian Parliament has announced that 2013 is to be to be Health year. A conference on health promoting schools was therefore organized, dedicated to this movement's 20th anniversary. Most honored schools societies were awarded diplomas by Minister of Education and Science and Minister of Health, persons who started and are still developing this movement were mentioned. The book of good practice experiences about health promoting schools was published. It is important to mention that the 3rd European Conference on Health Promoting Schools was held in Vilnius.

#### What can we learn?

It is important to notice that schools carry this activity voluntarily, with no funding for it. By expanding through all regions of Lithuania, this activity, and the results, show that if there is support for the idea, anything is possible. Very important is that it involved scholars and their research proved this object's purpose. From results we can say that cross-sector collaboration between health and education is developing and a Health in All Policies approach is acceptable and becomes productive.

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#### PROS AND CONS OF E-LEARNING

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**Keywords:** Computer, laptop, interactive board, schoolchildren, health.

#### What did you do?

Modern education at the pre-school level is impossible to imagine without e-learning. Involvement of modern children and adolescents in using information technology grows with every year. This form of training becomes routine practice. The age at which children first experience working with computers is significantly reduced. Advantages of computer training are undoubted and the necessity of mastering computer literacy is obvious. New technologies used in recent years in education provide a rapid growth inj the information and resource base, free access to a variety of information resources, remotability, mobility, interactivity, the ability to model and animate the various processes and phenomena. The affordability of acquisition and the increase in the number of home computer users promotes the expansion of distance education, also for secondary school students. Along with the expansion of didactic teaching opportunities, increased information, and the individualization of learning, the introduction of computer technology into the learning process in secondary schools has some negative aspects. During the lessons we conducted a study of mental capacity, functional state of the central nervous system and psycho-emotional state of schoolchildren and carried out the chronometry of training activities; i.e., the timing and duration of use of various forms of e-learning.

#### Who were the participants?

In the first series of our studies we have found that significant deterioration of the cortical link of the visual analyzer and indicators of mental efficiency of students in grades 5-7 occur at the end of lessons in which a continuous duration of the computer work was more than 30 minutes. Similar results were observed in students in grades 7-8. A reliable decrease in the lability of the visual analyzer they had after school, during which the continuous duration of computer usage reached 35 minutes.

#### What actually happened?

Portable computers (laptops) are more often used for lessons by students in recent years. Studies using photo-chronometric observations show that for students aged 7-9, because of the design features of the laptop (strict linkage between monitor and keyboard), the maintenance of optimal visual distance in the course of lessons is difficult, creating an additional risk of visual impairment and posture. The photo-chronometry showed that only in 30% of students did the initial distance from the eyes to the screen (visual distance) correspond to the recommended distance - not less than 50 cm. In the process of working with a laptop the visual distance gradually

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reduced by 5-10 cm. The second series of our studies was devoted to the substantiation of safe duration of using interactive boards in school lessons. It was found that if the total duration of the interactive board use in grades 1-3 was no more than 20 minutes, and from grade 4 - no more than 30 minutes there was no deterioration in the indicators of children's fatigue including visual as well as psycho-emotional state.

#### What difficulties were encountered?

A comparative analysis revealed that in lessons with an interactive board the indicators of pupils' fatigue were significantly lower than in traditional lessons. Rational use of the interactive board decreases the monotony of lessons, is accompanied by the activation of mental activities of the students and has a positive impact on their psycho-emotional state and performance. Safe use of the interactive board assumes a special light mode in the room, which eliminates the illumination of the image on the screen, sufficient contrast and rational selection of color solution. The information presented on the board should be clear and highly visible to all students regardless of their distance from the board. If the board is not used it should be turned off so that the glowing screen is not in the field of view of students.

#### Which aspects went particularly well?

Students with vision disorders require special attention. It was found that fatigue, especially visual, occurs earlier in these students than in the children without impairment. It was revealed that under other equal conditions the degree of fatigue after lessons with a computer was higher in children with myopia and a reduced supply of accommodation. Our studies showed that students with myopia (visual acuity  $0.18 \pm 0.04$ ) under the influence of 30-minutes of continuous work on the computer had a deterioration of visual capacity, which was expressed in higher values of the coefficient of fatigue of the accommodative apparatus of the eye.

#### How do you know how successful it was?

To prevent eye fatigue in children, lessons with computers and interactive whiteboards should be alternated with other types of training activities and short physical activity breaks.

#### What can we learn?

- 1. Safe continuous duration of computer use with an LCD monitor for students in grades 5-9 is 25 minutes.
- 2. As the results of photo-chronometric observations have shown, the use of laptops for pupils in lower grades does not provide compliance with a favorable working pose and increases the risk of the breach not only of the musculoskeletal system, but also eye disorders in students.
- 3. Safe duration for the use of interactive boards in the lessons in grades 1-3 is no more than 20 minutes, and from grade 4 no more than 30 minutes.
- 4. Students with visual impairments need to work in more soft mode with a personal computer at the lessons. The findings are reflected in the programmes of training and professional development of teachers, guidance and regulations governing the protection of children's health in educational institutions.

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#### **HEALTH OF MOSCOW SCHOOLCHILDREN**

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**Keywords:** School children aged 7-15 years, medical examination.

