

# Improving the lives of children and young people: case studies from Europe

## Volume 2. Childhood



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## **Volume 2. Childhood**

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Naomi Eisenstadt and Edward Melhuish

## **ABSTRACT**

The WHO Regional Office for Europe commissioned a European review of social determinants of health and the health divide. The case studies published in these three volumes arise from the review's early years, family and education task group. The task group commissioned experts in the European Region to write case studies addressing childhood and inequality in their contexts. Contributors were asked to identify promising developments that would also have international resonance, to describe the issues they addressed and how they were led and operationalized, and to set out emerging evidence of effectiveness. The result is a diverse collection of case studies presented over three volumes reflecting a "life-course" approach: early years; childhood; and school. Some review major national policy developments and frameworks, others deal with specific national initiatives or with local projects driven by community organizations, and a few focus on transnational initiatives. They do not set out to offer a comprehensive overview of childhood and health in the Region, but provide examples of innovative practice that will inform and inspire policy-makers, practitioners, managers, educators and researchers at country and European levels.

## **Keywords**

CHILD WELFARE  
CHILD DEVELOPMENT  
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## Abbreviations and acronyms, volumes 1–3

ADHD	attention-deficit hyperactivity disorder
A PAR	Association Aprender em Parceria [Learning in Partnership Association] [Portugal]
Arabkir MC–ICAH	Arabkir Medical Centre–Institute of Child and Adolescent Health [Armenia]
ASL	azienda sanitaria locale [local health unit] [Italy]
AVall	Alimentation and Physical Activities in the Eastern Valles [Spain]
BA (Hons.)	bachelor’s degree with honours
BMI	body mass index
BRÅ	Bråttförebyggande rådet [Complaints Prevention Council] [Sweden]
BZgA	Bundeszentrale für gesundheitliche Aufklärung [Federal Centre for Health Education] [Germany]
CHIP–AE	Child Health and Illness Profile – Adolescent Edition
CI	confidence interval
CINDI	Countrywide Integrated Noncommunicable Disease Intervention [programme]
CIS	Commonwealth of Independent States
CoE	Council of Europe
DAK	Deutsche Angestellten Krankenkasse [health insurance company] [Germany]
DG SANCO	[European Commission] Directorate-General for Health and Consumers
DHS	demographic health survey
EC	European Commission
ECEC	early childhood education and care
ECERS	Early Childhood Education Rating Scale
ENHPS	European Network of Health Promoting Schools
EnRG	Environmental Research framework for weight Gain prevention
EPODE	Ensemble Prévenons l’Obésité des Enfants [Let’s Prevent Childhood Obesity Together] study
EPPE	Effective Provision of Preschool and Primary Education [project] [United Kingdom (England)]
ESF	European Social Fund
EU	European Union
EU27	countries belonging to the EU after January 2007
EU–SILC	EU Statistics on Income and Living Conditions
FAS	[HBSC] Family Affluence Scale
FAST	Families and Schools Together [programme]
FNP	family–nurse partnership [United Kingdom (England)]
FSME	free-school-meal entitlement
GCSE	general certificate of secondary education
GDP	gross domestic product
GP	general practitioner
GRSP	Global Road Traffic Safety
HBSC	WHO Health Behaviour in School-aged Children [survey/study]

HEEADSS	home, education, eating and employment, activities, drugs, sexuality, suicide/depression
HEO	Health Education Office [of the Ministry of Education and Culture] [Cyprus]
HPS	health-promoting school [approach]
ICAPS	Intervention Centred on Adolescents' Physical Activity and Sedentary Behaviour [programme]
ICT	information and communications technology
IMCI	integrated management of childhood illnesses
INCA	Etude Individuelle Nationale sur les Consommations Alimentaires [survey]
INPES	Institut National de Prévention et d'Éducation pour la Santé [National Institute for Prevention and Health Education] [France]
IRTAD	International Road Traffic and Accident Database
ISCED	International Standard Classification of Education
IVAC	investigation–vision–action–change [approach]
JOGG	Jongeren Op Gezond Gewicht [Young People at a Healthy Weight] [the Netherlands]
KEDKE–EETAA	Central Association of Municipalities and Communities of Greece–Hellenic Agency for Local Development and Local Government
KiGGS	Studie zur Gesundheit von Kindern und Jugendlichen [National Health Interview and Examination Survey for Children and Adolescents] [Germany]
LLBT	“Learning to live better together” [programme] [France]
MMR	measels–mumps–rubella [vaccination]
MOVE	Motivierende Kurzintervention für Jugendliche [brief motivational intervention for young people] [Croatia]
NCD	noncommunicable disease
NESS	National Evaluation of Sure Start [United Kingdom (England)]
NFP	nurse family partnership [programme] [United Kingdom (England)]
NGO	nongovernmental organization
ns	not significant
OECD	Organisation for Economic Co-operation and Development
OKE	Wet Ontwikkelingskansen door Kwaliteit en Educatie Act 2010 [Law and Development Opportunities through Quality Education Act 2010] [the Netherlands]
OMCYA	Office of the Minister for Children and Youth Affairs [Ireland]
OR	odds ratio
ORIM	opportunities, recognition, interaction and model
PE	physical education
PEEP	Parents Early Education Partnership [programme]
PFS	[JUMP-in] pupil follow-up system [the Netherlands]
PISA	Programme for International Student Assessment [study]
PPP	purchasing power parity
PNNS	Programme National Nutrition-Santé [France]
SD	standard deviation
SES	socioeconomic status
SGBII	Dritte Buch Sozialgesetzbuch II [Social Code Book II] [Germany]
SHE	Schools for Health in Europe [network]

SHS	school health service[s]
SWOT	strengths, weaknesses, opportunities, threats
UNCRC	United Nation's Convention on the Rights of the Child
UNICEF	United Nations Children's Fund
WOŚP	Wielka Orkiestra Świątecznej Pomocy [Great Orchestra of Christmas Charity] [Poland]

## Foreword

*The population of children and young people up to age 18 in the WHO European Region is around 204 million. Most enjoy a high standard of health and well-being, with some countries in the Region having the lowest infant and child mortality rates in the world. The rate in other countries, however, is 25 times higher. This means that every year, more than 160 000 children in the European Region die before reaching their fifth birthday, 40% of them in the first month of life.*

*Children and young people represent the future of our Region: it is they who will drive the economies, create the prosperity and develop the conditions for healthy living on which Europe will depend as we progress through the 21<sup>st</sup> century.*

*As the new policy framework for health and well-being in the Region, Health 2020, explains, ensuring that children have the best start in life – through provision of good nutrition, immunization against vaccine-preventable diseases and access to environments that enable them to be safe and physically active – establishes a solid base for good health and contributes to healthy behaviour for years to come. Young people access new opportunities in education, social activity and occupation as they approach adulthood, but also face fresh challenges to their health and well-being status. Recognition of this is at the heart of the “life-course” approach advocated by Health 2020.*

*The case studies in these three volumes present a tool to support the implementation of Health 2020, taking their place among a range of interventions and resources being designed for this purpose. They describe how countries have used local, national and international evidence, partnerships and know-how to support children and young people at three vital stages of development – early years, childhood and school. The central pillars of Health 2020 – investing in health through a life-course approach, facing health challenges, strengthening health systems and creating suitable environments and resilient societies – feature large in the approaches adopted.*

*The case studies also have direct relevance to the European review of social determinants of health and the health divide. Some, such as the description of early childhood services and family support in Portugal, the National Nutritional Health Programme for children in France and innovative approaches to transforming school canteen meals in Denmark, will already be familiar to those who have read the review’s final report, although much more detail is presented here. Others will be new, but the areas of concern they address and the approaches they describe will be instantly recognizable to those who are familiar with the social determinants of health agenda.*

*The case studies in these three volumes provide vivid and memorable examples of innovative practice from countries across the Region that will inform and inspire policy-makers, practitioners, managers, educators and researchers at country and European levels.*

**Zsuzsanna Jakab**

WHO Regional Director for Europe

## Preface

The WHO European Region, like much of the world, is beset by significant inequalities in health outcomes. The extent to which people enjoy good health is dependent not only on individual characteristics and experiences, but also on their gender, ethnicity and socioeconomic status, on where they live, on the resources available to their countries and on the global forces that help shape what happens locally. In other words, there are significant “social determinants” of health inequalities which – in principle at least – national policy and frontline practice can help to address.

The WHO Regional Office for Europe has commissioned a European review of social determinants of health and the health divide, chaired by Sir Michael Marmot, to explore how these social determinants work and, more particularly, how they might be tackled. The case studies published here arise from the work of the Early Years, Family and Education task group, one of a range of such groups contributing to the European review.

What happens in childhood has a profound effect on the lives of adults. In particular, health outcomes are shaped by the circumstances in which children grow up, the extent to which their families can offer them a nurturing environment and the experiences they have in and out of the home, including preschool and school. The job of the task group was to explore what policy-makers, practitioners and community groups can do to ensure that all children grow up in the most supportive environment possible, so that inequalities in childhood are addressed before they translate into inequalities in health outcomes.

There is a substantial research literature in this field, and many transnational organizations have produced their own (more-or-less) evidence-based reports on how childhood inequalities might be tackled. Research evidence and generalized guidance, however, always need to be translated into local contexts: what works in one place may not be so effective – or, indeed, may not be possible at all – somewhere else. This is particularly true in the European Region, where the 53 Member States offer a highly diverse range of contexts in terms of social structure, culture, political environment, availability of resources, policy frameworks and professional skill levels. Locally developed initiatives are in many cases more effective than imported solutions and may provide a rich source of ideas from which practitioners and policy-makers elsewhere can draw to develop their own provision.

With this in mind, the task group wanted to find out what promising practices were already emerging in European countries. We therefore commissioned experts in different parts of the European Region to write case studies raising issues around childhood and inequality in their contexts and describing initiatives to address them. Contributors were asked to identify developments they considered promising in their situation that would also have international resonance. They were asked to describe the issues these developments were aiming to address, how they were being led and operationalized, and what evidence of effects on child experiences, development and health was emerging.

The result is a diverse collection of case studies presented over three volumes:

- Volume 1. Early years
- Volume 2. Childhood
- Volume 3. School.

Some of the case studies deal with major national policy developments or offer an overview of the situation of children or policy frameworks. Others deal with specific national initiatives or with local projects driven by community organizations. A few deal with transnational initiatives and many with work based in and around schools. The choice of focus was left to authors, who were simply asked to share with the task group examples of the “best” their country had to offer. Readers therefore should not look to these case studies for a comprehensive overview of childhood and health in the European Region, but they will find a wealth of ideas that may help stimulate their own thinking.

There are some inevitable limitations in a collection such as this. We activated our own networks of childhood and health experts, trying to ensure we had coverage from different parts of the Region. Other experts in the same countries would quite possibly have chosen different foci for their case studies, and other networks would have involved other countries. We are particularly aware that our range was limited by the need for contributors to write in English, and that it proved easier to find contributors in the north and west of the Region than in the south and east. We are also aware – as were our contributors – that the availability of data and evaluation evidence differs widely from country to country and initiative to initiative. The combination of high-quality national monitoring data and properly funded, well-designed evaluations seems to be rare across the Region. Identifying key issues and determining the effectiveness of initiatives consequently relies on partial evidence and on practitioners’ expertise. But problems are usually too pressing for policy-makers and practitioners to wait until gold-standard evidence appears.

What the task group made of these case studies is set out in detail in evidence we submitted to underpin the final report of the European review of social determinants of health and the health divide, chaired by Professor Sir Michael Marmot. Not surprisingly, we point to the need for better evidence, but we also argue for cross-sectoral action, for the political will to make such action effective, and for high-quality staff to implement it. The recommendations we presented to the review are based in large part on what we learned from the case studies, which in turn will help readers contextualize the recommendations. Equally important, however, is what readers make of these cases and the ways in which they encourage them to think creatively about what might be done in their own situations.

Finally, we would like to thank all of those who made the publication of these case studies possible: Candace Currie (University of St Andrews, United Kingdom (Scotland)), Bjarne Bruun Jensen (Steno Health Promotion Centre, Denmark) and Edward Melhuish (Birkbeck College, London, United Kingdom (England)), who assembled and led the teams of authors; Philip de Winter Shaw (University of St Andrews, United Kingdom (Scotland)), who edited many of the case studies; Vivian Barnekow of the Regional Office, who oversaw the publication process; and, above all, the case study authors, who met our demands with unflinching patience to make their considerable knowledge available to a wider audience.

**Alan Dyson**

**Naomi Eisenstadt**

*Co-chairs, Early Years, Family and Education task group*

## Editors

### **Vivian Barnekow**

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Ms Barnekow started her professional career as a teacher, completing postgraduate education in health promotion. She joined the Regional Office in 1994. Her main involvement for many years was with the European Network of Health Promoting Schools, where she was responsible for the technical secretariat. She is the WHO focal point for the Health Behaviour in School-Aged Children: WHO cross-national collaborative study (HBSC).

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Professor Bruun Jensen's research areas include conceptual development in health promotion and prevention, with a strong focus on action competence and participatory and innovative approaches. Recently he was one of the coordinators of the European Union-funded project "Shape Up – towards a healthy and balanced growing up". He has authored and edited many journal and book publications.

### **Candace Currie**

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Professor Currie directs the Child and Adolescent Health Research Unit and is HBSC international coordinator. Her research interests are in social inequalities in adolescent health and developmental aspects of health during adolescence.

### **Alan Dyson**

*Professor of Education and Co-director of the Centre for Equity in Education, Manchester Institute of Education, University of Manchester, United Kingdom (England), and Co-chair, Early Years, Family and Education task group*

Professor Dyson works in the field of educational disadvantage and inclusion, with a particular interest in community schools and in area-based initiatives. He is currently working with Save the Children on the development of a series of "children's zones" in the United Kingdom.

### **Naomi Eisenstadt**

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Dr Eisenstadt was formerly a senior civil servant in the United Kingdom Government, where she was in charge of all early years, child care and family policy. She has authored a book on United Kingdom (England's) Sure Start programme and advises the governments in England and Scotland on early years and child poverty issues.

### **Edward Melhuish**

*Professor of Human Development, Birkbeck, University of London, and Research Professor, University of Oxford, United Kingdom (England)*

Professor Melhuish researches environmental influences upon human development using longitudinal studies. He has over 200 publications and has been an adviser to several government and nongovernmental agencies.

## Authors

### Volume 1. Early years

#### 1.1. Family support and early childhood education and care in Greece

**Konstantinos Petrogiannis** is associate professor of developmental psychology at the Hellenic Open University. His research includes early child care and education, parent–child relationships, children’s resilience and socioemotional development.

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#### 1.2. Early childhood services and family support in the Netherlands

**Paul Leseman** is professor of education at Utrecht University and a researcher in early childhood education and care and family support. He is undertaking a national cohort study of the effectiveness of provision for young children. His publications focus on language development, multilingual development, emergent literacy and mathematics, and effectiveness of preschool education and care.

**Micha de Winter** is professor of education at Utrecht University. He researches youth (health) care, family support and school-based programmes for social development. He is the author of books on citizenship development and is an adviser to the government on youth health care and to The United Nations Children's Fund (UNICEF) on refugee children.

#### 1.3. Early childhood services and family support in Portugal

**Maria Emília Nabuco** has recently retired as a professor at Lisbon School of Education. She is president of the Association Aprender em Parceria [Learning in Partnership Association] and has undertaken research on parental support in Portugal.

**Claudia Costa** is a psychologist and lecturer at the Lisbon School of Education and has undertaken research on early childhood and parent support for disadvantaged families.

#### 1.4. Well-being of preschool children in Sweden – the role of early childhood education and free health care

**Ingrid Pramling Samuelsson** is professor in early childhood education at the Department of Education, Communication and Learning at Gothenburg University. Her research concerns young children’s learning and curriculum questions in early years education. She has a United Nations Educational, Scientific and Cultural Organization (UNESCO) Chair in early childhood education and sustainable development and is World President for the Organisation Mondiale pour l’Éducation Préscolaire.

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**Margareta Blennow** is a paediatrician and head of child health services in southern Stockholm County. She has served as president of the Swedish Paediatric Society and chaired the Stockholm Advisory Committee on Paediatrics and Child Health. Her research areas concern vaccinations and the effect of outdoor environment in preschools on the health and well-being of children.

#### 1.5. Developments in early years services in United Kingdom (England)

**Naomi Eisenstadt** was a civil servant in the Department for Education from 1999 to 2006 and was the senior officer in charge of many of the developments described in the case study.

**Edward Melhuish** is a research professor in human development at Birkbeck College, University of London and the University of Oxford. He has over 200 publications and his work has had substantial impact on policy for early childhood services in the United Kingdom and other countries.

## Volume 2. Childhood

### 2.1. The role of health education in addressing the health divide: evidence from two European health-promotion projects employing a participatory and action-oriented education approach

**Venka Simovska** is professor in health education and promotion at the Department of Education, Aarhus University. She is research director for the programme on “Learning for care, sustainability and health” at the department and leader of the research centre “schools for health and Sustainability”. Professor Simovska has published extensively in the field of school-based health promotion and health education. Her latest publications discuss research findings from the Shape Up project, featured in the case study.

### 2.2. Socioeconomic, education and family-related determinants of health and development of Armenian children and adolescents

**Sergey Sargsyan** is associate professor of paediatrics at the Medical University and Head of the Institute of Child and Adolescent Health at the Arabkir Medical Centre. He is WHO Health Behaviour in School-aged Children (HBSC) study principal investigator for Armenia, director of the “Healthy start” programme on child development and rehabilitation of the Arabkir Medical Centre and Vice-president of the Armenian Paediatric Association. He has participated in many activities and programmes in Armenia in relation to policy development, control of acute respiratory infections, health education, child immunization, health statistics, adolescent health and child advocacy and protection since the early 1990s.

**Marina Melkumova** is an adolescent health specialist at the Arabkir Medical Centre–Institute of Child and Adolescent Health (Arabkir MC–ICAH) and HBSC deputy principal investigator.

**Eva Movsesyan** is a coordinator of public health programmes and an active member of the HBSC team. Dr Movsesyan and Dr Melkumova also participated in most key developments in Armenia in relation to adolescent health, policy development and public health interventions.

**Ara Babloyan** is professor at the Medical University, Head of Department of Paediatrics and Paediatric Surgery and Scientific Head of the Arabkir MC–ICAH. He is also a consultant for the HBSC team and a member of the National Assembly of Armenia, where he is Head of the Parliamentary Commission on Health, Mother and Child Issues. He is President of the Armenian Paediatric Association and chief consultant to the Ministry of Health; he was Minister of Health from 1992 to 1997. He has been actively involved in the most significant health sector programmes in Armenia since the 1990s in relation to policy development and implementation, health care system reform, health financing and child and adolescent health. Currently, he is a member of the Executive Board of WHO.

### 2.3. The nutrition policy framework in France

**François Beck** is a statistician and sociologist who heads the Survey and Statistical Analysis Unit at Institut National de Prévention et d'Éducation pour la Santé [National Institute for Prevention and Health Education] (INPES) and is a researcher in the Cermes3, a sociology unit of Sorbonne Paris Cité (Paris Descartes University/CNRS UMR 8211/Inserm U988/EHESS). He is the principal investigator for the French Health Barometer survey.

**Emmanuelle Godeau** is a public health professional. She belongs to the Ministry of Education and to a research unit (UMR INSERM U1027, research team on perinatal epidemiology and childhood disabilities and adolescent health, University Paul Sabatier, Toulouse) where she works on the health and health behaviours of adolescents with a focus on special-needs students. She has been the principal investigator for the French HBSC survey since 2000, working in close contact with INPES experts.

**Hélène Escalon** is an economist and head of study at INPES, where she works on nutrition and physical activity. She is the principal investigator for the French Nutrition Barometer survey.

**Pierre Arwidson** is a public health professional who is Director of Scientific Studies at INPES. He specializes in public health intervention evaluations and represents INPES in the main French public health commissions.

### 2.4. Overview of national health policy and interventions on reducing social inequalities in health in children and adolescents in Germany

**Veronika Ottova, Carsten Rasche and Ulrike Ravens-Sieberer** are researchers in the field of mental health, well-being and health-related quality of life, working at the Child and Public Health Research Unit at the University Medical Centre Hamburg-Eppendorf, headed by Professor Dr Ravens-Sieberer. The research unit is involved in several national and international projects, including the BELLA study, a large representative study of mental health and well-being in children and adolescents in Germany, and the WHO collaborative HBSC study. The research unit has been involved in past WHO/HBSC forums on social cohesion for mental well-being and socio-environmentally determined health inequities.

### **2.5. Progress in implementing the national child and youth safety action plan in Hungary**

**Gabriella Páll, Ágota Örkényi, Emese Zsíros, Ildikó Zakariás, Dóra Várnai and Ágnes Németh** work for the National Institute for Child Health, a governmental organization coordinating the national infant and child health programme and child and youth safety action plan, supported by the Ministry of Health. It also coordinates the Hungarian HBSC survey, through which it is able to focus on investigating and analysing the prevalence and determinants of medically treated injuries in adolescents in line with the priority of child safety.

### **2.6. The development and use of a set of children's well-being indicators in Ireland**

**Michal Molcho** is a university lecturer in the Discipline of Health Promotion, School of Health Sciences, and a researcher in the Health Promotion Research Centre at the National University of Ireland, Galway. She has been a member of the HBSC study since 1997 and co-authored two of the “state of the nation’s child” reports that are among the outcomes of the children’s well-being indicators discussed in the case study.

### **2.7. Actions to equalize social and health opportunities in Norway through schools**

**Oddrun Samdal** has worked at the Research Centre for Health Promotion at the University of Bergen since 1993. She has collaborated with national health and education authorities and governments throughout her academic career, starting when the ministries of health and education asked the research centre to be the coordinating centre for the Norwegian part of the European Network of Health Promoting Schools. Professor Samdal was selected to be the national coordinator for the project and worked closely on planning and implementation with the ministries for 10 years. She was a member of the first national board for physical activity between 1999 and 2007 and sat on the committee that evaluated school meal arrangements in 2004/2005. Her role as Norwegian principal investigator for the HBSC study and her responsibility for several evaluations of school-based interventions means she is constantly in dialogue with national authorities, providing inputs on policy developments. She was recently part of an advisory group on how to promote daily physical activity in school.

### **2.8. Improving education and health outcomes for children with chronic disease in Poland – from social campaigns to systemic changes**

**Joanna Mazur and Agnieszka Malkowska-Szkutnik** work at the Department of Child and Adolescent Health, Institute of Mother and Child in Warsaw. They authors have been conducting research on chronically ill children’s functioning in school environments for several years and participate in planning and implementing new intervention programmes and contributing to expert teams, including those dealing with issues of inequality.

## **Volume 3. School**

### **3.1. MOVE: motivating brief interventions for young people at risk in Croatia**

**Ivana Pavic Simetin, Iva Pejnovic Frelentic and Marina Kuzman** work in the National Institute of Public Health, Zagreb. Dr Kuzman is also on the staff of the University of Applied Health Studies, Zagreb.

### **3.2. Building capacity for health-promotion activities in schools in Cyprus**

**Soula Ioannou** is coordinator of school health programmes and **Andreas Kleanthous** works at the department that grants funds for schools’ health promotion activities, both in the Health Education Office, Ministry of Education and Culture in Nicosia. The Health Education Office is responsible for developing and coordinating policies, actions and programmes that foster students’ well-being. The main task is to encourage schools to adopt a more structured approach to promoting healthy behaviours, including paying attention to the roles of social, cultural and physical environments in influencing students’ well-being. The strategies used for empowering the health promotion approach are described in the case study.

### **3.3. Can school meal provision contribute to the reduction of social inequalities in health and improve learning outcomes? The case of Sweden and Denmark**

**Bent Egberg Mikkelsen** is professor and research coordinator of the Meal Science and Public Health Nutrition Research Group, Denmark.

### **3.4. Promoting social, emotional and physical well-being, child participation, educational attainment and parent engagement in later childhood – the Finnish perspective**

**Kerttu Tossavainen** is head of the Schools for Health in Europe (SHE) research group in Finland and a member of the SHE research core group. She is responsible for Master’s-level teacher education in health sciences (nursing science as a main subject) at the University of Eastern Finland and supervises PhD students. She chairs the board of directors of the Finnish Health Association and is a member of the scientific committees

of the Finnish Centre for Health Promotion and the Mannerheim League for Child Welfare. She is an associate member of the Finnish matriculation examination board in health education, led by the Ministry of Education and Culture, and a member of the board that plans, implements and evaluates basic and advanced-level health education and health promotion studies at the Open University of the University of Eastern Finland. Her work has been instrumental in ensuring the inclusion of health education as an independent subject in the national curriculum for basic education.

**Hannele Turunen** is a senior researcher in the SHE research group in Finland and a member of the SHE research core group. Like Professor Tossavainen, Professor Turunen is responsible for Master's-level education in health sciences (nursing science as a main and leadership and management as a secondary subject) at the University of Eastern Finland and is a supervisor for PhD students. She is also a member of the administrative board at the university's Faculty of Health Sciences, an associate member of the Finnish matriculation examination board in health education and a member of the board that plans, implements and evaluates basic and advanced level health education and health promotion studies at the Open University of the University of Eastern Finland.

### **3.5. Vocational college health promotion pilot project experiences in Finland, 2008–2011**

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### **3.6. “Learning to live better together”: enabling schools and communities to implement a health promotion policy and minimize health inequalities in France**

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### **3.7. Joint development of healthy schools in Germany**

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### **3.8. Reducing health inequalities in schools in Italy**

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### **3.9. Health-promoting schools in Lithuania**

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### **3.10. JUMP-in: promoting daily physical activity in the Netherlands**

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### **3.11. Reducing child obesity: assessment of a school-based intervention in Spain**

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## Childhood: introduction

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Young children in their early years have been, and continue to be, a strong focus for policy-makers internationally. They represent a population group for which investment provides the greatest long-term dividends. Yet there is a growing body of evidence that interventions in later childhood through into adolescence can also improve health trajectories and reduce emerging health inequalities.

The case studies in this volume bring together diverse examples of the importance of intervening during later childhood and into early-to-mid adolescence. The power of young people to participate and contribute to their own health development is highlighted in the opening example. While this is a relatively new field of endeavour, it demonstrates that participatory and action-oriented approaches to school-based health promotion can contribute to efforts to reduce the health divide seen in children's lives.

Evidence of the health experience of children and adolescents and how it is shaped by social conditions can produce a framework for an intersectoral policy response. The case study from Armenia, where insufficient investment has to date been a severe limitation, highlights the need to exploit existing opportunities to go beyond efforts focused on the early years. Cross-sectoral collaboration is also key to the success of efforts to halt increasing obesity prevalence in France. Recognizing that individual food intake and physical activity are shaped by wider social, environmental and political factors has mobilized a greater sense of collective responsibility to change the environment and food supply. The case study from Germany emphasizes the importance of empirical evidence in shaping strategy to improve the health of young people and, in particular, tackle inequalities

Robust data systems to measure secular trends in health outcomes among young people (specifically in relation to injuries) provided the impetus for the development of a strategic planning process in the case study from Hungary. Reliable data on key indicators is vital to monitoring progress and once again the HBSC international study was identified as a vital resource (as with several of the other case studies). Indicator development is also a key element of the case study from Ireland, with child participation in production of indicators a central component of a process that fully reflected children's voices.

Equalizing social inequities, promoting health and well-being and improving opportunities for learning are the cornerstones of strategic health and education efforts in Norway, while the case study from Poland shows how systemic solutions within the school system can address and improve the quality of life of young people with chronic disease and disability.

Common themes across the case studies include:

- the use of robust data as evidence to signal the need for action and identify priorities;
- a focus on reducing inequalities;
- the power of cross-sectoral collaboration; and
- the importance of empowering young people to participate in the process of their own health improvement.

## **2.1. The role of health education in addressing the health divide: evidence from two European health-promotion projects employing a participatory and action-oriented education approach**

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### **Context**

The dialectic relationship between education and health has been discussed extensively in education and health promotion literature. For example, a recent review of evidence on the influence of health on education outcomes in high-income countries points to the link between positive health status and education performance and attainment (1). The classic “formula” suggested by Tones et al. in the 1990s (2) clearly indicates that health promotion is unattainable without health education, in combination with policy. WHO’s definition of health education integrates social policy and empowerment as the key principles of health education:

Health education is the combination of planned social actions and learning experiences designed to enable people to gain control over the determinants of health and health behaviours, and the conditions that affect their health status and the status of others (3).

Models and approaches to health education and their contribution to health promotion and to addressing health inequalities have been debated in the literature (see, for example, Green & Tones (4)). The gap, however, between analytical conceptualizations and the realities of practice throughout Europe and wider is extensive. Even though the systematic review of the effectiveness of health-promoting schools (5) emphasizes that programmes that are more likely to be effective are complex, multidimensional and embedded in more than one domain of school life, most studies focus on classroom-based programmes and neglect the more wide-reaching features of the health-promoting schools approach, including pupil participation and empowerment. In other words, health promotion/education in schools, in particular, remains focused on isolated health topics and on lifestyle change among children and young people rather than on education strategies that can contribute to the development of their competence, confidence and motivation to critically engage with health issues on an individual, but also on social and societal, levels.

The aim here is to argue that an approach to health education, consistent with critical education theory echoing Freire’s ideas (6), has the potential to play a significant role in addressing determinants of health by, first and foremost, providing children and young people with opportunities (as part of teaching and learning processes) to critically examine health issues, including social determinants of health, and to gain experience with initiating health-promoting changes within the everyday realms of their school or its adjacent community.

This case study briefly outlines two intervention projects, including references to research-based evidence related to the projects. It then summarizes the changes brought about by health-promotion actions in which children were involved and characteristics of the processes of participation to emphasize that children, if adequately guided, can act as agents of positive

change in health determinants in their schools and communities. By doing this, they develop critical awareness and action competence in relation to health issues that can be beneficial in addressing the health divide over the longer term.

## Approach

The critical (that is, participatory and action-oriented) health education approach that provides the basis for this case study was employed and researched in two European projects: Young Minds and Shape Up. The following briefly outlines the two projects and the education approach they shared.

### *Young Minds – exploring links between youth, culture and health*

The project was coordinated by the Research Programme for Health and Environmental Education at the Danish School of Education, Aarhus University (at that time the Danish University of Education). It was financially supported by WHO within the European Network of Health Promoting Schools (ENHPS) initiative.

Young Minds was an international web-based project in which pupils from schools in European countries collaborated on issues related to health. The project was organized in rounds or phases, with pupils from different countries and schools taking part in each. While each project phase had a specific content focus (such as alcohol consumption, food and nutrition, school environment and mental well-being), they all followed the same overall health education design. Table 2.1.1 outlines the two main phases of the project, its participants and related international conferences involving active pupil participation. More information about pupils' participation at the conferences and how this was embedded in the approach is provided in the "Evidence" section below.

**Table 2.1.1. Young Minds: duration, focus, participants and related conferences**

	Duration	Overall topic	Participants	Related conference ("real-life" action)
<b>Young Minds 1</b>	June 2000 – January 2001	Youth, culture and alcohol consumption	Approximately 100 pupils in four classes from schools in Denmark, the Czech Republic, the former Yugoslav Republic of Macedonia and Sweden, their respective teachers and a facilitator in each of the countries	WHO European Ministerial Conference on Young People and Alcohol, 19–21 February 2001, Stockholm, Sweden
<b>Young Minds 2</b>	February – September 2002	Well-being and the school environment	Approximately 100 pupils in four classes from schools in Iceland, the former Yugoslav Republic of Macedonia, Portugal and Slovenia, their respective teachers and one facilitator for the whole group	ENHPS conference Education and Health in Partnership, 25–27 September 2003, Egmond, the Netherlands

The Young Minds project (7) set out to explore and generate research-based knowledge on effective methods of engaging primary and early secondary school pupils in learning about health in an action- and collaboration-focused way. Its educational development drew on the main concepts and principles relating to the critical approach to health-promoting schools and its aims included:

- developing, exploring and documenting critical (that is, participatory and action-oriented) health education and health promotion in school;
- investigating the interplay between the participatory and action-oriented education approach with information and communications technology (ICT) and cross-cultural collaboration within the ENHPS; and
- facilitating the articulation and communication of young people's voices on health and well-being and promoting their influence on selected international conferences addressing issues of concern to young people.

***Shape Up – a school-community approach to influencing the determinants of a healthy and balanced growing up***

The project was co-financed by the European Commission (EC) Directorate-General for Health and Consumers (DG SANCO). At international level, it was coordinated by PAU Education (Barcelona, Spain) and the Danish School of Education (now Department of Education), Aarhus University. Five international competence centres were responsible for different aspects of the project: in addition to PAU Education and Aarhus University, ABCittà (Milan, Italy), Schulen ans Netz (Bonn, Germany) and the University of Hull (Hull, United Kingdom (England)) were also involved. More about the project's organizational structure and funding can be found on the Shape Up Europe web site (8).

Shape Up ran from 2006 to 2008 in 19 cities in 19 EU countries. In total, 73 schools, 2300 pupils and 140 teachers were involved, assisted by 38 local coordinators and facilitators and the international competence centres. Table 2.1.2 outlines the countries, participating schools and classes.

**Table 2.1.2. Shape Up schools and classes per city (country)**

City (country)	Participating schools	Participating classes
Athens (Greece)	5	5
Ballerup (Denmark)	3	8
Barreiro (Portugal)	2	4
Bonn (Germany)	4	10
Brno (Czech Republic)	2	13
Hull (United Kingdom (England))	3	29
Jönköping (Sweden)	4	6
Krimulda (Letonia)	2	5
Maastricht (the Netherlands)	4	4
Malta (Malta)	2	10
Mataró (Spain)	2	26
Monza (Italy)	4	4
Nicosia (Cyprus)	7	7
Pécs (Hungary)	3	3
Perpignan (France)	12	16
Poznan (Poland)	2	9
Tallin (Estonia)	3	3
Turku (Finland)	6	6
Vienna (Austria)	3	7

The project's stated aims (9) were consistent with the principles of critical health education and promotion theory (4,10) and included involving pupils in influencing (micro and meso) determinants of healthy eating and physical activity at schools. The main focus was social determinants of health rather than solely individual health-related behaviour. Project work in each city had a local coordinator and local facilitator appointed by the partner organization, normally city hall or municipality. A local promoting group consisting of various stakeholders at community level was also established in each city to support implementation and to ensure collaboration between school and local community.

***Principles and features of the approach common to both projects***

The fundamental premise of the education approach employed in these two health-promotion projects was that healthy lifestyles are influenced in sustainable ways by addressing their determinants at school, family, community and broader societal levels, rather than solely at individual behaviour level. Based on this premise, the projects aimed to bring together the principles of participatory health education, prevention and health promotion in an integrated intervention programme, regardless of the specific health topic in question. The focus in Young Minds was on shifting to different topics, including alcohol consumption, nutrition, mental health and environmental issues in relation to health. In Shape Up, the overall topic was healthy eating and physical activity with a view to influencing determinants of childhood overweight and obesity. The education approach was the same.

The fundamental principles underpinning both projects, adapted from Hart (11) and O'Kane (12), included:

- understanding and choice: pupils should volunteer for the project after its aims and objectives have been explained to them;
- power mapping: the power constellations in the project's organizational structure should be transparent and clear to pupils from the outset so they can identify the realistic sphere of their influence;
- shared rules: rules should be established and negotiated through dialogue (this does not mean that teachers or adults must not impose any rules – this is an inevitable reflection of power relationships and different responsibilities of teachers and adults in any society– but that the rule-establishing process should be clarified and any member of the group should be able to request discussion of any rule at any time);
- inclusiveness: pupils should have a wide range of opportunities to participate according to their age, gender, interests, previous experience and abilities; and
- ongoing information and transparency: the entire process of the project should be transparent and regularly updated as it develops through:
  - the relevance and importance of each phase being discussed with pupils on a level appropriate to their age and ability; and
  - pupils with different abilities, experience and skills choosing to participate in different phases (while this should be respected, a balance should be reached for other different considerations and education aims– again, transparency, democratic principles and dialogue are appropriate strategies for making decisions of this kind).

The overall methodological framework for both projects (7,9) was based on research within health-promoting schools. The following assumptions provided the basis for the programme theory:

- pupil participation and ownership are key elements of effective school-based health-promotion programmes;
- participation needs to be carefully planned and guided by competent adults and supported by organizational structures within the school;
- children need to develop action-oriented knowledge about health to adopt healthy lifestyles and acquire competence to bring about health-promoting changes;
- action-oriented knowledge can be gained through participation in authentic, real-life health-promoting actions (13), either individually or collectively;
- action-oriented knowledge is multidisciplinary and multidimensional, including knowledge about effects of lifestyle on health but also the influence of living conditions on health and knowledge about strategies of change (14);
- the investigation–vision–action–change (IVAC) approach (14) is a beneficial model to structure action-oriented participation; and
- collaboration between school and local community creates wide opportunities for learning, action and competence development.