#### What did you do?

The development of prevention programmes requires knowledge about the formation of schoolchildren's health during basic general education from the 1st to 9th grades.

Regular medical check-ups and longitudinal observation (longitudinal study) of a large number of children reveal the features of the development of chronic diseases, premorbid conditions (functional disorders), and violations of physical development at each stage of general education at school.

#### Why did you choose to do this?

The purpose of this longitudinal study was to investigate the characteristics of the formation of Moscow students' health during schooling from the first to the ninth grade, inclusively.

#### Who were the participants?

For 9 years since 2004, the Research Institute of Hygiene and Health Protection of Children and Adolescents has been carrying out a long-term clinical observation of students in several schools in different administrative districts of Moscow. 426 children (216 boys and 210 girls) havr been observed from grade 1 until the end of grade 9.

A comprehensive medical examination of children was conducted every year at the same time (in April) directly in the schools.

#### What actually happened?

It was found that during the learning from grades 1 to 9 the health of schoolchildren is getting worse: the number of students with chronic diseases at the compensation stage (from 51.3% to 66.5%) increased, the number of absolutely healthy children (from 4.3% to 0.7%) reduced and the number of students with premorbid state reduced - functional disorders (from 44.4% to 32.8%).

Some gender differences in the growth rates of morbidity were revealed. There was an increased prevalence of functional disorders by 33.1% in girls for 9 years of education. The prevalence of functional disorders in boys increased from grade 1 to 4 and then it gradually decreased to the level of grade 1. At the same time, the prevalence of chronic diseases among males increased by 45.7%, in girls - only by 5.7%. The findings show more adverse trends in health of contemporary Moscow boys than in girls. The adverse trends in rates of chronic morbidity in boys are caused by the increased prevalence of chronic respiratory diseases, musculoskeletal and metabolic disorders (obesity).

#### What difficulties were encountered?

The change in morbidity indicators of children is not linear, and there are periods of some decline of the prevalence of functional disorders and chronic diseases and periods of rapid increase. The most favorable trends were identified in students from the 4th to 6th grades inclusively. At this time, the prevalence of functional disorders reduces and the prevalence of chronic diseases does not increase. A sharp increase in the prevalence of functional





disorders was noted in grade 9. This is due to the neurotic and vegetative-vascular disorders in students during the intensive preparation for exams. The increase in the frequency of chronic pathology begins in grade 7 and especially increases in grades 8-9 at the expense of the increase in the prevalence of diseases of the digestive system, diseases of the musculoskeletal system and myopia.

Functional disorders of the cardiovascular, musculoskeletal, digestive, nervous system and psychiatric sphere (together), functional disorders of vision occupy the first five rank places.

#### Which aspects went particularly well?

The specifics of younger adolescents (10-14 years old) are an increase in the specific weight of functional disorders of the cardiovascular system (from 11% to 24%) and a decrease in the specific weight of functional disorders of the digestive system from 18% to 6%.

In the structure of chronic pathology the leading ranking places are occupied by the disease of the digestive system, musculoskeletal system, nasopharynx, expressed disorders of vision.

#### How do you know how successful it was?

In the dynamics of schooling the specific weight of chronic diseases of the digestive system increases (from 9% to 21%) and visual disorders (from 1% to 11%). The specific weight of the nasopharynx reduces (from 26% to 15%). The specific weight of diseases of the musculoskeletal system varies within the limits (27% -15% -21%). We examined changes in the prevalence of physical disorders in both boys and girls. Significant age and gender differences were revealed in the change of indicators. The prevalence of overweight (including obesity) increases from the 1st to 4th grade (from 10.9% to 21.4%) in the group of boys, and then gradually decreases and reaches 14% in the 9th grade.

#### What can we learn?

At the same time the prevalence of underweight increases from 5.9% to 21.5%. Clearly defined tendencies could not be detected among girls. At the elementary school 18% of girls were underweight. The number of school girls with underweight then increases. Among the girls of the 9th grade an equal number of girls has an excess and deficiency of body weight (15%). It should be noted that during the period of observation of children a group of students with obesity I-II and higher degrees formed. Schoolchildren with a diagnosis of "obesity" are 4-5% in grades 8-9.

Conclusion: Assessing the overall dynamics of the health state of students from the 1st to 9th grades we can assert that the health of schoolchildren is getting worse. The adverse trends are more pronounced in the group of boys compared with girls.

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#### RELATIONSHIPS AMONG SCHOOL STUDENTS

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Keywords: School, psychosocial wellbeing, sociometry.

#### What did you do?

The task of the study is to analyze the major factors of the psychosocial wellbeing of students.

One of the effective methods of the study is the method of sociometry developed by Ya.L. Moreno, allowing us to estimate not only collectives, but also specific features of each pupil on the nature of relationships with schoolmates. The method is modified for a possibility of available inspection of schoolchildren in all age-ranges of schooling.

Before each pupil there was a list of his schoolmates and 2 groups of questions were consistently asked. The questions were made abstractly so that they didn't concern the real events. They form a model of interaction with the collective in the consciousness of the pupil that, in comparison with the questions from real life, smoothens their emotionally heterogeneous sense.