The approach was characterized by the following features, which are consistent with the main underlying principles and theory of change.

### **Pupil involvement**

Participating pupils were actively involved in decisions about specific health and well-being issues they wished to investigate. They were engaged in decisions about strategies to explore these issues and in representing and communicating their findings and reflections. Decision-making processes were based on thorough dialogue and negotiation among pupils and between pupils and teachers that aimed to construct and clarify meanings and values relating to the health issues in question. Essential to this was discussion of the issues' significance to pupils' everyday lives and to broader society.

### **Action and change focus**

The projects were about taking action and initiating health-promoting change in relation to the overall project topics. Children and young people often feel overwhelmed and powerless in relation to health problems, so taking action as part of learning about health is vital if pupils are to be empowered rather than disempowered. The action-focused teaching emphasized the importance of close collaboration between the school and local community. It was agreed that actions should be related to the overall project topic and to the specific related issues that pupils decide to work with in greater depth. Each should have a clear goal, representing an attempt on the part of the pupils to bring about positive change relating to the health problem in question. The change could be in pupils' and adults' attitudes to, or knowledge and critical awareness of, the problem, but also in health-related conditions in the school or the local environment through the social and societal determinants of the problem. Pupils' ideas, previous knowledge and lived experience would play crucial roles in determining which changes and actions were carried out.

### **IVAC instructional design**

The IVAC approach, modified and adjusted to fit the specifics of each particular context and the existing systems of meaning characterizing school culture in each of the participating countries, was the main common framework for structuring and facilitating pupil participation. It was also adapted to individual understandings, professional skills, preferences and experience of participating teachers, facilitators and coordinators.

### **Teacher guidance**

Teachers and other project staff were responsible facilitators of project activities, inspiring, supporting and challenging pupils. They engaged in educational dialogue with pupils, broadening health concepts and health-related knowledge to include social dimensions, international (global) perspectives, equity and democratic values, and specific strategies for change management.

### **International collaboration**

Cross-cultural collaboration was evident in project-related communication across participating classes and in joint activities that contributed to the project's aims. Health problems are both local and global as the world becomes increasingly interconnected; integrating the international dimension in schoolwork on health issues is therefore very important. The two projects emphasized the benefits of school and class involvement from different European countries with diverse education and cultural contexts, all working on the same overall health issue at the same time and following the same education principles.

### **Local contexts and shared systems of meaning**

Implementation of both projects reflected broader (cultural, educational and societal) and immediate (individual school priorities, conditions, resources and systems of meanings) contexts relevant to each participating class, school and city. The projects nevertheless benefited from using the Internet and cross-cultural collaboration and from providing a shared, "virtual" context. This virtual context was defined by the interplay of local systems of meaning with the overall theoretical foundation and common project framework developed through dialogue between researchers and participating teachers and facilitators.

### **Evidence**

The evidence stems from project-related research and evaluations over the last 10 years. Evidence relating to Young Minds focuses more on processes of teaching and learning and teachers' and pupils' perceptions of participatory and action-oriented methodologies. Shape Up evidence reflects processes and outcomes in terms of health determinants and pupils' health-related competences. A number of publications record the progress of Young Minds (7,13,15–22) and Shape Up (9,23–26).

The research and evaluation findings show that children and young people can be guided to successfully bring about health-promoting changes in some health-related determinants at school and community level. Changes in these determinants resulted in, for example, healthier food consumption at school, new forms of physical activity and increases in children's and young people's interest, motivation and competence in dealing with health issues. More specifically, the participatory and action-oriented approach proved effective in initiating and bringing about health-promoting changes in health determinants at school, community and individual levels, as shown in Table 2.1.3.

By contributing to these changes at school and community level, pupils, with competent teacher guidance, gain valuable experience in health and health improvement that enhances their personal and social competence and motivation to further engage with health improvement at different levels, including individual lifestyle.

**Table 2.1.3. Changes in health-related determinants, summarized from both projects**

School	Community	Individual
New whole-school health policies developed by active participation of school staff and pupils	Improved physical environment, facilities and healthier offers in the community surrounding the schools (such as healthier food, easier walking or cycling access and playgrounds)	Ownership, motivation and action competence related to health
Improved school physical and psychosocial environment, structures and facilities conducive to health and healthy lifestyles	New partnerships involving schools, municipalities, city halls and other local stakeholders in prevention and health promotion	Critical/analytical skills, interpersonal communication, self-confidence, decision-making competence
	Focused collaboration with parents and extended families to encourage and sustain healthier choices	Multidimensional knowledge and critical awareness related to health, including determinants
		Sense of social responsibility and perspective

Actions taken over the course of Young Minds have been effective at school, in local environments and in the virtual space of online web forums, but additional actions were taken at the end of the project. These were put into practice in a “real-life” context outside the school frames at international conferences with high political and professional profiles (see Table 2.1.1). This “real-life” action consisted of presenting and demonstrating the project’s processes and outcomes to conference participants through an interactive workshop-style structure that represented a separate but integrated activity within the official conference programmes. It included:

- interviewing conference delegates on issues related to pupils’ project work and the main conference themes;
- taking statements from ministers, policy-makers and health professionals participating in the conferences on health issues the pupils had explored as part of their school and class projects;
- facilitating discussion among young people throughout Europe via the web-based discussion forum (the forum was an integral part of the joint web site created by the pupils as part of the project), then selecting highlights from the discussions and presenting them to participants; and
- asking participants to take part in the web forum through online discussion with young people.

Pupils were in online contact with their class peers during the conferences, coordinating their activities and deciding which questions, suggestions and reflections emerging from the web discussion or from previous Young Minds work should be raised. Pupil representatives created a bridge between the conference participants and young people throughout Europe, articulating and communicating young people’s concerns and ideas about health with a view to influencing participants’ opinions and having an influence on official conference outcomes. The process was documented on the project’s web site, which was updated daily.

Research on health-promotion processes in both projects highlighted trajectories of participation in which pupils learned about health in intentional, relational and purposeful ways. The participation trajectories were viewed as being situated in activity structures consisting of mutual interactions and different forms of participation, including taking “real-life” action and initiating health-promoting change. In other words, pupils were engaged in a range of processes of knowing, including exploring, envisaging solutions to problems and acting to bring about positive health change. Table 2.1.4 provides a summary using the participation model, distinguishing between “genuine” and “token” pupil participation (19,21,23).<sup>1</sup> It shows that the focus and expected outcomes of pupil participation in teaching and learning activities over the course of the project were open and divergent; they depended on the choices pupils made, with their teachers, during the teaching and learning process.

**Table 2.1.4. Characteristics of pupil participation within both projects**

Characteristics of participation	Examples
Pupil participation was <u>focused</u> on:	inquiry in the area of health, culture and health determinants, creation of shared frames of reference, development of common understandings and visions
Expected <u>outcomes</u> concerned:	pupils’ enhanced awareness in relation to determinants of health, their critical thinking, social responsibility, creative articulation of ideas and planning for action (with others)
Pupils’ actions <u>targeted</u> :	everyday school life, health policies and decision-making mechanisms at whole-school level, policy-makers’ and school management’s awareness of young people’s voices in this respect

The evidence shows that the participatory and action-oriented teaching approach, as deployed in the two projects, extended beyond a traditional focus on subject matter prescribed by the health education curriculum. There was no pre-formulated, fixed content or body of knowledge in the health domain that pupils had to learn, memorize, recall and employ. Even though the overall project topics were decided outside the project’s frames and were assigned to pupils, pupils investigated the area in their own ways, guided by their teachers and using the broad possibilities presented by the Internet and cross-cultural collaboration.

The evidence also reflects the fact that the focus of the participation was on processes of critical reflection, goal-oriented dialogue and negotiation of meanings related to health matters, rather than on acquiring a factual body of knowledge and moulding pupils’ lifestyles. Pupils’ sharing of responsibility for selecting aspects of the topics to be investigated and deciding methods they would use resulted in an increased sense of ownership of their learning activities. This led to increased pupil intent and responsibility, which contributed to building better understanding and competence to take action to promote health.

All these factors point to a genuine participation discourse through which participatory teaching and learning, as opposed to the “transmission” teaching model, was directed toward

<sup>1</sup> The two forms of participation should be seen as poles on a continuum rather than distinct, separated qualities of participation.

facilitating and extending educational dialogue about health issues relevant to learners. Learning was situated in pupils' everyday lives, interactions and experiences related to health. The benefits of such participation processes transcend conventional outcomes focused on fostering health-related knowledge, skills and attitudes. They expand to embrace effective health education and promotion practices in a broader sense, including more complex knowledge domains, insight into knowledge-building processes, action-competence development and, ultimately over the longer term, practical benefits for local governance in terms of strengthening sustainability, equity and civil society.

Differences between traditional instruction about health and teaching and learning in participatory and action-oriented “communities of learners” are outlined in Table 2.1.5. With reference to the classical “Didaktik Triangle”,<sup>2</sup> these differences are summarized in terms of the role of pupils, teachers and content.

**Table 2.1.5. Traditional versus participatory and action-oriented health education**

	<b>Traditional health education</b>	<b>Participatory and action-oriented health education</b>
<b>Learners</b>	Recipients of health information; should demonstrate factual knowledge and skills and adopt socially acceptable “healthy” behaviours	Knowing agents, researchers, “teachers”, self-regulated knowledge makers, creators, editors and interpreters of meaning, change advocates and change managers in relation to health matters
<b>Teachers</b>	Classroom managers focused on discipline and “motivation”, dispassionate deliverers of segmented health information, external monitors and evaluators of progress	Facilitators, interaction guides, curriculum choreographers, skilled partners in educational dialogue, consultants in the processes of knowing; co-participants and learners
<b>Content</b>	Closed, medical concept of health, fragmented body of knowledge focused on negative effects and consequences of a variety of health risk factors; ICT role focused on individualized practice and drill in an entertaining manner	Open, holistic concept of health, multidimensional, coherent, interdisciplinary knowledge landscape, negotiated meanings and understandings, strategies for change, “real” health problems embedded in the sociocultural environment; ICT role focused on communication and collaboration, using ICT as a tool for exploring and discovery, intentional reflection, articulation and representation of ideas

Source: modified from Simovska (13).

In contrast to traditional health education, pupils in democratic learning communities are active agents in their learning and have a sense of ownership of the learning process. They actively develop knowledge by constructing new representations and behaviours, building on

<sup>2</sup> This refers to the German tradition of thinking about teaching and learning as critical-constructive “Didaktik”, which is different from the Anglo-American curriculum tradition. Didaktik refers to the planned (that is, institutionalized and organized) support for learning to acquire “Bildung”. Bildung is most frequently translated in English as “formation”, indicating three dimensions: (a) determination; (b) codetermination; and (c) solidarity. Emphasis is placed on social context and societal goals, teachers’ professional autonomy and the prospective object of learning in terms of its significance to students. Didaktik therefore does not deal with teaching techniques in a mechanical sense, but rather perceives teaching as a complex interpretive issue that needs to be considered in the light of a pedagogical situation.

each others' ideas and creating a common knowledge ground. They support joint learning and share responsibility for teaching and learning with teachers. Teachers are more focused on building the community of learners, composed of dynamic systems of collaboration and mutual interactions, rather than providing direct instruction. Their main task is to ensure that pupils have flexible and sensitive opportunities to adopt complementary roles among and between teachers and pupils and in their relations to the subject matter. Equally important, in the process of acting as facilitating social agents of learning, teachers also learn.

Content is open and constructed in constant negotiation and renegotiation within the community of learners. It is closely connected to learners' everyday lives and to the broader sociocultural context, including the health divide. The Internet is employed as more than an entertainment tool; it is used to stimulate reflection, communication and knowledge building rather than to replace the active, participative learning experience. It is also used to widen the classroom's or school's boundaries and to introduce international (global) perspectives on health issues.

Generally, therefore, teaching and learning about health within the framework of critical health education and health promotion are characterized by participation and action, with a high level of mutuality and cooperation among pupils and between pupils and teachers on content. Learning is characterized by transformation of participation in shared activities related to health issues that are tied to wider cultural institutions. Pupils consequently become increasingly competent members of their communities in relation to health matters.

### **Challenges in implementation**

Research on the projects has shown that adequate pupil guidance from teachers and other adults is central to the effectiveness of this approach. Provision of well-balanced guidance is not, however, an easy and straightforward process: it is challenging. Some of the challenges include:

- difficulties relating to a tendency (in both pupils and teachers) to focus on interaction and active participation while neglecting the subject matter contents;
- demotivation and disillusionment connected to structural barriers to pupils' actions and changes in school context;
- dissonance/tensions between predominant values existing in the culture of the school or local community and the values endorsed, in this particular case, in relation to pupil empowerment and the open approach to health concepts; and
- lack of support for teachers, particularly for new ways of providing balance between open classroom discourse and guiding pupils through the broad health-knowledge landscape.

This case study raises the following questions for further research and debate.

- How can transferring the project-based principles of classroom organization and cross-cultural collaboration into regular health education and the health-promoting school curriculum be supported, taking into account pupils' concepts, concerns and everyday experience in relation to health in their social contexts (including social, structural, cultural and other aspects related to health)?
- How can effective collaboration structures between schools and local governance be established and supported to enable pupils' participation and influence as part of the ongoing teaching and learning processes, which is beneficial for educational as well as health outcomes?

- How can a balance be struck between institutional needs to ensure, for example, control and safety and the need to allow the genuine views of young people in relation to health to be expressed?
- How can the issue of choice and freedom of choice be addressed when perspectives and expectations of school authorities and pupils differ – for instance, when authorities do not wish to have vending machines dispensing sweet carbonated drinks or confectionery on school premises but young people expect such an option to be available to them?
- What are the implications of children's and young people's genuine participation for health policy development, implementation and evaluation, and how can it be ensured that participatory and action-oriented health education and health-promoting schools are conducive to informing policy agendas with young people's ideas, needs and visions?

In summary, the main argument discussed here, based on the Young Minds and Shape Up projects, is that the participatory and action-oriented approach to school-based health promotion, with a strong education dimension, can be beneficial as a part of comprehensive wider attempts to address the health divide. It is conducive to the development of children's critical consciousness, multidimensional knowledge about health and action competence and empowerment in relation to health. Some preconditions are important for the approach to work in practice, with flexible curricula, integration of the approach in the core tasks of the school (teaching and learning) and professional development of school staff being essential.

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## **2.2. Socioeconomic, education and family-related determinants of health and development of children and adolescents in Armenia**

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### **Context**

Various socioeconomic factors affect the health of children and adolescents in Armenia, which is a country in rapid transition. Mortality rates in early childhood are much higher than European averages. Indicators (which are largely determined by socioeconomic inequities and differences in quality of, and access to, health care) are higher in rural areas than in urban. Children's nutritional status is influenced by education and social factors, with children whose mothers have low levels of education being more likely to have stunted growth.

Child development and disability issues in the country were poorly recognized until relatively recently. Child disability is more common among socially vulnerable families: its presence also influences the family's welfare status. Stigma associated with disability still exists within some families with low education levels, with disabled children being perceived as "defective" and kept at home, hidden and segregated.

Despite all this, some effective public health interventions have been implemented, particularly in relation to reducing child mortality and preventing disability.

Systemic data on the health status of children in late childhood are lacking, as are systemic public health interventions. Some surveys have indicated a tendency towards increased prevalence of chronic health conditions among school-aged children, suggesting links with socioeconomically determined factors such as environmental hazards (including those experienced by children in schools) and lifestyles. Child labour is also an issue, threatening the health status of children in vulnerable families.

The WHO Health Behaviour in School-aged Children (HBSC) survey from 2010 identified some key socioeconomic, school- and family-related determinants of adolescents' health status and behaviours. Data on social context were ambiguous: despite the fact that most Armenian children lived in families with both parents, perceived communication with parents was weak and parental engagement low. Communication with teachers was problematic, with high prevalence of insulting language from teachers, and some respondents identified problems with peers as prompting fears about attending school: despite this, Armenian adolescents' rating of "liking school" was among the highest.

Adolescents' propensity to seek health care improved slightly from the previous HBSC survey but was still weak. Poor eating habits, sedentary behaviours and an overload of time dedicated to homework or additional schoolwork to secure entry to university caused concern, but there are indications that healthy lifestyle lessons recently introduced to school curricula are proving effective and are influencing children's behaviours.

The HBSC data show that SES, education (particularly at school) and family-related factors are among the key determinants of Armenian children's and adolescents' health and development from birth to adulthood. All of these need to be addressed to improve health outcomes, with an emphasis on tackling existing negative trends and strengthening the role of the education system (particularly schools) and families as positive health assets.

## National situation

### SES

The collapse of the Soviet Union, disruption of traditional ties with Soviet republics, rapid and sometimes irrational transformation from a socialist to a market economy and the consequences of war and blockade caused enormous socioeconomic difficulties for Armenia on gaining independence in 1991. The employment rate declined sharply, there were shortages of food, fuel, power and other basic supplies, living conditions worsened, emigration increased and family attitudes and practices changed significantly, resulting in worsening health indicators (1). Despite this, the economy grew rapidly between 2000 and 2008, with an annual growth rate of 8.7%: this trend continued until the world economic crisis (2). Gross national income per capita was 5410 purchasing power parity (PPP) in 2009. There is now evidence that the national economy is recovering but The World Bank still groups Armenia among countries with "lower-middle incomes".

Social funding remained low even in the relatively prosperous years of the mid 2000s. Health expenditure in 2008 amounted to 7.2% of total government spending and was 3.8% of GDP, significantly lower than many European countries (3). The poverty rate decreased to 25% in 2007 but increased by at least 5% by 2010; the level of extreme poverty increased to 6.9% in 2009 (4). National statistics suggest that the poverty rate varies between regions and especially between the capital, Yerevan, and remote rural provinces. Large households and those with three or more children are at higher risk of poverty: Table 2.2.1 shows the increased poverty risk of families with children compared to childless families between 1999 and 2005.

**Table 2.2.1. Poverty risk of families with children compared to childless families**

	1999	2005
Families with four or more children	1.04	2
Families with three children	0.99	1.7
Single-parent families with children	1.12	1.8

Source: Government of Armenia (5).