The index of the sociometric status (ISS) connected with a position of the subject in the structure of the interpersonal relations in the social environment was estimated for each subject.

Sociometric survey of the group of schoolchildren (200 pupils) is carried out annually as a part of the comprehensive programme of longitudinal studies of development of their cognitive functions.

#### Why did you choose to do this?

Not only absence of diseases and physical defects, but also harmony of the personality with the society is an important sign of health. The school plays a huge role in the social wellbeing. Interaction of the school student with an educational collective provides the accumulation of social experience, social and mental development. Therefore ensuring psychosocial wellbeing in educational collectives is important for the solution of problems of health protection of children.

#### Who were the participants?

The results of the longitudinal study showed an age dynamics of the ISS in grades from 1 to 8. On average the ISS was positive in girls, but in the course of growing it gradually decreased from 8% in grade 1 to 1,5% in grade 8. It is significantly lower in grades from 1 to 5 in boys than in girls. In the course of training grades from 1 to 8 it increased from-4% to +2%. The negative status was shown significantly often in boys. Its frequency of manifestation in boys decreased from 46% to 35%, and in girls - increased from 9% to 35%.

#### What actually happened?

Certainly, an ideal picture is a positive sociometric status of each student. However a real picture of the average positive social status of girls and the negative status of boys shows the lack of social wellbeing in today's schools which is necessary for full health of pupils.

As the age of school entry has a great importance for health of schoolchildren, the analysis of this factor was carried out. The girls who arrived in the social environment of training before 7 years old, showed the ISS less reliably in grades from 1 to 8 than more senior schoolmates. The ISS was more negative at the beginning of school before 7 years old in boys of elementary school. Thus, the ISS significantly depends on the age of school entry. In the schoolmate who started school early, it was insufficiently high to feel a full-fledged member of the collective.





It was also established that at any age the ISS was reliably higher in persons with higher academic achievements. The sociometric status among struggling students is even negative, which is not the case for good and excellent students.

#### What difficulties were encountered?

This means that it is necessary to uncover and maintain the hidden abilities and talents of struggling students that will allow him/her to feel a full-fledged member of the collective and remove this socially unhealthy conflict atmosphere in the class.

For the analysis of interrelation of the ISS with the ability to adapt socially and psychologically, we interviewed pupils of grade 8 using K. Rogers and R. Daymond's method. It was established that the sociometric status of schoolchildren authentically depends on their mental abilities to adapt to the social conditions of the educational process. A special interest is the dependence of the ISS on mental health. For the analysis of this factor the schoolchildren were divided into 2 groups based on the results of psychoneurological inspection: healthy and with boundary disorders of the nervous system. Reliable intergroup distinctions were obtained showing a distinct decrease of the ISS in schoolchildren with neurological deviations.

#### Which aspects went particularly well?

The finding is a confirmation of known representations about the cruelty at children's age: the health deviation in the schoolmate' health can cause a negative attitude of society.

Thus, on the basis of results of long-term longitudinal studies we can conclude that the sociometric status of schoolchildren is significantly connected with the factors of coeducation of children of different gender, the age of school entry, academic achievements, social and psychological adaptability and the mental health.

#### How do you know how successful it was?

The high reliability of the modification of a method of sociometry makes it available for practical application in the system of monitoring psychosocial wellbeing of schoolchildren to solve problems of psycho-hygiene and health protection of children and teenagers.

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#### LOMA NYMARKSKOLEN – THE DEVELOPMENT PROJECT

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**Keywords:** Health promotion, ownership, Motivation, Sense of Coherence.

#### What did you do?

LOMA Nymarkskolen is a joint development- and research project. This abstract concerns the development project where teachers, students and headmasters are key-persons. The objective of the development project was to the develop a new meal system according to the LOMA principles at Nymarkskolen. The principles ensure that a sustainable and local perspective (LOMA = abbreviation of LOKAL MAD = local food) is applied to cooking, learning and food sourcing projects. In order to test the concept and improve ownership, inter-disciplinary pilot projects, each lasting a week, regarding the broad notion of health have been conducted in 2012 and 2013: we call them LOMA Pilot Projects. During these 4 weeks, students worked in groups in five different workshops and shifted throughout the week. Every day, the group in the cooking workshop prepared a meal for the approx. 100 students and teachers who participated. Likewise another group went on excursions to local farms in order to learn about farming, but also to buy and transport food from the farm - or the fishery - back to the school. Meanwhile other groups were working with food in other subjects like science, media and language. Each day all students and teachers shared a communal meal in an ad-hoc environment, as there was no canteen at the school yet. However, by October 2013 a production kitchen and canteen will be established at the school, where groups of students will participate in cooking every day as part of the curriculum.

#### Why did you choose to do this?

We did this as a test and training opportunity before the final implementation. It was wery important for us to be able to test and qualify the LOMA project at our school before the final implementation. We wanted to try to integrate different subjects concerning health and well-being for the young students. One of the questions was: How can we connect and integrate the learning in subjects like science, math, exercise, media and language, so that the students gain the action competence and the motivation to make healthy choices in life?

#### Who were the participants?

The LOMA project is at a secondary school, Nymarkskolen, with students aged 12-15 years. In a project week there were approx.100 students and 8 teachers.

The LOMA Nymarkskolen project has developed as a Community of practice (CoP) involving stakeholders from Nymarkskolen, the municipality of Svendborg (Department of Children and Youth and Department of Health) University College Lillebelt and Aalborg University, MENU. (PhD candidate Dorte Ruge has been following the

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development project).

#### What actually happened?

We have completed four projekts weeks during the last year. Every week with about 100 students participating. The students where divided into five groups. The groups changed workshop every day. The different workshops represented a subject/learning area, but every workshop had the same headline "LOMA in relation to Health and Wellbeing".

It is very important to the project that the students have a feeling of ownership through participation and, with this in mind, each group decided which meal they were going to prepare for lunch.

The acitivities where rather challenging for teachers at the school, as food-related learning acitivities are new to most of the teachers - but due to a very enthusiastic effort all weeks actually went well according to statements from teachers as well as students.

#### What difficulties were encountered?

It is a political decision by the municipality to implement LOMA at our school. Therefore some teachers don't feel comitted to the project, and some have difficulties in seeing the learning potential. Another difficulty was the facilities. The learning- and professional kitchen is not ready for deployment until October 2013.

The teachers' resistance has in other words been countered by having a coordinator who was also a colleague, who they could use during the the planning of the pilot project week.

#### Which aspects went particularly well?

It seems as if especially the excursions, where students went to a local producer to get some products, were successfull: the experience of collecting vegetables and afterwards returning to the school kitchen an making some nice healthy food and serving and eating it with friends turned out to be very popular.

#### How do you know how successful it was?

In connection to the PhD case study, the students were asked to answer some questions before and after the LOMA week. One of the most poignant features was that students were very pleased about eating together - and also pleased about eating together with the teachers.

#### What can we learn?

- It made good sense for the young people to be part of planning and preparing food and meals. They have got more courage in trying different food and the majority seem to approve very much of sharing a meal together.
- 2. Having the experience of going to a local farm, seeing how the animals live, what they eat, can motivate and have an influence on students' choices when they choose their future education.
- 3. Most importantly we learned that students would like to have more influence on the educational activities, e.g. influencing which food producers to visit.
- 4. Regarding the academic achievement of these weeks we need to further develop teaching materials that are 'tailored' to our special LOMA meal and learning system and we intend to include teachers and students very much in that proces. One way to crystallize the learning may be that students make a report according to certain guidelines after each LOMA week. That would facilitate evaluation of the interdisciplinary outcome.

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# EXPERIENCE DEMOCRACY WHEN YOU'RE A CHILD: THE WAY TO GAIN SELF ESTEEM, PRACTICE LIFE SKILLS AND DEVELOP A DEMOCRATIC SETTING IN SCHOOLS

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**Keywords:** School council, democracy, participation, societal values.

#### What did you do?

Our primary schools are placed in a rural area in the province of Milan. They are attended by more than 600 pupils in 3 school buildings located in different areas of the municipality of Cassano d'Adda. From 2007 we have been participating in the local programme "My dear Pinocchio: how to develop a HPS", a partnership between the Local Health Agency Milano2 and the schools. In 2011 we formally entered the newborn "Local HPS Network" and in 2012 we joined the recently founded "HPS Network in Lombardy" and became Coordinators of Milano Province. We first decided to implement the area of philosophy and relationship and chose to organize a "School Board for Girls and Boys" (SBGB). The first step was to describe how things work in the school, in a simple, but detailed way: organization and management of school and class activities, trips, purchase of materials and equipment, school calendar, meetings with parents, cleaning, canteen, school regulations. A training course was organized for teachers and activities were scheduled. Each teacher explained the school organization and the role that the SCGB and its representatives will have to the class. Pupils were introduced to the mechanism of the election and the importance of acting democracy. All the pupils in fourth and fifth grade participated in the campaign. Before the election children had time to discuss important items for them and for the school. Then each candidate presented his own programme and produced a brochure or a poster.

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#### Why did you choose to do this?

Among the various components that are involved in the school life, the voice of girls and boys was missing. They had no space of active involvement and needed to learn how to participate. The law provides the opportunity only for high school students to be present in school organizations. In our primary schools we felt the need to involve all pupils in the daily school life. We believe that to give children the opportunity of expressing ideas, opinions and proposals and experiencing democracy, is an important part of the philosophy of a HPS.

#### Who were the participants?

The main target group includes pupils from the 4th and 5th school grade. Ten classes participate every year with teachers and children. Ten candidates were elected and met in official meetings to assess problems in the school. Parents are informed and involved in supporting the initiative. The Municipality of Cassano supports the initiative and provides the necessary transport for moving between one school and another.

#### What actually happened?

We worked extensively to experience democracy at school in order to allow pupils to express and exchange ideas, to establish common rules and exercise their rights and duties. Elections took place in December, one candidate was elected in each 4th grade class and the term of office lasts 2 years.