Some 38% of children live below the poverty line, with 4.5% below the extreme poverty line. Half of children in families with three or more children are poor; for those living in female-headed households, poverty reaches 43% and extreme poverty 6%. The most striking percentages, however, relate to children with disabilities and their siblings: among them, poverty reaches 70% and extreme poverty 13% (4).

### Demographic situation

Demographic indicators changed following independence and again in the aftermath of the economic crisis. The population was 3.2 million in 2010 (down from 3.7 million in 1991) (6) split evenly between the capital city of Yerevan, urban areas and rural areas, with 97% native Armenians. The birth rate declined from 78 000 in 1991 to 44 000 in 2009. The average

number of children per woman of reproductive age reduced significantly from 2.6 in 1990 to 1.7 in 2010. The divorce rate is 16.6%.

Despite some negative trends, and unlike many other European countries with stronger economies, Armenia retained a positive population balance in the natural increase even in the crisis years (2.1 per 1000 in 2002) and has seen growth over the past five years (6,7).

### ***Health system***

Armenia inherited a relatively well-developed public health care system from the Soviet era, but it has witnessed tremendous challenges in recent years, particularly in relation to lack of resources and the ongoing transformation of the former Semashko health system to a market-style model. As in other countries of eastern Europe and the Commonwealth of Independent States (CIS), informal payments constitute a large portion of health expenses, although the Ministry of Health has been working since 2010 to try and exclude informal payments from health facilities' practice (5).

The burden of health care costs is shared inequitably among the population. The average spend is 12.3% of income, but it can be as high as 20% for the poorest (8). Ongoing changes and challenges in the child and adolescent health sector are not always effectively addressed (9).

### ***Health indicators***

Life expectancy is 76.8 years for women and 70.4 for men, each of which is better than eastern Europe averages. The most prevalent causes of mortality in 2008 were cardiovascular diseases (49.9%), malignant neoplasms (20%) and respiratory system diseases (6.5%). More than half of adults are overweight (body mass index (BMI) of more than 25), 57% of males over the age of 20 use tobacco daily, about 20% are physically inactive and one in six males consumes more than 20 g of pure alcohol daily. Many of these health outcomes are connected to health behaviours and have their origins in adolescence (10,11).

### ***Education system***

Like the health system, the education network was mainly established during the Soviet period. Post-independence development has been obstructed by lack of financial, institutional, human and education resources. The literacy rate is nevertheless almost 100% (2,3).

The main components of the education system are preschool education for children aged 2 or 3 to 6 and general education, comprising primary school (grades 1–4), middle or basic school (grades 5–8) and high school (grades 9–12). There are also specialized, vocational and higher education institutions.

As with other countries in the region (12), preschool facilities have reduced by 47% since 1991 with enrolment reductions of 69% due to birth-rate reduction, emigration and quality and accessibility issues. There were 1392 state-owned schools in 2010 and 59 non-state schools. The education needs of children with physical and mental disabilities are being addressed through ongoing efforts to establish a network of inclusive schools (13).

### ***Approaches***

Armenia is a country in transition, so its health statistics show tendencies typical for both developed and developing countries.

The child mortality rate has significantly decreased over the last 15 years but remains much higher than the European average. WHO cited the rate in 2010 as 22 per 1000, while official statistics from the Ministry of Health suggested approximately half of this; either way, the rate was higher than in western or central Europe. It is nevertheless half of the rates found in middle–lower income countries, possibly due to Armenia’s higher literacy levels, public health system institutions (mainly established during the Soviet era) and better sanitation (3).

Perinatal and neonatal conditions, followed by congenital anomalies and respiratory infections, are the main causes of death in early childhood. Data from demographic health surveys (DHS), which are carried out every five years, show that relatively high levels of neonatal and infant mortality and morbidity are determined by socioeconomic inequities and differences in quality of, and access to, obstetric and paediatric services. Child and infant mortality rates are significantly higher in rural areas, with a five-fold difference among children aged 1–4 years. Under-five mortality levels decline as the mother’s education increases. As is the case across the world, mortality rates are higher among children of families from lower wealth quintiles (14).

Education and attitudes to health issues influence vaccination uptake. Sources show that more than 90% of children are appropriately immunized (3), but surprisingly, the tendency to miss or avoid vaccinations is higher among relatively better-educated mothers in urban areas: children in rural areas are more likely to be fully immunized than those in urban, particularly Yerevan (13).

Education and social factors also influence children’s nutritional status. The number of breastfed infants has significantly increased over the last decade, largely due to collaborative programmes with WHO and the United Nations Children’s Fund (UNICEF). Only 0.57% of infants aged 0–6 months were exclusively breastfed in 1991, but this had risen to 57% by 2008 (15). Duration of breastfeeding is shorter in urban areas (14), probably due to mothers needing to recommence work soon after birth.

Children of mothers with low education levels have a greater risk of growth stunting (the prevalence is 13%). Anaemia prevalence is significantly higher in women and children from families with the lowest well-being level, although the prevalence is also high (32%) among families with the highest level.

Child developmental disorders and disability develop in early childhood and may be lifelong. Data from the national household survey show that approximately 11% of children under eight years have a developmental delay or disorder. Mental health problems, including autistic spectrum disorders, are increasing (15,16). Families require significant financial resources to care for a disabled child and almost half of affected parents (mostly mothers) may find their caring duties confine them to the house, restricting employment opportunities and reducing the family income for almost 60%. Consequently, many children from socially vulnerable families who have disabilities or conditions that may lead to disability do not receive the treatment they need, with lack of access to rehabilitation leading to social exclusion and segregation within communities (16).

Stigma still exists, with children with disabilities, particularly those from families with low education levels, often perceived as “defective” and kept at home, hidden and segregated, and consequently being unable to access education. State capacity to provide social support to these children and their families is limited. Indeed, the health sector practically ignored the needs of disabled children until very recently: a survey of 11 regional communities in 2007 revealed that almost half of the children identified by household respondents as having a disability received no treatment (17).

It can be seen, therefore, that socioeconomic and education factors cause significant inequities and significantly influence Armenian children’s health status from early life.

### ***Implementation: successes and barriers***

Armenia, supported by WHO, UNICEF and other international organizations, has been implementing interventions aimed at improving health outcomes and reducing socioeconomic inequities since the mid-1990s, initially in response to the crisis of the early 1990s that caused an increase in child mortality and worsening of other health indicators (1).

Programmes to control acute respiratory infections and diarrhoeal diseases (introduced in 2002 as part of an integrated management of childhood illnesses (IMCI) strategy) aimed to reduce child mortality through optimizing clinical management and education activity with families. Implementing comprehensively adapted WHO treatment protocols on these disorders was a significant challenge: the protocols recommend mainly home treatment with limited or no medication, while the norm in Armenia, developed during the Soviet era, was to treat cases in hospitals with heavy reliance on medication, particularly antibiotics. Nurses and doctors received training in counselling skills and information booklets, leaflets, posters and other educational materials were disseminated to health facilities. Surveys carried out at the time showed significant decreases in use of antibiotics (from 97% to 55%) at outpatient level (18). A comparison of practice in the early 1990s and early 2000s in one district showed that the hospitalization rate for acute respiratory infections had been halved, with decreases in mortality. Nationwide, respiratory infection mortality rates decreased significantly (3,15).

The immunization rate during the last part of the Soviet period decreased sharply, mainly due to media coverage of supposed adverse effects and hazards associated with vaccination (1). Outbreaks of vaccine-preventable diseases consequently occurred in all post-Soviet countries, including Armenia. The national programme for immunization has used different methods to raise the public’s awareness of the safety and benefits of vaccination and extensive training has been offered to paediatric and public health staff. The result has been an increase in vaccination coverage and a dramatic decrease in cases of vaccine-preventable diseases (3).

The promotion of breastfeeding programme offers another example of successful family-based education activities in Armenia. Breastfeeding prevalence decreased in the late 1980s and early 1990s due to changing maternal attitudes, socioeconomic conditions and the availability of free infant formulas provided through health facilities as part of humanitarian support to the country. Introduction of the baby-friendly hospital initiative, training for health staff and education for mothers dramatically changed the situation and led to better breastfeeding practices.

The Ministry of Health launched a primary care-based project to monitor child development and identify disorders. Parents, nurses and doctors used a special inventory to observe child

growth and development (health workers were trained to train mothers on its use) and regular health check-ups were introduced.

The Ministry of Health also joined forces with the Arabkir Medical Centre–Institute of Child and Adolescent Health (Arabkir MC–ICAH) and UNICEF to develop a concept paper on early intervention. The paper addresses the specific needs of children with disabilities and emphasizes the necessity of educating parents and raising their awareness. Arabkir MC–ICAH, with support from the ministry, local authorities and international partners (especially the Danish humanitarian organization “Mission East”), established regional child development and rehabilitation centres to improve assessment and increase access to rehabilitation services. The centres are staffed by paediatricians, psychologists, speech therapists, physiotherapists, ergotherapists, special educators and other specialists. They currently provide services for hundreds of children, with ongoing education for parents on home care and simple rehabilitation techniques a core activity. Data emerging from the centres indicate positive outcomes from interdisciplinary rehabilitation, including significantly enhanced education opportunities for children (18).

The national child and adolescent health and development strategy, developed in collaboration with WHO, was adopted by the government in 2009 (15). It prioritizes early childhood issues such as high neonatal, infant and child mortality rates (including home deaths, inpatient mortality within 24 hours of admission and the relatively high rate of accident-related mortality among 1–4-year-olds) and child nutritional status issues, with ongoing high prevalence of early childhood malnutrition and anaemia. Further active involvement and education of parents are among the prioritized actions.

The strategy aims to strengthen intersectoral collaboration, especially involving the education and social sectors. Targets on providing support to enhance preschool institutions’ contribution to promoting early childhood development and health education have still to be attained, but as preschool education is not common in Armenia, the main priority remains parental education and involvement.

## **Late childhood**

### ***Approaches***

In common with many countries, Armenia lacks data on the health status of school-aged children aged 5–10 years (3) and has limited experience of interventions.

National guidelines decree that every child should be thoroughly assessed by the family doctor or paediatrician before entering school at six years and, if required and available, be seen by other relevant specialists (such as a surgeon, orthopaedic specialist, neurologist or ophthalmologist). Compliance with the guidelines is fairly widespread. Data over the next five years of life, however, are limited: they are not systematically disaggregated by age and there are questions about their reliability (19).

Generally, chronic health conditions tend to increase in prevalence among school-aged children, with health problems burdening their health status and welfare not only during this period, but also into adolescence and adulthood. A survey of 6–12-year-olds in 2005 found that around 20% of school-aged children suffered from recurrent allergic conditions such as asthma and rhinitis. Examinations carried out in one rural region showed that 60% of children had at least one of the following diseases or conditions: dental caries, allergy, chronic ear, nose and throat problems, chronic cough, urinary tract and gastroduodenal diseases, scoliosis,

vision problems and neurological disorders (14). Data from check-ups performed in schools showed high prevalence of vision problems at different ages: vision failure was detected in 10% of 3-year-old children, 28% of 7-year-olds and around 45% of 14-year-olds (20).

The prevalence of these conditions provides evidence of hazards associated with environment (including those experienced by children in school) and lifestyles. Some are easily preventable or are manageable through better care from family and parents, provision of health education in schools and access to appropriate health services, but these are not widely available. They are nevertheless crucial to improving health status in late childhood.

Poor hygiene and environmental conditions (lack of clean water and effective sewerage systems and lack of heating, for instance) still exist in some kindergartens and schools. There is also a lack of safe places for children to play and to take part in physical activity, especially in cities. The current curriculum, approved by the Ministry of Education and Science, requires that at least three classes of physical education of 30–45 minutes each (depending on grade) and involving different sports and activities must be offered, but implementation is hampered by lack of proper facilities, equipment and appropriately prepared teaching staff. Another specific problem is the weakness of the school nursing system (20).

Most Armenian children live with both parents. Many in urban and rural communities take part in sports, music, art and/or attend additional classes in some disciplines (such as a foreign language or mathematics). Families have to pay for these kinds of creative activities. Most children have opportunities for positive family communication: they are usually praised for their accomplishments in school or in creative activities and families celebrate their successes. Many communities also participate in children's development through community-level events, although this does not necessarily lead to sustainable positive communications with parents (see below).

The situation is different, however, for children in socially vulnerable families. A UNICEF survey showed that 4.7% of children aged 7–18 years from urban and (especially) rural areas are involved in child labour, with some providing support for their parents' work in areas such as farming or small trading. This interferes with their education and health: parents of working children noted work-related injuries in 60% of cases (21).

### ***Implementation: successes and barriers***

Systemic public health interventions with this age group are limited. Different programmes have been introduced to address the health needs of children in remote areas through mobile medical teams and treatment of, for example, vision problems. Positive results have been achieved, but most programmes lack sustainability (19). The Ministry of Health, in collaboration with education authorities and the Schools for Health in Europe (SHE) network, developed the national concept of health-promoting schools in 2010, and this is currently being implemented in three pilot schools.

Efforts have been made to address health determinants and some elements of the healthy lifestyles curriculum were introduced within disciplines of the general school curriculum for the first years of education. The government adopted the national action plan for school renovation, resulting in environmental improvements to hundreds of schools through state financing or donor support (13). The National Olympic Committee supports many activities aiming to involve school-aged children in sports.

There are social assistance programmes, ongoing programmes in the social and child protection sectors, initiatives to deinstitutionalize the care of children and integrated social services, but many have been launched only recently, so there is a lack of monitoring data to systematically assess the health outcomes of interventions with this age group.

## Adolescence

### *Approaches: HBSC survey*

Armenia does not collect specific statistics on adolescents aged 11–19 years, so data on this age group are taken from surveys, particularly HBSC. The pilot HBSC survey was carried out by Arabkir MC–ICAH with support from UNICEF in 2005 and the second in 2010, supported by UNICEF, WHO and the National Committee of Science. The 2010 survey included 62 schools selected by the “probability proportional to size” principle. Overall, 4330 students aged 11, 13 and 15 years were involved in the survey which, following exclusion of some data due mainly to age inappropriateness of interviewees,<sup>3</sup> provided a total of 2833 valid interviews. Some results from the survey appear below.

### **Social context: family**

Eighty-three per cent of respondents reported that they lived with both parents: about half lived with grandmothers and one third with grandfathers.

Parents seemed relatively well involved in their children’s lives, with 65% of mothers knowing “a lot” about their friends (23% knew “a little” and only 2% knew “nothing”); the figures for fathers were less impressive (46% knew “a lot”, 35% knew “a little” and 6% knew “nothing”). Data on communications with fathers and mothers raised some cause for concern (Fig.2.2.1 and Fig. 2.2.2). Communication with fathers was described as “easy” in only 40% of cases and with mothers in 60%, with 25% of children uncertain. These figures are among the worst in Europe. One possible explanation could be that some parents, regardless of their occupation, are working much longer than eight hours a day due to the current socioeconomic situation, but this does not account for the many jobless parents. A lack of communication therefore appears to be the result of socioeconomic factors, negative parental attitudes and poor parenting practice.

The survey highlighted many of Armenia’s social challenges. Only 75% of fathers and 37% of mothers of respondents had a job. The jobless rate was higher in rural areas, perhaps reflecting government statistics that show a 13% decrease in agricultural production in recent years (6).

Seventy-five per cent reported that they never went to bed hungry, but 8% said they “always” did and the remainder did so “sometimes”. These figures correlate well with data on the prevalence of poverty in Armenia. Eighty-three per cent reported that they have never been punished by any family member.

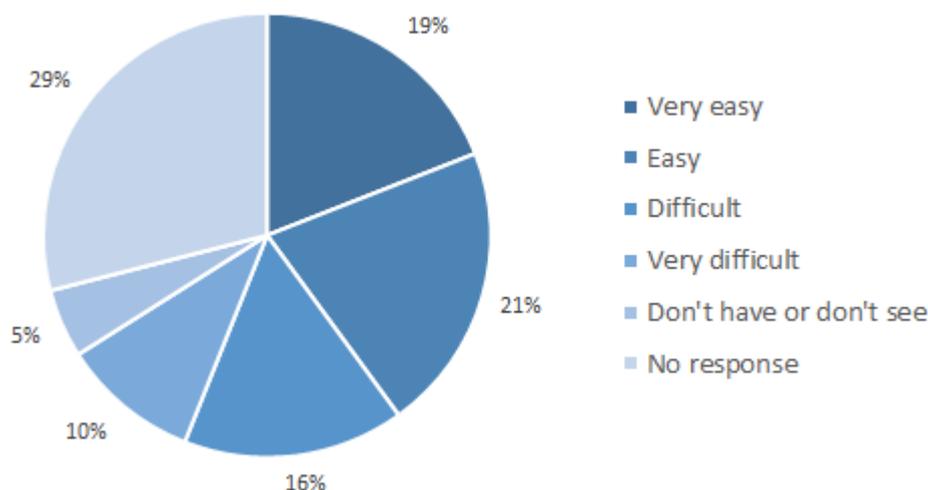
### **Health status**

Twenty per cent believed their health was either “fair” or “poor” (Fig. 2.2.3), which is close to European averages.

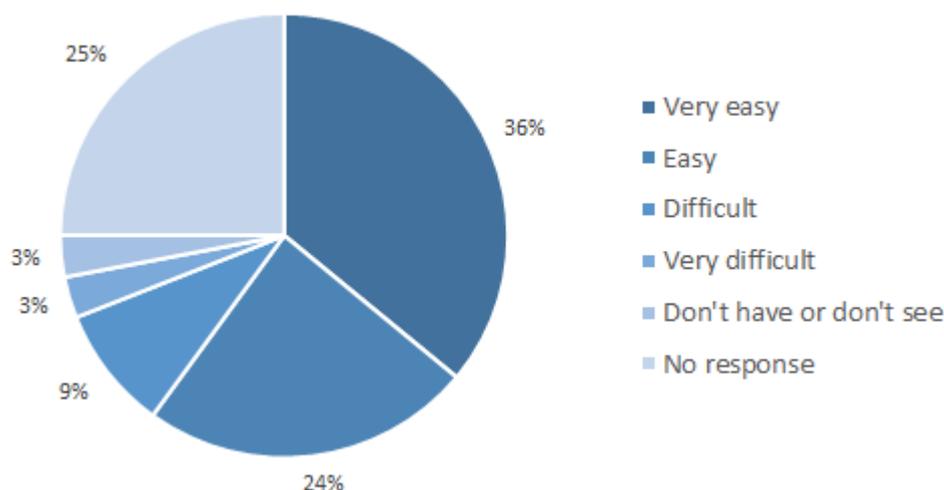
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<sup>3</sup> The age range in classes in Armenia varies significantly due to ongoing reforms of the education sector. For instance, children of ages 14, 15, 16 and 17 can be placed in the same 10th grade class. For the final data analysis, children with an age deviation of more than 6 months were excluded.