The SBGB meets 4 to 7 times during the year, a president and a vice-president are elected and the programme of each delegate is read and discussed. The board discusses arguments such as: school life, school subjects, desires and opinions, school building, garden, safety, didactic trips, regulations, hygiene, parties, environment, culture, sports, school catering and transport. Important issues are chosen as priorities and developed during the year. Problems are reported by all pupils to the SBGB, through a report form. They are discussed by the board, which seeks solutions. The documentation like reports, amendments to the Regulation, approval of the School Council, is collected over the years in a file that is made available to the classes at the beginning of every school year.

#### What difficulties were encountered and how were these overcome?

The choice of good representatives was a crucial step: candidates are not elected for friendship, but because they represent the entire class. It is important that the kids understand the role and tasks of a class representative: he/she must bring to the authorities the thought of the class, that means opinions, problems and requests; on the other hand he/she must bring the observations of the authorities and the SBGB back to the class. To promote understanding by the children of the characteristics, responsibilities and tasks that a representative should have, pupils themselves drafted a document, "the identity card of the applicant": the candidate must be able to collaborate with others, be reliable, fair and consistent, he must have ideas, he needs to listen and to have patience, he must read and speak well, he should not be shy, nor impose his own thought or take his own initiatives. Another difficulty we met was the distance between the 3 schools. We decided to hold the meetings alternately in the 3 locations. The municipality helped us providing the necessary transportation.

#### Which aspects went particularly well?

Citizenship education and the knowledge of the Italian constitution come out from the theory and are lived and experienced through the opportunity for the children to apply for elections, to discuss their programmes and to vote.

The positive aspects of the project were many: it contributes enormously to teach skills to young girls and boys, to let them take action, to improve the school atmosphere and the participation, to discuss rules and let them be approved in a democratic way. In the end, pupils became promoters of the respect of school rules and healthier behaviors.

#### How do you know how successful it was?

Teachers and parents were surprised by the potential of the girls and boys. Teachers found a greater ability to argue, an improved sense of belonging and a greater participation in school life in pupils. Relationships improved



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among pupils, parents and school staff. Parents found a greater maturity in their children.

Even at the organizational level there was a better involvement of the 3 schools in all initiatives and better contacts with the School Council. For the teachers the project has been successful and sustainable and will be continued.

#### What can we learn?

The results of this project show that the potential of pupils is often more than expected, children only need to be helped to realize this potential. We can learn that the transfer of the attention of the school from knowledge to practice leads to great results. Pupils and parents can help the school to achieve their objectives only through true democracy, acting on the basis of mutual respect. Acting democracy means to learn life skills and implement healthy behaviors. The sooner you experience democratic behavior, the better results can be in the field of active citizenship: primary school can be a good starting point.

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# THE INFLUENCE OF SINGLE SEX EDUCATION ON THE LEVEL OF MASCULINITY, QUALITY AND PHYSIOLOGICAL VALUE OF VERBAL AND FIGURAL-SPATIAL PERFORMANCE

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Keywords: Separate education, masculinity, boys and girls.

#### What did you do?

The statistical comparison with the Mann-Whitney criterion revealed that CE boys and girls had significant difference in MI ( $-0.14 \pm 0.57$  for boys and  $0.63 \pm 0.84$  for girls; .=0,017). Boys had more masculine ( $14.30 \pm 3.35$ ; .=0,035) and less feminine ( $12.55 \pm 1.67$ ; .=0,008) replies than girls ( $10.14 \pm 4.60$  and  $15.14 \pm 3.39$ , accordingly). Girls performed verbal tests faster than boys ( $226.16 \pm 23.97$  and  $291.62 \pm 71.08$ ., accordingly; .=0,028) and did not differ from boys by figural-spatial successfulness and CRV.

In SS boys and girls had no significant difference in MI. Although boys did not yield to girls in verbal successfulness, they had higher physiological value of verbal performance. In comparison with girls, verbal tests caused in boys more prominent features of sympathetic activation, such as increase in mode amplitude (.=0,021) and cardiac stress index (.=0,059) with the decrease of SDNN (.=0,028). Boys from SS did not differ from CE boys in MI and CRV. They fulfilled verbal tests faster (183,66  $\pm$  77,97 and 291,62  $\pm$  71,08., accordingly; .=0,019), but made more mistakes in figural-spatial tasks than boys from CE (28,16  $\pm$  22,62 and 8,68  $\pm$  16,38 %, accordingly; .=0,024).

#### Why did you choose to do this?

Single sex education is founded on physiological data of sex differences in brain development, which cause sex peculiarities in cognitive strategies. Owing to more earlier left hemisphere maturation, girls excel boys in verbal tasks, but yield to them in figural-spatial tasks, more associated with right hemisphere. Supposedly, single sex education, thanks to adequate educational rates and methods, may improve verbal and figural-spatial performance of boys and girls with minimal physiological value.

#### Who were the participants?

With the purpose to evaluate the effect of single sex education on masculinity, efficiency and physiological value of verbal and figural-spatial performance of 38 pupils were investigated after 8-years of education in single sex (SS) schools (9 boys and 10 girls) and co-educational (CE) schools (9 boys and 10 girls) of the same level. In this study the speed and correctness of verbal and figural-spatial performance, masculinity index (MI) and parameters of cardio rhythm variability (CRV) before and in tests execution were evaluated.

#### What actually happened?

Girls from SS had more masculine replies (13,30±2,94 and 10,14±4,60, accordingly, .=0,052) and less physiological stress in figural-spatial tasks than girls from CE. During figural-spatial tests among girls from CE there were more decrease of mode and SDNN (.=0,052) and increase of mode amplitude (.=0,023) than in girls from SS.

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#### What can we learn?

The results of this study allow us to conclude that 8-year SS education causes significant changes of investigated parameters, more prominent in boys. Without any influence on masculinity in boys it improves verbal and deteriorates figure-spatial performance. In girls SS education decreases physiological value of figural-spatial activity, but promotes masculine features reinforcement. Girls and boys from single sex schools have more similarities in masculine/feminine features, verbal and figure-spatial performance, than pupils of co-educational school, but boys from SS pay a higher physiological price for verbal successfulness.

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**Keywords:** Teachers, non-teaching staff, health promoting school.

#### What did you do?

In 2012 the three-year project on health promotion for teachers and non-teaching staff was implemented within the framework of the health promoting school (HPS) programme in Poland. The aims of the project are:

- 1. To develop positive changes in the school physical and social environment, enhancing the health of school staff;
- 2. To encourage staff members to take care of their health through positive changes in their lifestyle;
- 3. To check in practice the usefulness of the proposed model of health promotion for school staff.

Action research was used as the basic method. Coordinators at the national level support school activities (e.g. they train school coordinators and head teachers, prepare materials, advise schools, organize meetings to share experience, monitor, and evaluate project outcomes).

The first stage of the project was to make the diagnosis of the initial state. Three questionnaires for teachers and non-teaching staff concerning assessment of occupational wellbeing, positive health behaviour and subjective health were prepared as the tools for diagnosis. Each school analysed its own data in order to identify problems which should be solved during the project and build the plan of action and evaluation, according to the principles used in the HPS programme in Poland. 2012/13 was the first year of the project. Schools implemented their plan to solve selected priority problems. The plans were consulted during the meeting for school coordinators and head teachers.

#### Why did you choose to do this?

Over the 20 years of the HPS programme, focus was always placed on the students' health. Encouragement of school staff to pursue a healthy lifestyle and improve the quality of the work environment will contribute to improving their occupational wellbeing and health status. It is also expected that increasing staff involvement in health promotion at school will help to have them act as role models for students. The project is an attempt to join the concepts of two projects based on a setting approach: the HPS and workplace health promotion.

#### Who were the participants?

Teachers and non-teaching staff members (administrative, service and school canteen workers) from 22 primary and lower secondary schools belonging (for 5 years or more) to six regional HPS networks. Head teachers and at least 60% of school staff members had to volunteer to commit to the project. The total number of participants was about 800 teachers and 300 other staff members.

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#### What actually happened?

During the one-and-a-half-year of the project the following activities were undertaken by national project coordinators:

- 4. Two meetings with school project coordinators and head teachers were organized. The aims of these meetings were: to present the concepts of workplace health promotion, and explain the methods of diagnosing the initial status and planning the activity; to run workshops on motivating staff members to participate in the project and take care of their own health;
- 5. Results of three questionnaires used in the diagnosis (each school received tables with their data) were interpreted;
- 6. The national coordinator visited schools and met with school staff;
- 7. An analysis of the plans of activities was conducted giving feedback for each school concerning their agreement to the principles of planning in HPSs. As a result four main types of activities were selected: changes of staff members' health behaviour (mainly increasing physical activity and diet change), decreasing the noise level at school, arranging lounges for teachers and service workers, integration of staff

#### What difficulties were encountered?

The following difficulties were encountered:

- Low competence of activity planning and evaluation; materials were prepared to overcome this problem, two workshops were organized; each school received written feedback and individual consultancy;
- Most of the schools focused their activities more on teachers' health than non-teaching staff health; this
  was discussed during the meetings;
- In some schools a relatively small proportion of staff were involved in the activity, awaiting what would be
  offered to them by the school coordinator; it will be a long process to change staff members' thinking and
  convince them they are acting to improve their own health. A series of workshops would be helpful;
- The motivation of schools to actively participate in the project differed, because there were different reasons to apply to the project; it is expected that 2 out of 22 project schools will probably give up participating.

#### Which aspects went particularly well?

Most of the school coordinators and head teachers have a positive attitude to the project and get personal satisfaction out of their participation; they are open and ready to learn. Some of them implemented positive changes in their lifestyles. In some schools lounges for teachers and service workers were organized.

#### How do you know how successful it was?

The changes mentioned above were reported during the last meeting of school representatives (March 2013). At the end of the first year of the project (June 2013) schools will evaluate their activities during the first year of the project, according to the evaluation report that has been drawn up.

#### What can we learn?

Implementation of the health promotion project is a long lasting process. There are a lot of changes in the school system in Poland. Many teachers feel overloaded and they are not sure about their employment (decreasing population of students). Realistic planning ('small steps') is needed. Investment into a personal development of staff members, as well as greater engagement of school management is necessary.

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## THE HEALTH PROMOTING SCHOOL IDEAS WAVE THROUGH LITHUANIA

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Keywords: Health, Promotion, School, Public Health Bureau.