**Fig. 2.2.1. Communication with parents: how easy is it for you to talk to your father?**

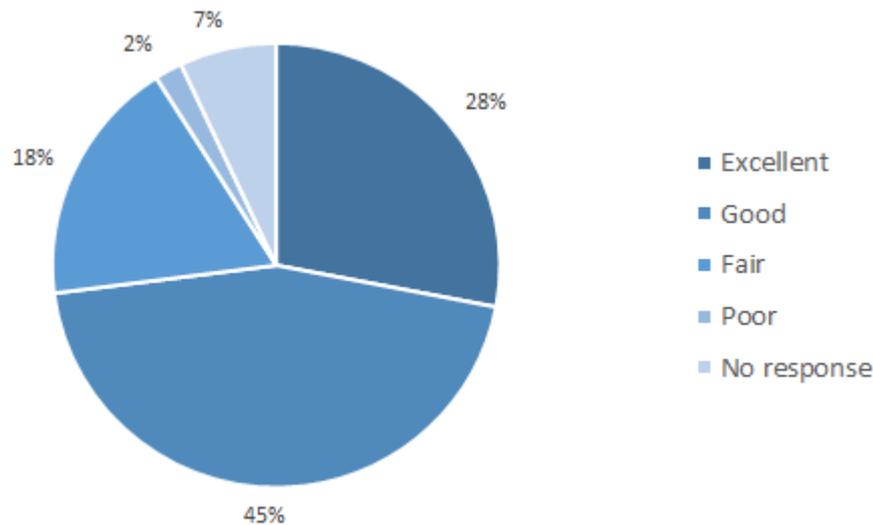


**Fig. 2.2.2. Communication with parents: how easy is it for you to talk to your mother?**



Only half, mainly boys, reported feeling fit and full of energy in the previous week. Forty-four per cent had recurrent headaches, with 23% experiencing headache more than once a week or every day. Some 60% complained of recurrent stomach ache and 13% had abdominal pains every day or several times a week: both indicators were higher among rural inhabitants (probably due to the high prevalence of intestinal parasites (worms)). Most (60%) thought their weight was “close to being right”, but 23% believed they were “a bit” or “too thin” and 15% “a bit” or “too fat”.

Only 48% reported that they never felt lonely: 27% felt lonely “sometimes”, 12% “quite often” or “very often” and 5% “always”, indicating an increase in those who felt lonely “sometimes” or “always” from the previous survey. Twelve per cent had difficulty sleeping every night or once a week.

**Fig. 2.2.3. Self-perception of general health****School**

Verbal abuse and punishment was quite common, with only 58% of children reporting that they had not been insulted by a teacher in the last 12 months. Boys were insulted more often, but 80% had never been punished in school.

Just over half spent three hours or more on homework or additional exercises, although the frequency was less in Yerevan and rural areas. Armenian children spend a lot of time studying the overloaded school curriculum, especially when preparing for university.

Fifty-seven per cent liked school “a lot” (there were no specific regional patterns), with girls liking school slightly more (the difference was not significant, however). This is higher than the European average and among the highest in the European HBSC survey (22). Sixty-five per cent reported “good” or “very good” school performance, which is also close to the highest European results.

As was mentioned above, the Ministry of Education and Science introduced a compulsory curriculum on healthy lifestyles a few years ago. There was interest in Armenia about children’s awareness of the curriculum, and the survey showed that 69% of respondents had attended healthy lifestyle classes in school during the previous year. Around 66% of 15-year-olds received information on HIV, which is encouraging as lessons on this topic had only been introduced shortly before the survey was conducted.

**Violence and bullying**

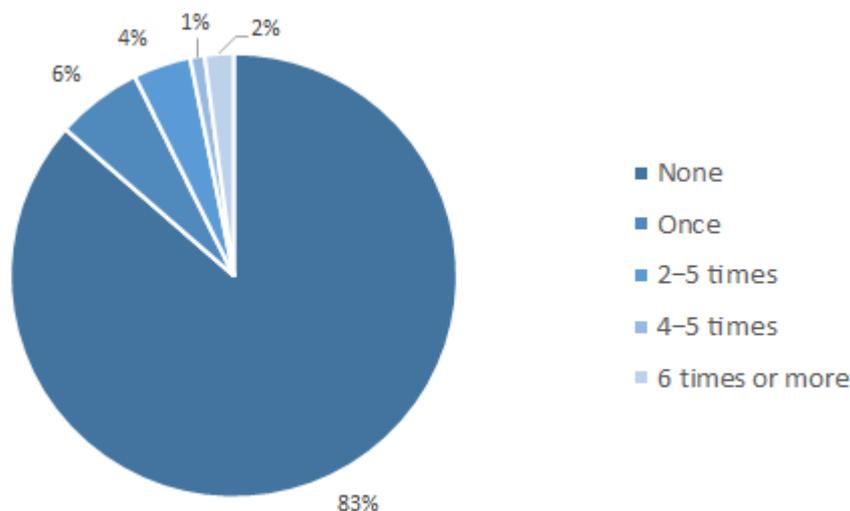
As in the pilot HBSC survey in 2005, significant numbers of children claimed that they had missed school within the previous 30 days because of fear of violence (Fig. 2.2.4). In the 2010 survey, “at least once and more” was reported by 17% of respondents, while in the survey of 2005 this indicator was 10%. The violence level has therefore increased.

**Health care-seeking practices**

Health care-seeking practices remain weak, although some improvement was seen from the pilot survey in 2005. More than 23% of respondents reported that they never visited a dentist

and 40% never visited their family doctor or paediatrician, despite national guidelines stating that family doctors or paediatricians should check their health status at least yearly. Nevertheless, 40% reported that they have been visited by a doctor, which is 10% higher than in 2005. The position of “adolescent doctor” has been re-established in some urban outpatient clinics and a quarter had consulted this physician, which is also better than in 2005. Overall, there was moderate progress in care-seeking practices and health system responsiveness in this area.

**Fig. 2.2.4. Missing school within the previous 30 days because of fear of violence**



### Behaviours

Measures to improve eating behaviours through school- and community-based education activity were introduced following the findings of the 2005 pilot survey. Improvements were seen in the 2010 survey, with 44% eating breakfast every weekday and only 21% always skipping breakfast. Thirty-eight per cent ate sweets more than once a day and 25% (mainly from Yerevan) consumed soft drinks at least once every day.

Thirty-eight per cent took part in physical activity 5–7 days a week (20% every day) and 71% watched television for 2 hours or more during weekdays (76% at weekends). Time spent using computers significantly increased since 2005, but 34%, mainly from poorer rural areas, did not use a computer at all.

Forty-two per cent of 15-year-old boys surveyed claimed to have had sexual intercourse, although there may be an element of overreporting in this figure; only 3% of girls claimed likewise. Sexual activity tends to start later in Armenia than in other European countries due to the continuing dominance of some traditional values (7).

The HBSC survey and the global youth tobacco survey held in Armenia in 2009 among 3390 respondents (23) each indicated a low prevalence of smoking. Only 3.5% of schoolchildren were smokers (6.1% boys and 1.2% girls), which is a lower prevalence than in most European countries. Exposure to secondary smoke and the presence of a tobacco user in the family are also important: 70% of children reported living in households in which other family members smoked.

### **Life satisfaction**

Regardless of SES, health complaints and other problems, survey respondents seemed to hold optimistic attitudes. Indeed, their overall life satisfaction (reported by 91%) was among the highest in Europe. As in other European countries, boys were slightly more satisfied than girls (93% versus 89%).

### ***Implementation: successes and barriers***

The need to ensure healthy young conscripts for the armed forces meant that some aspects of adolescent health were prioritized during the Soviet period. Adolescent health specialists were established in city outpatient polyclinics and mandatory screening introduced in schools. This was effective (to some extent) in preventing somatic disorders, but it completely ignored issues such as well-being, confidentiality and participation.

Adolescent health was usurped by the need to address child survival issues in the 1990s and early 2000s but it reappeared on the agenda in 2005 when the national youth-friendly health services (YFHS) concept paper (24), developed through collaboration involving the health ministry, UNICEF, NGOs and professional institutions, was published. Since then, staff have been trained on the WHO orientation programme and national standards of care have been developed and endorsed through district-level pilots. NGOs have supported training and education on HIV/AIDS for high-school students in two vulnerable regions and have also been involved in training nurses.

Introducing healthy lifestyle lessons in higher grades has been one of the most important interventions. Significant efforts to introduce “life skills” or “healthy lifestyles” lessons into the school curriculum had been ongoing since the 1990s, but the training programmes were inadequate and no common countrywide approach had emerged. This has now changed. Healthy lifestyle topics are now being presented to students in grades 1–7 of secondary school through a course in life skills and to those in grades 8 and 9 by a pilot course on healthy lifestyles. A government decree of January 2008 determined that 14 compulsory academic hours per annum are to be assigned to the course on healthy lifestyles for 8<sup>th</sup> and 9<sup>th</sup> graders. This 28-hour programme includes different issues such as HIV/AIDS prevention and safe behaviours. Teachers have been trained (or are being trained) to teach these new subjects.

The national strategy for child and adolescent health development (15) is largely based on data from the pilot HBSC survey. It outlines key initiatives such as:

- implementing a growth and development surveillance system at primary health care level;
- expanding and improving adolescent-friendly services in secondary and tertiary care;
- improving medical and counselling education;
- promoting healthy lifestyle principles among school-age children and adolescents;
- encouraging children and adolescents to take ownership of their own health; and
- increasing parents’ and the public’s awareness, knowledge and skills on school-age children’s and adolescents’ health issues.

The health ministry introduced compulsory health and reproductive health screening for girls at age 12 and general health for boys at 15 as part of strategy implementation. Screening includes checks of vision, hearing, height, weight and BMI, haemoglobin and blood pressure. It also includes ultrasound tests (for girls), dental examination, screening for scoliosis, Tanner

staging of physical development and a psychosocial development questionnaire focusing on home, education, eating and employment, activities, drugs, sexuality, suicide and depression (HEEADSS). Training for nurses has been implemented under the strategy and adolescent health has been introduced into undergraduate and postgraduate health curricula.

There are challenges around practical implementation of strategy initiatives, however. Screening has not always been effective and the data it produces require further analysis. Poor communication between health workers and doctors' and nurses' lack of knowledge and counselling skills are dissuading adolescents from seeking advice and information (19). Doctors and nurses are not well motivated and are stifled by bureaucracy, neither of which predisposes to the delivery of high-quality care. School nurses' focus is largely on providing first aid and their role in wider adolescent health issues is limited, with no contribution being made to health education in the school. The fact that most family doctors and nurses are women is proving a disincentive to boys, who may be embarrassed about discussing behavioural and sexual health issues with them. Generally, much of the activity generated through the strategy is targeted on reproductive and sexual health issues, a narrow approach that means other needs of adolescents may be bypassed, and the health sector still has a serious problem with lack of resources.

In summary, only the first steps to strategy implementation have so far been taken and much more needs to be done.

Schools play an important role in the health and development of adolescents (25). Recent years have seen significant efforts to strengthen the positive protective role of schools. Some have been renovated to provide a better physical environment, but many more are awaiting redevelopment. Sporting activities have been introduced, but the HBSC survey shows that adolescents' physical activity levels remain low. Healthy lifestyles lessons have been introduced into the curriculum and HBSC data reflect encouraging signs of their effectiveness. Staff nevertheless lack the skills to lead the lessons, with most being taken by teachers of physical education and sport or biological disciplines.

HBSC data regarding adolescents' relationships with teachers, the prevalence of insulting language, peer relations in school with a high rate of truancy and the overloaded curriculum causing young people to spend lots of time on homework or preparing for entering university (consequently significantly decreasing opportunities for physical activity) give cause for concern. Recent education sector policy documents make no reference to adolescent health (with the exception of those dealing specifically with health education) and the expected health outcomes of many ongoing reforms are not clear. Overall, the school climate is not always a positive asset for Armenian children.

The need to increase the role of schools in Armenia is especially urgent when another key piece of evidence from the HBSC survey is taken into account – the finding that Armenian children like school (their rating being among the highest in Europe). School can, and must, play a more positive and active role not only in education, but also in supporting health and development.

HBSC data focusing on the family's role as a specific asset in protecting adolescents' health provide mixed messages. Responses stressed that existing socioeconomic inequities, particularly the high rate of joblessness, and a lack of basic resources (including food) in some families were leading many children to report that they go to bed hungry. Armenian

family values tend to be based on a Christian ethos mixed with some eastern traditions and values. This provides opportunities for children to access family support and have more positive family communication than children in many other European countries who live in single-parent or “split” families. Most children in Armenia also have siblings who can provide support.

Two elements of the HBSC data, however, confound these impressions: the first is that even though adolescents are “surrounded” by parents, siblings and friends, many reported feeling “lonely”; and second, many children reported having a problem communicating with their parents.

It can be concluded that parental engagement is not satisfactory in Armenia. This might be a consequence of the socioeconomic factors cited above, or that many fathers migrate temporarily to the Russian Federation to seek work. The fact that today’s generation of adolescents are the first to grow up in the “independence era” and have become accustomed to a free market-style society, in contrast to their parents who grew up under Communism, is creating tensions and posing challenges to values, behaviours and attitudes that have been entrenched for a long time. There are indications, however, that Armenian families are not adapting to the needs of adolescents. Efforts have therefore been made to improve child/adolescent–parent relations and increase positive family support in solving children’s and adolescents’ problems.

## Conclusion

This case study has discussed factors and determinants that influence the health status and development of Armenian children and adolescents from birth to adulthood. Particularly important among these is the socioeconomic situation, with difficulties in transitioning from a socialist to a free-market economy and the effects of the national economic crisis of the 1990s and the world crisis starting 2008. There is also insufficient investment in social, health and education sectors, low levels of education within families (leading to some unsound parenting practices), unsatisfactory conditions for health promotion in school settings, school environments that are in different ways “unsafe” for children and lack of education opportunities for children with special needs. Tackling these challenges requires significant effort not only from the health sector, but also from other fields such as education, social care, communities and families.

Overall, there is a need to increase investment in the health sector. Successfully implemented interventions so far have mainly been targeted at improving health outcomes in early childhood, while those for school-aged children are limited. The basic principles underpinning selection of appropriate interventions should include consideration of national and international experiences with comprehensive adaptation to the Armenian context, multisectoral collaboration and integration, and parental and adolescent involvement. Experience suggests that successful interventions exploit existing opportunities and build on strengths: these opportunities and strengths have to be deployed.

Lessons from Armenia to some extent are useful in enabling understanding of developments and possible interventions in all the countries of the CIS.

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## 2.3. The nutrition policy framework in France

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### Context

Nutrition and physical activity are fundamental to the development and clinical manifestation of many illnesses and conditions, including cardiovascular diseases, several cancers, obesity and type 2 diabetes. These are the most widespread diseases in all industrialized and developing countries.

Obesity (defined by a BMI $\geq$ 30 for adults aged over 18) is probably the most visible of all these conditions. Its prevalence in France has increased dramatically within adult and child populations over recent years. According to the repeated cross-sectional ObEpi surveys (1), prevalence in the French population aged 18 and over (based on self-reported data on height and weight) increased from 13.1% in 2006 to 14.5% in 2009, an increase of 10.7%. Previous ObEpi studies showed rises of 18.8% between 1997 and 2000, 17.8% between 2000 and 2003 and 10.1% between 2003 and 2006. The relative mean increase during the 12-year period was 5.9% by year. According to the latest data from the French nutrition and health survey, a cross-sectional survey carried out in 2006/2007 among adults aged 18–74 years, 49.3% were found to be overweight (including obesity) and 16.9% were obese (2), based on measured height and weight. The issue of obesity particularly concerns groups with lower SES (3), as in all other developed countries (4,5).

The prevalence of childhood obesity has increased worldwide over recent decades (6). Prevalence of overweight among children and young people aged 3–17 in France in 2006 was 17.8% (including 3.5% obese) (2). A national survey conducted between 1990 and 1993 showed an overweight prevalence of 8.3% (of which 2.4% were obese) among children aged 5–6 (7); by 1999/2000, the prevalence in the same age group was 10.4% (3.9% obese).

A 2009 paper showed some stabilization in overweight and obesity prevalence among 7–9-year-olds in France, from 18.1% (including 3.8% obese) in 2000 to 15.8% (2.8% obese) in 2007 (the difference was not significant) (8). The same trend was observed among children aged 3–14 between the Etude Individuelle Nationale sur les Consommations Alimentaires (INCA) 1 survey of 1998/1999 and INCA 2 in 2007 (9). Another survey also showed stabilization in 6–15-year-olds in the whole population between 1996 and 2006 and among children from low-SES families between 2001 and 2006 (10).

Overweight and obesity occur when energy intake exceeds expenditure. Genetic characteristics and early environmental factors can determine a predisposition to excessive weight gain, but the increase in the prevalence of overweight and obesity over the last few years mainly results from changes in eating habits and sedentary lifestyles (11).

Obesity has multiple public health consequences but also psychological and social effects, even among children and adolescents (12–15), as obese people are often victims of stigmatization and discrimination. Overweight and obese students are more often victims of bullying than their normal-weight counterparts (12,14,16).

As weight during childhood is predictive of weight in adulthood, maintaining a healthy weight is important at all stages of life, especially early adolescence, which is the topic investigated in this case study.

The National Nutritional Health Programme (Programme National Nutrition-Santé (PNNS)) (see below) aims to stop the increase in the prevalence of obesity among young people. Two of the programme's action plans contribute to the achievement of this target: the first sets nutritional prevention measures for the whole population and specific subgroups, particularly young people; and the second aims to improve screening for nutritional problems and obesity management in children and adolescents.

One of the child-specific measures included in the programme is systematic screening for overweight and obesity during school medical examinations or in "child and mother welfare". The programme recommends a multidisciplinary approach to obesity management involving health professionals (doctors, dietitians) and non-medical actors such as school professionals, local authorities and NGOs. The need for discussion and coordination of actions is recognized through child obesity management networks, introduced in 2003.

## Approach

The first PNNS was implemented in January 2001, followed by the PNNS 2 between 2006 and 2010. The overall objective is to improve the health of the general population by focusing on one of its major determinants – nutrition.

### *Priority objectives*

PNNS 1 set nine quantified priority objectives related to food consumption, physical activity and biological and anthropometric indicators (Box 2.3.1). Nine non-quantified objectives that relate to specific population groups were then added. The PNNS 2 strategies aimed, on the one hand, to improve individual responsibility via education and, on the other, to improve communication and nutrition environment via work with the economic sector (producers, industry, retailing, catering).

#### **Box 2.3.1. PNNS nine priority nutritional objectives**

**Increase consumption of fruits and vegetables** to reduce the number of "low consumers" (consuming less than one and a half portions of fruits and less than two portions of vegetables) by at least 25%.

**Increase consumption of calcium** to reduce the number of people whose daily calcium intakes are below the recommended nutritional level by 25% and reduce the prevalence of vitamin D deficiency by 25%.

**Reduce the average contribution of total fat intake** to less than 35% of daily energy intake, with a 25% reduction in consumption of saturated fatty acids for the general population (less than 35% of total fat intake).

**Increase consumption of carbohydrates** to more than 50% of the daily energy intake by: encouraging the consumption of starchy carbohydrates; reducing current consumption of simple sugars by 25%; and increasing the consumption of dietary fibre by 50%.

**Reduce alcohol intake** among those who consume alcoholic drinks. Intake should not exceed the equivalent of 20 g of pure alcohol per day (equivalent to two 10 cl glasses of wine, two 25 cl beers or 6 cl of spirits). This objective targets the general population and stands in a nutritional context (excessive contribution to energy intake); it is not directed towards people who suffer from chronic alcoholism, who require specialized care. The objective of reducing the annual alcohol intake of the population by 20% (to reach 8.5 l per year per person aged 15 and over) was added in 2006.

### Box 2.3.1 contd

**Reduce mean blood cholesterol level** in adults by 5%.

**Reduce systolic blood pressure mean** in adults by 2–3 mm Hg.

**Reduce the prevalence of overweight and obesity** (BMI>25) in adults by 20% and halt the increase in the prevalence of obesity in children. The objective of reducing the overweight adult population below 33% was added in 2006.

**Increase the number of people who include the equivalent of at least 30 minutes of fast walking every day** by 25%, consequently increasing overall daily physical activity levels, and tackle sedentary lifestyles, which are risk factors for chronic diseases, among children.

The PNNS is driven by the Ministry of Health and brings together public and private sectors involved in research, training and monitoring, local programmes, health promotion, prevention and care, and food production, distribution and control.

The nine priority objectives apply to all age groups, with young people being identified as having particular needs. The following specific objectives were consequently included in PNNS 1 and PNNS 2:

- stop the increase in the prevalence of obesity among young people; and
- improve children's and adolescents' calcium and vitamin D status and infants' iron status.

## Evidence

This section presents some results from the 2006 HBSC survey in France (17,18) and from the main French studies of eating habits, physical activity, sedentary lifestyles and body weight and the socioeconomic determinants of health in adolescents.

### *Data from the 2006 HBSC survey*

#### **Eating habits**

About one third of French 11–15-year-olds reported that they did not eat fruit or vegetables every day, which was a reduction from the more than 50% who had reported this in 2002. The proportion increased with age. In addition, 27.1% reported that they consumed sweets daily and 26.6% soft drinks, both percentages increasing with age. Overall, girls made healthier food choices.

These results confirm that there is room for improvement in the eating behaviours of adolescents. Comparisons with other HBSC countries show that France is about average for eating fruits and consuming sweets and soft drinks. It is worth noting, however, that France is largely above average in vegetable consumption.

#### **Physical activity and sedentary behaviour**

Young people reported that they took part in physical activity for at least an hour 3.7 days a week on average (3.1 days in 2002). Boys were significantly more active at all ages (19.4% of boys took part for at least an hour every day). Overall, 14% of students had a level of physical activity that would meet current international recommendations (an hour a day of moderately intense physical activity), which is much less than in 2002 (20%).

The average time spent in sedentary activities (watching television/videos, computer use) was 5.5 hours per day. It was much greater among boys (6.1 versus 4.9 for girls) and increased with age. A significant proportion of adolescents spent several hours a week in sedentary

activities, with watching television and videos being the most common pursuits. On average, boys spent the same time in front of a computer than girls, with gender difference only arising in relation to video game use. The time devoted to homework increased with age for both genders.

Boys and girls who were active were much less likely to spend several hours in front of their computer but devoted the same amount of time to television and homework.

The results show that French students are far less active than their counterparts elsewhere. France, alongside Switzerland and the Russian Federation, ranks in last or second-last positions for meeting international recommendations for physical activity. French students (and those from Switzerland and Italy) nevertheless were among those who spent the least number of hours in front of a screen.

### **Body image, weight and weight control**

Just over half thought their body was “more or less the right weight”. The proportion who believed they were “too fat” was greater among girls (37.3%) than boys (22.6%), with perceptions increasing with age. These figures are quite similar to those of 2002. More girls stated that they were either on, or needed to be on, a diet (37.9% versus 21.5%). This proportion increased with age only in girls and is lower than in 2002 (46.2% and 25.4% respectively). Almost all who thought they were “too fat” believed they ought to be on a diet.

According to their self-reported heights and weights, 10.3% were overweight (against 8.7% in 2002), with the prevalence being higher in boys (11.7% versus 8.9%). The prevalence of obesity was around 1.6% (1.5% in 2002) and increased with age. Body perception was consistent with reported weights. Proportionally more overweight adolescents stated they were on a diet or that they should be on one, compared to those of normal weight.

Body perception, dieting and prevalence of overweight and obesity were at the European average.

### **Socioeconomic determinants of health in HBSC**

Daily consumption of fruits and vegetables was significantly lower in low socioeconomic groups (measured against the HBSC Family Affluence Scale (FAS)) and soft drinks and sweets consumption higher.

The proportion of students who met international physical activity recommendations rose significantly with SES. The prevalence of obesity (based on declared height and weight) was significantly lower among students of high SES, as was overweight. The proportion of students on a diet or who thought they should be dieting was the same in both categories.

These findings are in line with those from previous French HBSC surveys (17,19).

### ***Other French studies***

Links between adults’ dietary habits (20–22) and knowledge (23) and socioeconomic determinants are well recognized. The consumption of fruits, vegetables and fish is lower (24) and intake of fats and soft drinks greater in low-SES populations (25). Fewer data are available regarding young people. Mantey et al. (26) showed that students aged 11–12 consume soft drinks during meals and eat snacks more often if they go to school in an economically deprived area. These results suggest that a diet rich in energy-dense foods and

poor in micronutrient-dense, low-energy foods (which are more expensive) characterize the eating patterns of disadvantaged populations – in other words, an unhealthy diet that predisposes to weight gain and disease.

Sedentary lifestyles among children aged 3–14, as described in the INCA 1 study (1998/1999) (27), are significantly related to parents' socioprofessional status. Children of unemployed or economically inactive parents or of manual workers spend more time watching television (around 2.5 hours per day on average) than those of executive or freelance parents (1.5 hours). The same trend was seen in the INCA 2 survey (2006/2007). Sedentary behaviour (time spent on all screen devices, including television, video games and computer) in children aged 3–14 was much higher when the head of the household's occupational status was low (3 hours per day on average) than when it was high (1.9 hours). The overall amount of time spent on all screen devices increased between INCA 1 and INCA 2 across all SES groups (9).

Social and economic factors therefore seem to play an important role in determining overweight and obesity (28). The INCA 1 survey (29) showed a significant negative correlation between parents' socioprofessional category and the prevalence of overweight among their children aged 9–14. The prevalence of overweight (including obesity) among children of executive or freelance parents was 6.7%, but it was 30% among those whose parents were unemployed. INCA 2 showed the same trend in 3–14-year-olds: all SES indicators analysed (head of household's occupational status and education level, household wealth composite index and SES composite index) were inversely correlated to children's overweight (including obesity) (9). Consistent results have been found for 10–11-year-old children (30), for whom overweight (including obesity) affects those whose parents are manual workers more than those whose parents are executives, and the children of unemployed fathers more than those of working fathers. Similarly, a study of 14–15-year-old students (7) indicated a gradient of overweight (including obesity) and obesity that depends on parents' socioprofessional category.

Feur et al. (31) showed that obesity among young people aged 10–18 is more frequent in reconstituted families, when the parents' professional situation is precarious and when the food budget is limited. A study of 12-year-olds (32) found overweight to be more frequent in economically deprived areas, with its prevalence being inversely associated with family income and parents' education levels. The study also suggests that the mother's education level has a predominant effect, rather than the family's financial resources.

These studies show that overweight and obesity among adolescents and the behaviours that influence their development – unhealthy eating habits and sedentary lifestyles – are closely bound not only to various socioeconomic indicators such as parents' education levels, financial resources and professional situations, but also to living in economically deprived areas.

## Implementation

A wide range of actions targeting adolescents has been undertaken since 2001. The main initiatives relating to nutrition education are detailed; food supply and advertising were subject to specific measures, as described below.

The Ministry of Education published guidelines on the composition of school meals and food safety in 2001 (33). The guidelines remind catering managers and cooks of children's and

adolescents' specific nutritional needs and emphasizes the school's role in nutrition education and in the development of food preferences. They also provide recommendations on the structure and composition of meals, with a focus on portion sizes and frequency with which foods and dishes should be served, and offer information and recommendations for food safety. Food and drink vending machines have been forbidden in schools since September 2005 under the Public Health Policy Act (2004–806). Additional guidelines on student health were published in 2003 (34), scheduling the installation of fresh-water fountains in all schools by 2007.

The Public Health Policy Act and the Social Security Financing Act (2005–1579) provide a framework for food advertising that is believed to have had a great influence on child and adolescent food choices. Advertisements for soft drinks and manufactured food products are required to include a message promoting healthy eating and direct consumers to a dedicated web site (35), or else the advertisers must pay a tax.

***Initiatives promoting healthy eating and physical activity in the school setting***

Families are most significant in children's and adolescents' development, but school also has an important responsibility in helping them to develop into adults. Health education in the school setting, especially nutrition education, is part of the learning process that gives students the means to build their future life. The school system is a large network through which all young people can be reached regardless of social origins, at least theoretically. The main PNNS initiatives (described below) are consequently specifically directed towards children and adolescents at school. It must be emphasized, however, that adolescents also benefit from interventions targeted at the whole population outside the school setting (such as mass media campaigns, medical staff training and overall improvement of the nutritional quality of food).

The Ministry of Health and Ministry of Education formed a partnership in 2003 to reinforce schools' role in health education. It aimed to define common objectives to promote child and adolescent health and develop coherent actions in priority areas. Promoting healthy eating and physical activity are two such priorities.

***Actions implemented as part of the interministerial partnership***

A national food guide based on the PNNS objectives was created in 2002 as a practical reference document for the general population, offering information on daily food choices and clarification on what "a balanced diet" means. Various versions have been published, including a nutrition guide for parents with a specific section about adolescents published in 2004, an accompanying booklet for health professionals (2004) and a nutrition brochure for adolescents (2005) (35).

The brochure for adolescents aims to give them the keys to healthy eating, based on personal preferences and enjoyment of food. It shows in a personalized way how important eating choices are to growing well, thinking well, feeling well and maintaining a healthy weight. The brochure also provides tips and quick recipes that allow teenagers to balance their meals with the types of food they like. Various profiles are proposed so that everyone can identify themselves in the guide and find solutions that are adaptable to their own situations: for example, "I love sugar", "I like eating in fast food restaurants" and "I feel too fat" are three of the profiles described.

It was distributed to all 12–13-year-old students in France via their science teachers and through a large network of sport and leisure associations (almost 10 000 sites) to extend its reach. The brochure was promoted during spring 2006 through partnerships with a radio station web site and a TV channel popular with adolescents.

The national institute for prevention and health education, National de Prévention et d'Éducation pour la Santé (INPES), published a multimedia nutrition education tool for students aged 11–15, “Fourchettes et baskets” [“Forks and sneakers”], in October 2006. It is aimed at education and health professionals in school settings and aims to encourage students to develop a critical attitude towards the links between their environment and eating habits and to enhance their abilities to make healthy choices adapted to their needs, tastes and habits. A letter announcing the publication of the tool was sent to all French schools as part of the interministerial partnership. The tool is available free on request from INPES.

### ***Other national and local actions***

A PNNS logo was created in 2001 and has been used as a branding for all campaigns, documents and tools produced as part of the programme. NGOs<sup>4</sup> can apply to use the logo on their communication and information media, with an expert committee examining applications to ensure conformity with PNNS objectives. Several associations and catering companies have proposed nutrition education tools for adolescents that have been validated on scientific and education criteria through the logo attribution procedure.

Various bodies conduct a wide range of local initiatives. For example, the well-known French “ensemble pour la prevention de l'obésité des enfants” [“preventing child obesity together”] programme, funded by the food and pharmaceutical industry, uses community mobilization approaches to prevent obesity. Other projects are co-financed through health-nutrition grant programmes. Two such projects are of particular interest for the present case study: the “Val-de-Marne” project and the Intervention Centred on Adolescents' Physical Activity and Sedentary Behaviour (ICAPS) initiative (36). Both are primary prevention programmes focusing on adolescents, are implemented in school and are based on the promotion of healthy eating and/or physical activity. They have already shown good results in terms of behaviours and BMI. ICAPS will be expanded at national level through an information guide targeted at local authorities, national education associations and extracurricular education providers. The guide, developed by INPES in collaboration with ICAPS, can be accessed online (37).

Free fruit is distributed once or twice a week in many schools in deprived districts thanks to local funding.

## **Conclusion**

Different authorities and local and nongovernmental bodies have been active since the beginning of the PNNS. The partnership between the ministries of health and education has paved the way for a profitable collaboration in the field of health promotion that has already proven successful.

It is widely recognized that food choices and physical activity are determined by individuals and by environmental, social and political factors. Many of the actions undertaken during

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<sup>4</sup> In this specific sense, “NGOs” refers to non-state organizations, including local public organizations and private companies (such as catering companies).

PNNS 1 were about providing nutrition information and education to positively influence individuals' choices. Fewer initiatives have targeted collective responsibility, including changes in environment and food supply. Authorities recognized this and directed PNNS 2 towards achieving a better balance between individual effort and collective responsibility. "Nutritional commitment" charters with economic stakeholders have been set to improve the nutritional composition of existing or new products, portion sizes, product presentation, communication and advertising.

Recommendations on food supply at school were published in 2007 by the school catering and nutrition markets study group, but guidance on implementation is still awaited.

Progressive implementation of the school measures described above needs to be widened. Adolescents spend a limited part of their time at school; their family and leisure environment and the availability of food outside school determine their diets and physical activity levels to a great extent. Programmes such as ICAPS set physical activity actions inside and outside school. Such actions, coherent with and complementary to those taken at school, are necessary to achieve consistent behavioural changes and must be continued.

Improving children's sleeping habits, which appear not to correspond with recommendations (38) and which may be related to obesity (39), is among the new challenging issues that will need to be tackled over the next few years.

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## 2.4. Overview of national health policy and interventions on reducing social inequalities in health in children and adolescents in Germany

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### Context

This case study describes ongoing activities in the promotion of children's and adolescents' health and well-being in Germany. The focus is on reducing social inequalities in child health, particularly in relation to mental health, nutrition and physical activity. It builds on an earlier case study on social cohesion and mental well-being, the main findings of which will be summarized briefly.

A case study on promotion and prevention initiatives in adolescent mental well-being in Germany published by the WHO/HBSC Forum in 2007 presented results from the longitudinal study on mental health and well-being in children and adolescents in Germany (BELLA), which pointed to the growing importance of mental health issues and highlighted the potential of children's and adolescents' health resources. Health interventions such as life-skills programmes were described as important tools in reducing substance consumption, improving mental health and promoting social cohesion. The "PrimaSchule" study was selected as an example of a unique initiative. It evaluated the effectiveness of three common life-skills programmes in Germany (Fit und stark für's Leben [Fit and strong for life], Erwachsen Werden [Growing up], and Buddy-Projekt [Buddy project]) in two federal states (Berlin and Schleswig-Holstein) among socially disadvantaged children and adolescents from migrant backgrounds, with a special focus on mental health.

Using international data, Ravens-Sieberer et al. (1) showed an association between low family affluence and mental health problems in children and adolescents in 8 out of 11 countries. Across countries, children growing up in more-affluent families reported better mental health than those from low-affluence backgrounds. These findings are fairly clear, but some caution is required in interpretation, as standards of living differed between countries in the analysis: the experience of deprivation varies greatly and cannot be interpreted uniformly (1). A key point made in this paper is that there is a major need for early intervention and for approaches focusing on reaching less-privileged groups.

The present case study shows notable improvements in addressing child public health issues in Germany. The Federal Government and federal states have introduced programmes and interventions addressing health promotion and disease prevention in younger age groups (2). The case study begins by highlighting key national policies and reports on child health and the national health targets that have been defined and agreed by relevant actors in the health system.

### Health care system

Germany has 16 federal states, each with its own constitution, parliament and government. The federal states are responsible for education systems, security and environmental law and, in relation to the health care system, for inpatient care and the public health service. The

federal Ministry of Health is responsible for health care policy in cooperation with other federal ministries, and institutions associated with the federal ministries are responsible for health monitoring, research and prevention (3).

Germany has a conservative welfare system with good provision of health care services, offering patients immediate access and high-level benefits. Cost-effectiveness, however, requires improvement (4). Extensive health care system reform in 2007 aimed to improve this and several other problems.

### **National reports on child health**

The Federal Government produced a series of reports on child health to prioritize its place on the political agenda. They highlight key child health issues, define action areas and highlight relevant information gaps where further research, particularly empirical research, is needed.

#### ***Strategy paper on child health promotion***

The overarching goals of the strategy are to:

- enhance equal opportunities in health for all children and adolescents;
- improve the prerequisites for a healthy lifestyle;
- motivate children and adolescents towards a healthy lifestyle and integrate it into everyday life;
- reduce health risks;
- support healthy physical and mental development of children and adolescents; and
- raise public awareness of child health issues.

Specific priority areas are defined, including the importance of developing health competences early in life and personal, family and social resources for healthy development.