#### What did you do?

This year is dedicated to the 20th anniversary of the Health Promoting Schools movement in Lithuania. Among the festive events of this important date was 'The Health Promoting School ideas Wave through Lithuania'. The main aim of this event was to promote the HPS approach as a great example or instrument of organizational health promoting activities at the school; share, present a good practice to local communities; to honor the most active persons in the HPS movement.

#### Why did you choose to do this?

We chose such a format for the event with the aim of including more participants from all municipalities and to enable all to celebrate.

#### Who were the participants?

Health Promoting School communities, stakeholders, general public.

#### What actually happened?

The invitation to participate in the 'wave' was accepted by 41 municipalities (out of 60) and more than 400 schools. Public Health Bureaus have done an excellent job in all these municipalities as initiators and intermediaries between schools and municipalities.

Wave of the Health promoting Schools ideas in Lithuania rolled across the country and reached even the most distant regions. This was a visualized introduction of HPS to the local community through the school community parades, performances, songs, line dances, contests, tours, promotions, exhibitions and other means with an effort to attract as many participants and spectators as possible. The event was organized in municipal centers, cities and towns, in places dedicated to public gatherings. These activities were taking place throughout April. This was an unique programme because of its huge number of participants and diversity of events. This movement brought a lot of fun to the kindergartens, primary schools, gymnasiums, vocational training centers and universities of all Lithuania.

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#### What difficulties were encountered?

There were no difficulties with organization, except time consuming development of event rules between two ministries.

The biggest problem was the bad weather, which made it necessary to change the programme.

#### Which aspects went particularly well?

We are happy that a large number of municipalities joined the event, which became mammoth in scale. It was an excellent example of cooperation between various stakeholders. Military, outpatient clinic staff, mayors, representatives of local authorities, other professionals etc. attended and assisted in organization of these activities.

#### How do you know how successful it was?

The Health Education and Disease Prevention Center developed a reporting template and collected data and comments from all municipalities. We are glad that feedback was overwhelmingly positive.

#### What can we learn?

Every new idea is attractive and accepted, especially if we are able to cooperate with other partners. Cooperation was the main tool for success.

# **Meet with Authors ABSTRACTS**



THE 4<sup>TH</sup> EUROPEAN CONFERENCE ON HEALTH PROMOTING SCHOOLS – Equity, Education and Health – 7<sup>th</sup>-9<sup>th</sup> October 2013



# A-Z OF HEALTH PROMOTION (PROFESSIONAL KEYWORDS)

Laverack, G. (2013)
Hampshire, UK: Palgrave Macmillan, (2013); 256 p. ISBN: 978-11-3735-048-0

### Glenn LAVERACK

Independent public health advisor grlavera@hotmail.com



If you are looking for the definitive short guide to the theory and practice of health promotion, then you need look no further.

Written by a leading international expert, this concise text offers, for the first time, a comprehensive explanation of key concepts, terms and definitions used in health promotion. Glenn Laverack explains over 70 key concepts and over 140 other guiding principles, theoretical models and approaches that frame health promotion. He also explains the many tools and strategies that enable practitioners to work more effectively.

This handy sourcebook has been written by the author in a typically accessible style that will provide readers with a superb overview of the subject. Numerous cross-references signpost the connections between different ideas, allowing you to explore conceptual relationships and linked approaches in an order that suits the reader.

Whether you are studying, training or are already working, this book will be an indispensable source of information, evidence and analysis for deepening your understanding and for extending your practice.





## DAS Q<sup>GPS</sup> VERFAHREN: QUALITÄTSENTWICKLUNG GESUNDHEITSBEZOGENER PROGRAMME IN SCHULEN

# (THE Q<sup>HPS</sup> PROCEDURE: AN INSTRUMENT FOR QUALITY DEVELOPMENT OF HEALTH RELATED PROGRAMMES IN SCHOOLS)

Dadaczynski, K. & Witteriede, H. Language of the book: German Vandenhoeck & Ruprecht, (2013) ISBN: 978-3-525-40448-5

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Issues of quality assurance and development in health promotion and disease prevention have become of high importance to the German health system within past years.

The Q<sup>HPS</sup> procedure exemplarily closes a gap regarding the **Q**uality development of **H**ealth related **P**rogrammes in **S**chools. Prospects of success are expected to increase, if such programmes do not only address health issues, but also their conditions and primary objectives. The Q<sup>HPS</sup> procedure accordingly combines quality criteria for measures of health promotion with such ones specific to schools.

With this book, readers are invited to discover the Q<sup>HPS</sup> approach, find the criteria system fully explained and get detailed instructions on how to use it. This is additionally illustrated by an application example. Findings of its evaluation are finally reported.

Additional information can be found on the website www.ggps.de.

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## HEALTH EDUCATION IN SCHOOLS. THE CHALLENGE OF TEACHER TRAINING

Jourdan, D. Saint-Denis: Inpes, coll. Santé en action, (2011); 144 p. ISBN 978-2-9161-9231-4

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The aim of health education is to help all young people gradually to acquire the resources that they need in order to make choices and exhibit responsible behaviour concerning both their own health and that of others. It therefore enables young people to be effective citizens. The role of the school system is, therefore, to help students to develop this capacity to decide for themselves and to take responsibility for their own health. In view of this fact, health education is not a matter for specialists; rather, it is part of the daily work of adults who are responsible for the education of children and adolescents.