The strategy aims to connect all relevant stakeholders, establish goal-oriented cooperation and corporate identify and close action gaps. Specific activities, including a review on the health status of children and adolescents (5) and a report on the mental health of schoolchildren in day schools (6), were commissioned. Most activities include additional research which should flow into the overall strategy. The strategy outlines actions that were largely drawn from data from the Studie zur Gesundheit von Kindern und Jugendlichen [National Health Interview and Examination Survey for Children and Adolescents] (KiGGS).

#### ***The Federal Government's third report on poverty and wealth***

The report, published in 2008, outlines changes necessary to overcome poverty and evaluates recent actions. It focuses on key factors associated with poverty: economic situation, employment, labour, participation, education and welfare. The main findings relevant for children and adolescents (7) are that:

- education is not only a basic prerequisite for employment, but is also central to health-promoting knowledge and behaviour;
- while family education levels have risen in recent years, children's educational achievement still largely depends on parental education levels; and
- poverty risk for children depends strongly on parents' participation in the workforce – having at least one family member working full time reduces the poverty risk for households with children from 48% to below 8% (8).

The Federal Government recognizes that changing family structures and the increasing trend towards single-parent households and non-marital unions creates a need to adapt working conditions. Statistical reports show that in 2008, 16% of children grew up in single-parent households (8). Flexible and qualitative child care is necessary, particularly to promote the education and participation levels of children from low socioeconomic or migrant backgrounds (8).

Following the report's publication, the Federal Government adjusted existing poverty-reduction programmes, developed new initiatives at national level and outlined actions for federal states, such as developing and promoting all-day schools and day-care centres. Other programmes support families directly by reducing day-care centre fees and increasing the children's allowance (7). The report provides an ongoing tool for all institutions involved in evaluating national improvement initiatives.

### ***Thirteenth report on children and youth***

This report was published in 2009. It focuses on the current health situation and living conditions of children and adolescents and aims to raise awareness of child and youth welfare issues.

The Federal Government is required during every legislative period to publish a report by an expert commission outlining future action needs. The report is introduced by a section on underpinning concepts followed by a summary of its main findings and health data presented by specific themes for each of the following age cohorts:

- under 3 years (bonding and autonomy)
- 3–6 years (language development and exercise)
- 6–12 years (developing relationships)
- 12–18 years (identity development)
- 18–27 years (decision-making and taking responsibility) (9).

Data presented in the report indicate positive determining factors for child and adolescent development, but also show that 20% of adolescents show noticeable problems, mainly in terms of chronic somatic and psychological symptoms (9). Empirical findings have repeatedly confirmed the negative effect of social inequalities on health, which particularly affect children from socially disadvantaged families (10). The risk of poor health and risky behaviours is much higher in this group of children, for whom a social gradient exists (that is, differences exist not only between poor and rich, but also between those of middle and high SES and low and middle SES (10)). Targeted prevention through socially sensitive interventions can help reduce these health inequalities.

The third and the fourth part of the report evaluate existing prevention and health-promotion programmes. The expert commission uses the results to develop recommendations and guidelines for child and youth welfare, involved institutions (such as schools) and policy-makers. The main conclusions are presented in five goals that aim to:

- develop a systematic support programme for families from pregnancy to preschool age to ensure early support for child development and to reduce child maltreatment;
- promote healthy nutrition and exercise;
- support early language training;
- foster health promotion in schools; and
- encourage healthy psychosocial development in adolescence and early adulthood.

The Federal Government has defined national health targets to address some of the issues raised in these reports: these are described in the next section.

## National health targets

The cooperative association “gesundheitsziele.de” was established to support a child health-promotion strategy. One of its aims is to work closely with numerous actors from politics, research, health professions, the health insurance sector and patient and citizen organizations to define practice-oriented health targets and suggest how they can be implemented (11). Health targets for various public health issues, including type 2 diabetes, breast cancer, tobacco consumption, patient sovereignty, depression and healthy growth, have been developed. Targets for child health were updated in 2010 to reflect insights from health reporting that identified new issues of importance to the implementation process.

Specific child health-promotion national health targets, with implementation guidance, have been defined for three health areas: nutrition, exercise and stress management (12). These three domains are closely interrelated and are strongly associated with other important health outcomes (such as obesity and overweight) that are typical of modern lifestyles (13) and which are often associated with SES and education level. They therefore require measures and approaches that address social inequalities in health for children and adolescents.

Data on health-target evaluation and implementation need to be updated regularly to ensure benchmarking of improvements. Specific data are required to allow precise and comprehensive assessment of relevant problems and developments. Previous research has shown, for instance, that not all children and adolescents profit equally from public health programmes. National health targets therefore define equal health opportunities as an important cross-cutting goal.

Health targets on “growing up healthy” were updated on the basis of health-reporting intelligence. Recommendations covered the health areas cited above and focused on the three most important settings: kindergarten, school and family/leisure time. Children spend most of their time in these settings, so this is where health behaviours are shaped and health resources, such as competence and skills, are acquired and developed. “Gesundheitsziele.de” defined the targets in the following areas:

- promotion of life skills in children and adolescents;
- reduction of stressors and negative factors for children, adolescents and families;
- promotion of physical activity;
- reduction of unhealthy nutrition and promotion of healthy nutrition in families; and
- improvement in health-promotion conditions and structures in kindergarten, schools and family environments.

Recommendations for starter activities in different areas, such as banning food commercials targeting children and prohibiting their placement in children’s programmes, establishing life skills as a curriculum topic (with associated teacher training) and addressing health targets, were proposed.

The next section highlights approaches to addressing the growing social inequality in children’s and adolescents’ health in Germany. Some are ongoing long-term initiatives while others are time-limited.

## **Approach**

Germany has introduced some measures and projects aimed at reducing unhealthy eating habits, physical inactivity and overweight and related diseases (14). Federal authorities, federal states, communities and civil society work together to jointly achieve improvements in health-target areas.

Implemented measures generally target school-aged children and adolescents in education settings. Kindergartens and schools are very important settings in which public health measures can positively influence child health. The interconnected areas of nutrition, physical activity and mental health are priority areas for integrated health interventions (14).

A selection of ongoing health-promotion activities targeting children and adolescents is now presented.

### ***National health goal for children: "Growing up healthy: life skills, exercise and nutrition"***

This was the only health goal in 2003 focusing on a defined population group. It was revised and supplemented in 2006 and again in 2010 by "gesundheitsziele.de", which worked with policy-makers, practitioners and scientists to develop a nationwide strategy designed to be easily adopted at federal-state level. It focuses on major youth health domains and provides relevant examples to enhance practical application. The national health goal has helped to foster various actions and programmes at federal-state and municipality levels.

### ***Nationwide cooperation network "Health promotion for the socially disadvantaged"***

The overall goal of the network, which was initiated by the Bundeszentrale für gesundheitliche Aufklärung (BZgA) [Federal Centre for Health Education] in 2003, is to improve health opportunities and strengthen the health of people in severe social circumstances. One focus area deals with health promotion for deprived children and adolescents. The network works with experts to develop actions and exchange information and knowledge on good practice among federal states. The network, coordinated by BZgA, developed scientific criteria for "good practice" and disseminates outstanding projects through a continuously updated report. It also organizes symposia and training for educators in day-care centres to support socially deprived children during the critical developmental phase and to influence parents towards a healthier lifestyle.

### ***European project "Closing the Gap"***

One of the main challenges in public health is the reduction of socioeconomic health inequalities. The "Closing the Gap" project aimed to "develop a European knowledge base and infrastructure in order to implement and strengthen strategies and actions to reduce health inequalities" (15). Twenty-two national public health and health-promotion agencies took part in the development of national situation analyses on existing policies, structures and actions between 2004 and 2007.

The project encouraged agencies to evaluate national strategies and programmes against those of other European countries and to start action at EU level. Analyses were summarized in a European directory of best practices to reduce health inequalities and outcomes have been integrated into the European health inequalities portal.

### ***German Alliance for Mental Health***

The alliance aims to promote mental health throughout German society, prevent mental illness, provide education on mental health and reduce stigmatization and discrimination. More than 60 alliance partners from research, health promotion and self-help groups have been working since 2007 on nationwide anti-stigma programmes and actions to support social acceptance of mental disorders. It has organized conferences, a national “mental health week” and published a study on the implementation of interventions to destigmatize mental illness (16) as part of the European Pact for Mental Health and Well-being. The alliance sees children and adolescents as an important target group in its pursuit of sustainable change in society over the long term. It gathers knowledge in the field and works on nationwide strategies to raise awareness and reduce stigmatization.

These examples represent a broad spectrum of approaches currently being taken to address social inequalities in children’s and adolescents’ health. Common to all is an intersectoral, interdisciplinary approach, drawing on actors and stakeholders from research, practice and politics. Although not all focus solely on children and adolescents, they do include them as an important target group with specific needs. While the nationwide cooperation network “Health promotion for the socially disadvantaged” initiative and European project “Closing the Gap” specifically focus on the reduction of health inequalities, the other two approaches focus on the three areas of health defined in national health targets. All approaches, however, aim to reduce social inequalities in health.

## **Evidence**

Empirical data from representative surveys are needed to define and evaluate health targets. The data underpinning the health targets for child health promotion and the approaches described above came mainly from a large national examination survey conducted between 2003 and 2006 and modular subsurveys tied to the core survey. The next section describes these and discusses the relevance of their results for evaluation of national health targets.

### ***Empirical data from child health surveys***

Until recently, lack of representative data on children and adolescents hindered evaluation of the effectiveness and success of measures targeting child health promotion. Most available data came from statutory health insurance, the federal statistical office and the public health service, but they provided very selective information and were not sufficiently comprehensive for evaluation purposes.

### **The KiGGS study**

Due to these limitations, large-scale evaluation of health targets was not possible until KiGGS survey data became available. The KiGGS survey was the first representative survey of children and adolescents of all age groups in Germany. It provided comprehensive information on the health status and health behaviours of 17 641 children between 0 and 17 years. Data for this cross-sectional survey were collected in 167 randomly selected study locations across Germany between May 2003 and May 2006. In addition to questionnaires, laboratory tests and physical examinations were conducted by trained personnel (17).

The core survey was supplemented by five additional modules (smaller in-depth studies designed to collect detailed information in particular areas). Four concentrated on specific health topics (mental health, nutrition, physical fitness and environmental exposure) and the fifth involved a sample-size increase for Schleswig-Holstein to obtain a representative sample (17). Representative subgroups of participants were asked to participate in one of the

additional survey modules. The mental health module was the BELLA study, which collected in-depth information on mental disorders, emotional well-being and behaviour.

### **The BELLA study**

Past prevalence estimates of mental health and mental health problems were far too inaccurate to enable an evaluation of the mental health situation of children and adolescents in Germany. The BELLA study collected data from 2863 children and adolescents aged 7–17 years and their parents to overcome this deficit and to close the gap in mental health. Participants were asked to complete questionnaires and children aged 11 and older were also interviewed by telephone; further interviews took place one and two years after the baseline interview (18).

The BELLA study delivers important data on prevalence rates and starting points for future prevention and health-promotion interventions. The identification of risk factors for poor mental health, in addition to factors that help protect against health deterioration, was an important milestone for child health in Germany. The study showed that single- or step-parent households, chronic disease or mental disorder of one of the parents and low SES were associated with increased risk of mental health problems in children and that accumulation of these risk factors increased the probability of adverse mental health (19). The presence of resources such as good family climate reduced the risk of mental health problems, but even plentiful resources could not compensate for the negative effects of a stressful environment (19).

Children with mental health problems suffer in a variety of areas, as reduced health-related quality of life scores imply, and many do not receive treatment (20). In light of this, it is important that prevention and interventions concentrate on strengthening individuals' resources (20).

The KiGGS and BELLA studies now make it possible to develop representative statements about the health situation of children and adolescents in Germany (12) and assess implementation of national health targets. Despite some limitations, the data are useful in indicating the extent to which health targets for child health promotion have had an effect.

### ***Evaluation of health targets***

Selected results from the KiGGS and BELLA studies are now presented against the backdrop of the national health targets and approaches to reducing social inequalities in health.

### **Promotion of healthy nutrition and physical activity**

Nutrition and physical activity are two of the main factors strongly associated with overweight and obesity. The KiGGS study revealed that 15% of children between ages 3 and 17 were overweight, and 6.3% obese. The risk of overweight and obesity was higher in children and adolescents from lower socioeconomic and/or migration backgrounds and whose mothers were overweight (21). KiGGS results also show that socioeconomic and migration backgrounds play a role: the better-off the family, the better the nutrition behaviour of the child, and children from migrant backgrounds were worse-off compared to their German peers (12).

With the exception of fluid intake, which satisfied the recommendations of the German nutrition society, intake of complex carbohydrates, fruit and vegetables were below recommended levels in the KiGGS study. Dairy intake and fish consumption were also

generally too low, but meat consumption was very high (50% of boys aged 12–17 years consumed more than double the daily allowance) and more than 80% surpassed the daily allowance of sweets and snacks, including soft drinks. Better nutrition habits were found in younger age groups and in girls (12).

Physical activity is an important health determinant and low levels are associated with higher risk of overweight. Despite many options for physical activity, studies show a declining trend in children as they grow older (22,23). The HBSC study in Germany has revealed that while 20–25% of 11-year-olds engaged in moderate-to-vigorous physical activity on a regular basis, this reduced to 10–16% at age 15 (22). Germany ranked in the bottom half in international comparisons of this indicator.

The KiGGS study confirms the downward trend of physical activity with increasing age (23). Only 11% of girls and 18% of boys aged 17 years reached the target level of almost daily physical activity. This stands out in great contrast to the level of physical activity of younger age groups (3–10-year-olds), of whom 75% were engaged in activities outdoors (according to parent-reported data) (12). Children and adolescents from lower-SES families, with a migration background or coming from the former German Democratic Republic were at greater risk of not engaging in sports activity (23). Tests for motoric fitness in the KiGGS study suggested an association between fitness, migrant status and socioeconomic background (24).

The nationwide cooperation network “Health promotion for the socially disadvantaged” established a network for the exchange of knowledge and practice and has developed a set of criteria for assessing projects in this area. A platform is used to pass on knowledge so practitioners and others can learn from other ongoing activities. This form of exchange helps in passing on the knowledge about successful and promising prevention programmes aimed at reducing overweight and obesity in children and adolescents, and health interventions promoting healthy nutrition and physical activity can be disseminated and established beyond regional and state borders.

### **Strengthening stress-management competences**

In the BELLA study, 14.5% of children and adolescents between 7 and 17 years were identified as having at least one specific mental health problem. Many reported substantial comorbidity and less than half were receiving treatment (25). KiGGS further showed that those from socially disadvantaged families and/or migrant backgrounds were at greater risk of poor mental health (26).

Gender differences around personal, social and family resources also emerged. Gender-specific analyses revealed that boys were better-off in terms of personal resources, while girls had better family and social resources (12). BELLA identified family climate as a particularly important risk factor for children’s mental health (19). Accumulation of risk factors increased the prevalence of mental health problems, while the presence of individual, family and social resources reduced them (19). Data analyses of the follow-up BELLA surveys (at one and two years) will provide further information on their incidence and development as well as their interaction with protective and risk factors (20).

These findings underline the importance of a health policy strategy aimed at promoting mental health, as they show substantial differences in children and adolescents in this health area when social background is taken into consideration. Strategies should aim to address all

groups but should pay particular attention to the needs of high-risk groups. The German Alliance for Mental Health is making an important contribution to this by raising awareness of mental health problems throughout the population by means of various activities, including conferences and publications.

### ***Strength of the evidence base***

The KiGGS results make it possible to formulate gender- and age-specific targets and suggest further measures in each of the three health areas (12). The data provide valuable information on children and adolescents from socially disadvantaged families and from families with a migration background.

Even with these sources, however, Germany still lacks longitudinal data on child and adolescent health to enable evaluation of the health targets. The Robert Koch Institute will establish health monitoring to collect data from all age groups on a regular basis to help overcome this deficit (27). The KiGGS follow-up survey started in 2009 and is scheduled to run until 2012, collecting data from the original KiGGS cohort via telephone interviews. An additional sample of 0–6-year-olds will be interviewed to obtain information on the new generation of children and adolescents in Germany. It is hoped that these new data will close important information gaps and set the stage for further development of the present health targets (12).

### **Implementation**

Data from surveys on children and adolescents in Germany confirm that most are healthy and are growing up in healthy conditions. Some, nevertheless, face adverse conditions, putting them at risk of poor health and diminishing their chances of healthy development. Unequal health opportunities are particularly visible along the socioeconomic gradient, which shows that those who are socially disadvantaged do not have the same opportunities as children from better-off backgrounds.

The section on “Approaches to reducing inequalities” (above) highlighted different measures taken in nutrition, physical activity and mental health. These are currently ongoing, focusing on identifying specific health risks and identifying possible means of addressing them. Many measures were designed to address the unequal distribution of health opportunities and to counteract the social divide that not only affects adults, but also has an effect on children and adolescents. They can be categorized as either situational, behavioural, or both. They use a settings approach (schools, kindergartens and family/leisure time), focus on strengthening and promoting resources (empowerment), stress participation and strive for a low-threshold approach (10).

Implementation initiatives have taken two approaches: those focusing on the optimization of prevention services; and those based on the settings approach (10). The project “Ich geh’ zur U! Und du?” [“I’m going to the U! And you?”] provides a good example of the first kind of approach as it accessed difficult-to-reach population groups, such as families with a low education level and those from a migrant background. The project’s goal was to inform and motivate parents from socially disadvantaged backgrounds to participate in an early-detection screening and immunization programme for their children. It was active at neighbourhood level, lowering the threshold substantially. Evaluation results of the pilot phase showed that early-detection screening participation rates increased by a third in families from migrant backgrounds (10,28).

The settings approach focuses on the context of daily living where health and risk behaviour takes place (10). Numerous initiatives are underway in Germany, many of which concentrate on subgroups at increased risk (such as single-parent households). Most focus on schools and kindergartens. Germany also has also many regional health-promotion activities for socially disadvantaged children that show promising results. Unfortunately, the lack of a cross-regional, state-wide national political structure hinders their effect.

The following conclusions, based on the initiatives' current situation, can be drawn (10):

- social inequalities are a cross-cutting topic relevant to all political sectors;
- cooperation between government and nongovernment stakeholders is important, as is intersectoral networking;
- socially sensitive prevention and health promotion should be based on scientific evidence;
- the implementation of research evidence in practice needs to be strengthened;
- monitoring is important and should include regular reporting on health inequalities;
- assessments of the social effects of preventive measures are necessary;
- structure-forming measures are needed to support sustainability; and
- “soft” factors (raising awareness and strengthening engagement) need to be developed.