For primary and secondary teachers, health education is one of many tasks. Their training in this area cannot therefore be limited to a series of information sessions about health-related themes. A truly appropriate training system must be carefully integrated with the other aspects of the modern teaching profession, and must be placed at the heart of any plan to redefine teaching. Addressing such "live issues" of citizenship with students is a way of enabling them to draw connections between what

they learn academically and their own experience, and thus to create their own identities as teachers.

The purpose of this work is to make explicit the various pitfalls that can arise in health education training, and to offer the reader some tools to deal with them.

It is aimed at all those involved in training, at professionals from various disciplines and working in various institutions, and has been designed to help produce a culture that is common to the various stakeholders, working in the context of a partnership.

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### INDOOR CLIMATE IN SCHOOLS

Authors present at the session will be: Margit NØRGÅRD-EDMUND and Lis KEIDING

Copenhagen: Danish Health and Medicines Authority, (2012) ISBN: Printed Danish version 978-87-7104-430-0 ISBN: On-line Danish version 978-87-7104-429-4 ISBN: English on-line introduction: 978-87-7104-536-9



Evidence on the various effects of high-risk behaviour is growing. It is becoming increasingly apparent that unhealthy lifestyles and exposure to risk factors impose considerable additional costs on the municipalities. Society has much to gain, including economically, from keeping people as healthy as possible and inequity exists not only across national borders.

The work with the packages arose from the reform of local government (2007) in which Denmark's municipalities were delegated the responsibility of creating healthy settings and establishing disease prevention and health promotion services for their citizens in accordance with the Health Act (2005).

Evidence is growing that education, lifestyle and mortality are connected. We aim to contribute to more health and equity in our society by linking research with policy and practice for a good indoor climate with optimal conditions for learning.

The package is an evidence-informed tool to both assist municipal decision-makers and health planners in setting priorities in school-based health promotion as well as giving information and practical advice for local staff. It stresses the importance of incorporating requirements for the indoor climate into the municipality's health policy and school policy. But also gives practical advice for health intervention and disease prevention in the daily work.

### Links

## Danish version

http://www.sst.dk/~/media/Sundhed%20og%20forebyggelse/Kommunal%20sundhedsplanlaegning/Forebyggelsespakker/Indeklima220113.ashx

## English version – introduction

http://www.sst.dk/publ/Publ2013/06jun/ForebygPk/He althPromPackDK\_EN.pdf.

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# TEACHING MATERIALS FOR SCHOOLS ABOUT ALCOHOL, NARCOTICS, TOBACCO AND DOPING – INVENTORY, ANALYSIS, NEEDSEDITED BY SWEDISH NATIONAL BOARD OF EDUCATION, (2013)

ISBN 978-91-87115-88-2

## Jörgen SVEDBOM

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Material för skolan om alkohol, narkotika, tobak och dopning

- manning ungs an harton

- mannin

In Swedish schools alcohol-, tobacco-, and drug education is not a subject of its own but should be included when teaching other subjects. That's why general publishers of school-books don't edit teaching material for drug education. Instead different NGO's produce such material which is offered – often for free- to schools.

Sometimes these NGO's have their own agendas and don't represent values and politics that, according to the national curriculum, should be promoted by the school.

Therefore National Board of Education has taken initiative to produce a guide for teachers that should help them to choose a teaching material on alcohol, tobacco and drugs that is in accordance with the values of the school and suitable for the goals, culture and situation of the specific school.

Approximately twenty different teaching materials are analyzed in relation to ten criterions on alcohol-, tobacco-, and drug education that are derived from research and has shown to be of importance for an efficient education.

The result is presented in form of tables and comments.

The book also contains a discussion about evidence based drug education and how different kinds of evidences could be critically analyzed and used when planning drug education.





# THE IMPLEMENTATION OF HEALTH PROMOTING SCHOOLS: EXPLORING THE THEORIES OF WHAT, WHY AND HOW?

Samdal, O. & Rowling, L. (Eds.), (2013) London: Routledge. ISBN: 978-0-415-52554-1

### **Oddrun SAMDAL**

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Developing a 'healthy school' contributing to learning is a key aim for many schools across the globe, yet achieving successful implementation has proven to be challenging. The Implementation of Health Promoting Schools articulates a theoretical and empirical evidence base for implementation centred on eight implementation components, each of designed to help practitioners to utilise theory-based guidelines within the school as an organisational setting. Taking a school-wide perspective rather than focusing on the individual classroom, the book is structured around three sections with inputs from international contributors in health promotion, public health, psychology, and education:

- Part One: addresses the theory base for implementation of health promoting schools
- Part Two: provides examples through case studies
- Part Three: identifies directions for future developments.

Authoritative, research-based and supported by examples from concrete practices in schools and governmental bodies at local and national level, this text provides guidance vital to future advancement of the field, and is essential reading for teachers, educational professionals and policy makers. It will also appeal to researchers, academics and students studying whole school health practice and research. It covers both the health and education theme of the conference.





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