Longitudinal data from the KiGGS survey will shed light on the effectiveness of the approaches and whether they have been successful in reaching the defined health targets. KiGGS and BELLA are already delivering important indications about promising approaches and activities.

Education is an important sector that is closely associated with SES and health. Promoting equal education opportunities for socially disadvantaged children and adolescents is a key step. Other promising approaches include family-oriented support measures, increasing participation through setting-based approaches focusing on children and adolescents' lives in schools, kindergartens and communities, and gender-specific approaches.

Close interagency and political cooperation involving different sectors (in addition to the health sector) are necessary to address unequal distribution of health opportunities and to ensure that all children and adolescents receive equal chances (5). The establishment of the nationwide cooperation network “Health promotion for the socially disadvantaged” in 2003 marked a step in the right direction as it brings together many NGOs. The Federal Government's strategy paper on child health promotion also provides a basis for interagency collaboration.

Health behaviours adopted early in life remain fairly stable and tend to persist into adulthood (10). This has two implications: positive health behaviours need to be further promoted, and behaviours that pose a risk to health need to be prevented. Health-promotion strategies should focus on groups with the riskiest health behaviours (such as those who use tobacco or alcohol, have poor nutrition and do not take part in physical activity) and those with poorer health and mental health and should use approaches specifically designed to reach them. For many years, prevention programmes and other public health measures have failed to reach those who are in greatest need, resulting in the so-called “prevention dilemma” (29). Research has focused too little on children's and adolescents' social and health circumstances (30) and Germany still lacks comprehensive health and social programmes that address the relationship between social status and health (10).

Empirical research results from, for example, the German HBSC survey show that material factors (family structure, perceived family wealth and (food) poverty) are the main explanations of health inequalities among German adolescents (31). These results are in line with other literature on the subject, including international findings on the association between SES and self-rated health (32,33). This means that future strategies for prevention measures aimed at reducing health inequalities in children and adolescents should focus on the material circumstances of less-affluent groups (31).

Current political prevention strategies aim to develop programmes that target those at greatest risk and who are socially disadvantaged, while also considering their needs and life situation (10). Apart from, and in addition to, health promotion, redistribution of socially unequally distributed health chances is another important goal of politics (34,35).

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## 2.5. Progress in implementing the national child and youth safety action plan in Hungary

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### Context

Hungary is a republic with a territory of 93 000 km<sup>2</sup>, divided into 19 counties and the capital city (Budapest) (or 7 regions) for administrative purposes. The independent democratic state was established in 1989, with parliamentary democracy based on free elections and a multiparty structure. New legislation eliminated barriers to the development of a market economy.

Hungary faced temporary severe economic decline, unemployment and social polarization in the 1990s and the early 2000s. Currently, Hungary is a member of the United Nations, WHO, the Council of Europe (CoE) and OECD. It joined the EU in 2004.

Injury prevention and safety promotion are focus areas for child health. As is the case in other European countries, unintentional injuries are not only the leading cause of death for children aged 1–19 years, but they also have serious consequences through permanent disability and high direct, indirect and social costs. Hungary is an active partner country in European initiatives aiming to improve child safety, including the European Child Safety Alliance, WHO and EU.

### National policy documents affecting injury prevention

Three important government-endorsed policy documents affect policy for child injury prevention. The national programme for infant and child health, *Children, our common treasure* (1), served as the framework for the development of the national child and youth safety action plan (2), described below. The national injury prevention strategy (3) and the public road transport safety action programme (4) were developed in parallel, each regarding children and young people as especially vulnerable populations.

#### *The national programme for infant and child health*

Adopted in 2005 (1), the programme is based on the assumption that adults' physical and mental capabilities and their ability to avoid disease and maintain health are rooted in the childhood years, as the "losses" suffered in this period cannot be restored later. This is definitely true with respect to the consequences of injuries suffered in the infant years or in childhood. The programme therefore defines injury prevention as the first task under the subsection "public health issues requiring multidisciplinary/multisectoral cooperation", emphasizing that it should be aligned with the national injury prevention strategy.

#### *The national injury prevention strategy*

The strategy (3), which is still under development, was commissioned first by the Ministry of Health and then by the Ministry of Human Resources and is being developed in parallel with the national action plan on child and youth safety. It is expected that it will be formally adopted in 2013. The strategy emphasizes the increased risk to which children and young people are exposed and considers prevention as a priority objective.

### **Road safety action plan**

The plan (4) has several measures that directly or indirectly aim to improve the safety of children and young people while travelling. Planned measures on infrastructure, regulation, inspection and support for efforts to prevent injuries may also have a positive influence on their road traffic safety.

## **Hungarian school system**

Free and compulsory schooling starts at 6 years (8 at the latest) and ends at age 18. Education institutions may be established and maintained by the state, local government, local governments run by minority groups (referred to as “public sector schools”) and legal entities (foundations and churches, for example); there are also private schools. Local (regional) governments administer pre-primary, primary and secondary education (Table 2.5.1).

**Table 2.5.1. Hungarian school system**

<b>Phases</b>	<b>Institutional framework</b>	<b>Age (from-to)</b>
<b>Pre-primary</b>	<i>Óvoda/kindergarten</i> Pre-primary/preschool education Final year is compulsory International Standard Classification of Education (ISCED) 0	5–7 (can be 8 in special cases)
<b>Primary</b>	<i>Általános iskola</i> Single structure – primary and lower-secondary education	6/7–14 6–8, introductory cycle 8–10, rudimentary cycle
<b>Lower secondary</b>	ISCED 1, 2	10–12, foundation cycle 12–14, developmental cycle
<b>Upper secondary</b>	<i>Gimnázium (1)</i> General lower- and upper-secondary education ISCED 3 or 2/3	10/12/14 14–18/19
	<i>Szakközépiskola</i> Upper-secondary general and post-secondary nontertiary vocational education (ISCED 3, 4) ISCED 4 is not compulsory Education is compulsory until the age of 18	14–18/19/20
	<i>Szakiskola (1)</i> Upper-secondary vocational education and training with a two-year general education phase (ISCED 3) Education is compulsory until the age of 18	14–16 (general) (14/15)16–18/19/20 (vocational)
<b>Lower and upper secondary</b>	<i>Szakiskola (2)</i> Remedial-lower secondary general (ISCED 2) and upper secondary vocational education and training (ISCED 3) Education is compulsory until the age of 18	15/16–18/19/20 (1/2+2–4 years)

Source: EURYDICE (5).

Secondary education usually lasts four years. Children who finish primary school can choose between three types of secondary schools, two of which (grammar and technical schools) provide students with a general certificate of secondary education (GCSE) and an entrance exam for higher education. The other type is a vocational/trade school, which does not issue a GCSE or prepare students for university, but focuses on job-specific skills through vocational training and practical experience (6,7).

### **Health differences by school type**

The Hungarian HBSC survey applies a binary classification to secondary schools: those that offer a GCSE and those that do not. National findings showed consistently that students of non-GCSE schools were more exposed to health risks such as tobacco smoking, illegal drug use, alcohol consumption, unprotected sexual intercourse and fighting (6,7). The effect of education type on risk behaviours remained significant when controlled for sociodemographic variables (FAS, gender, grade, school population and region) (8). Further multilevel analyses are needed to explore the relationship between education type and school setting on health in adolescence. These results suggest that prevention programmes should be more focused on vocational/trade schools and should take into account their students' needs and differences in school setting and motivational and psychosocial environments.

While health problems in childhood hinder academic achievement, health inequalities affect school settings. Satisfactory health status is a prerequisite for success in education (9).

### **Approach**

Hungary started a multisectoral strategic planning process in 2008 aiming to reduce mortality and minimize the consequences of unintentional injuries among children and young people. The national child and youth safety action plan sets a target of reducing mortality by 30% in 10 years. Programme implementation commenced in 2010.

### ***Intersectoral action***

Mortality and morbidity data for injuries were analysed during the programme's preparatory phase. In addition, national partners were identified and international examples of strategic planning were mapped.

The action plan was developed following a multisectoral workshop organized by the National Institute for Child Health and held on 23 February 2009. Eighteen experts in health, education, the environment and consumer protection, transportation, law enforcement and social sectors joined young people at the meeting to develop a mission statement and objectives for the next 10 years. The following critical issues were identified:

- road traffic safety
- home safety
- safety in child care institutions
- play, leisure and sports safety
- coordination, evaluation and monitoring.

Working groups of 3–7 experts were organized for the critical issues, defining objectives and proposing actions for the 2010–2012 period and indicators were developed for each to enable evaluation.

## *Actions, 2010/2011*

### **Road traffic safety**

The data collection system for road traffic safety, including injury data and police action, is well organized and supplies information to meet national and international needs, including the International Road Traffic and Accident Database (IRTAD).

Schools are invited to take part in an annual competition aiming to raise the awareness of children at elementary schools on road traffic safety, with 40 000–80 000 pupils taking part each year. The National Committee for Injury Prevention, which aims to introduce traffic safety education into the elementary school curriculum, supports the programme to run an arts competition focusing on children's views of road traffic safety: it attracts over 10 000 entries. The National Institute of Transport Sciences represents Hungary in some international projects aiming to reduce the number and seriousness of road traffic injuries of this vulnerable population group. It collaborates with the NGO Global Road Traffic Safety (GRSP) Hungary on the "Save our lives – a comprehensive road safety strategy for central Europe" project, which is jointly financed by the European Regional Development Fund and aims to enhance children's safety while travelling to school.

The National Institute for Child Health and the National Committee for Injury Prevention developed an education programme for children aged 10–14 that focuses specifically on traffic and water safety. The committee has also suggested changes in the driver-licensing process for young drivers.

Effective legislative changes and enforcement of traffic safety laws were introduced in 2009, resulting in a significant reduction in road traffic mortality for the whole population, including children. The most significant elements were measures to enforce car owners' responsibilities, zero alcohol tolerance for drivers and the introduction of a demerit point system.

GRSP Hungary is increasingly focusing on ensuring child safety. It renovated two practice parks in which child pedestrians and cyclists can learn about road safety and the "rules of the road". Two mobile practice parks are also run by the organization, enabling it to reach children living in rural areas. GRSP Hungary sponsored a campaign to increase safety belt use in cars, which in Hungary is still under the EU average.

### **Home safety**

The National Institute for Child Health developed a set of leaflets for parents covering issues such as safe home environments, parental supervision, specific safety aspects for toddlers, younger school-aged children, adolescents and children living with hearing, vision, mental or physical impairments, and a self-assessment checklist on home safety features. It also produced 14 television slots carrying messages about home safety.

United Way Hungary developed an education programme for children aged 6–10 years and the National Association of Primary Care Paediatricians and Association of Home Visitor Nurses included child safety as a topic in their annual conferences to educate health professionals working with families and children.

The National Institute for Chemical Safety runs a poison-control centre with a call centre for parents and health professionals. It gathers and analyses data from poisoning cases and its

web site provides quality information on children's poisoning. It has also organized "roadshow" training events on childhood poisoning for home visitor nurses.

Bethesda Hospital, the national centre for burns patients, developed a burns and scalds prevention programme for children aged 10–14 that aims to help children who have permanent disfigurement to reintegrate with their peer group.

### **Safety in child care institutions**

The chief medical officer's office reviewed the safety of public school environments across the country in 2009 and the National Association of Community Paediatricians incorporated child safety into its agenda, organizing sessions at its annual conference for school doctors and nurses. The Red Cross has a network of collaborating elementary schools and kindergartens taking up the organization's first-aid courses. It is also active in educating peer helpers and organizing a national competition promoting school teachers' competence in first aid.

The National Institute for Child Health assessed the input on child safety prevention in health visitor and school nurse university curricula and presented recommendations for improvement.

### **Play, leisure and sports safety**

The National Authority for Consumer Protection regularly investigates the non-food stockpile of stores and shops, such as toys, baby and child nursing products and sports equipment. It presents the results on its public web site, highlighting and describing dangerous products.

The best 12 drawings from a competition for 6–14-year-olds on the theme of "safety" were published in a "safety calendar" in 2011. The calendar was disseminated to decision-makers to raise their awareness of child safety issues.

The paediatric clinics of Pécs University supported a media campaign promoting bicycle helmet use, and a child-friendly version of the WHO/UNICEF world report on child injury prevention (10) was translated into Hungarian and distributed to schoolchildren.

### **Coordination, monitoring and evaluation**

The Child Safety Committee, led by the National Institute for Child Health, is dedicated to increasing intersectoral coordination. Governmental organizations, NGOs and youth participants are involved.

The set of indicators developed by the national child and youth safety action plan will be used to monitor and evaluate the programme. These indicators are being used to prepare a report covering the years 2007–2009 that will be used as a baseline from which to evaluate the programme's effectiveness. Ongoing actions include reviewing and summarizing effective national child safety laws from Europe's safest countries and making proposals for changes in Hungarian legislation.

### **Evidence**

Evaluating national programmes is always a challenging undertaking. The most obvious desirable outcome would be a reduction in morbidity and mortality from unintentional injuries, but this would not necessarily provide evidence of the programme's effectiveness: determinants and variables not affected by the programme may be the responsible agents for

reduction. Improvements in the prevalence of fatal and serious injuries will nevertheless be an important indicator of the effect of the preventive strategy.

The HBSC study provides an important means of monitoring the prevalence of medically treated unintentional injuries among young people in Hungary aged 11–17<sup>5</sup> and investigating their underlying factors, including socioeconomic determinants such as parental education level, family affluence, community and family structure and gender. The mandatory HBSC question on prevalence of medically treated injuries in the past 12 months was included in the Hungarian questionnaire for the 2010 HBSC survey alongside national questions. This enables an analysis of the injuries (where and how they happened, what were the consequences) and comparison of results with the 2006 HBSC data collection. As the study population is representative of Hungarian adolescents aged 11–17, this provides an opportunity to monitor medically treated injury prevalence at national level.

### ***Links with community size***

Community size influences education and health indicators. Regions and communities differ according to the characteristics that influence inhabitants' life chances (11), lifestyles and education opportunities (12). Small towns and villages may provide safe environments, but access to education and other services might be limited. Big cities offer a greater variety of education options, but their heterogeneous populations may present problems (9). In relation to the school system, small towns and villages face inequalities in terms of access and provision compared to cities (13).

### ***Analyses of changes in prevalence of unintentional injuries among children aged 11–18 between 2006 and 2010***

#### **Aims**

The aims of the analysis were to:

- compare overall prevalence of medically treated unintentional injuries and traffic and non-traffic injuries between the HBSC survey years 2006 and 2010 by gender and school grade; and
- examine the influence of survey year and school type as a social factor in injury prevalence (traffic and non-traffic, respectively) among high-school students (15–18 years).

#### **Material and methods**

The HBSC survey samples of 2006 and 2010 were analysed. All young people reporting unintentional injury data were involved (N=5179 in 2006, N=7637 in 2010). Both samples were nationally representative and were identified through a multistage stratified sampling technique. Strata were created by school category (such as municipal or church), geographic position, community size and secondary school type (grammar school, trade school). Classes were randomly selected from the sampled schools and all students from selected classes were involved in the planned samples.

Following data cleaning, a weighting method was applied to both final samples to reconstitute national representativeness. Details of data collections (April–May 2006 and

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<sup>5</sup> Seventeen-year-olds feature as an additional age grouping in the HBSC survey in Hungary.

March–May 2010) and data entry and other details are described in the national reports of the surveys (6,7).

Questions on injuries were the same in the questionnaires used in 2006 and 2010, respectively. “Injury” was defined for respondents in the following way.

Many young people get hurt or injured from activities such as playing sports or fighting with others at different places such as the street or home. Injuries can include being poisoned or burned. Injuries do not include illnesses such as measles or the ‘flu. The following questions are about injuries you may have had during the past 12 months.

The international mandatory question asked, “During the past 12 months, how many times were you injured and had to be treated by a doctor or nurse?”, with possible replies being: “I was not injured in the past 12 months”; “1 time”; “2 times”; “3 times”; “4 times or more”. Further questions developed nationally were asked in relation to the circumstances of the most serious injury of those who reported having been injured at least once. The question “What were you doing when you got injured? Choose the one that matches best!” was used to differentiate traffic and non-traffic accidents. If students chose one from “I was driving a car, motorcycle/I was a passenger in a car, on a motorcycle/I was riding a bicycle/a vehicle hit me when I was a pedestrian (car, motorcycle, bicycle, or other)”, they were classified as having had a traffic accident. Any answer from “I was doing sports (running, playing ball games, rollerblading, swimming)/I was working (in a factory, during student work, doing housework, helping around the garden)/I was playing, having fun, spending my free time/I was fighting, jostling/I was walking as a pedestrian (I slipped or tripped over something)” was categorized as non-traffic. The option of “I was doing something else, that is: ...” could apply to either category.

Prevalence was calculated by gender and grade (grade 5: students’ mean age was about 11.5; grade 7: 13.5; grade 9: 15.5; grade 11: 17.5). Differences in prevalence between the survey years were subject to chi-square testing.

Odds for all injuries (traffic- and non-traffic related) were examined by separate binary logistic regression analyses (design-based analyses, applying the IBM® SPSS® Complex Samples module (Armonk, NY, 1989, 2011)) for three outcomes (for all injuries: had any kind of injury, for traffic injuries: had traffic injury, for non-traffic injuries: had non-traffic injury). Survey year was included in the models as a predictor to analyse changes of odds and education type (schools that provide GCSE and schools that do not) was also added for high-school students.

All three models were controlled for gender, grade, community type (capital, other town, smaller settlement) and family affluence using the FAS (14). Statistical analyses were produced by the 17.0 version of IBM® SPSS® software (SPSS Inc., Chicago, IL, 2008) and the significance level was 0.05.

### **Results: prevalence changes in medically attended injury, 2006 and 2010**

#### **Number of injuries**

In 2006, 21.7% of adolescents reported having a medically attended injury once in the previous 12 months and 18.3% twice or more, giving an overall unintentional injury prevalence of 40%. The respective figures in 2010 were 20.9%, 13.4% and 34.3%,

significantly lower than 2006 ( $p < 0.001$ ) due to the difference in the rate reporting two or more injuries (Fig. 2.5.1).

**Fig. 2.5.1. Rate of medically treated injuries in previous 12 months, 2006 and 2010**

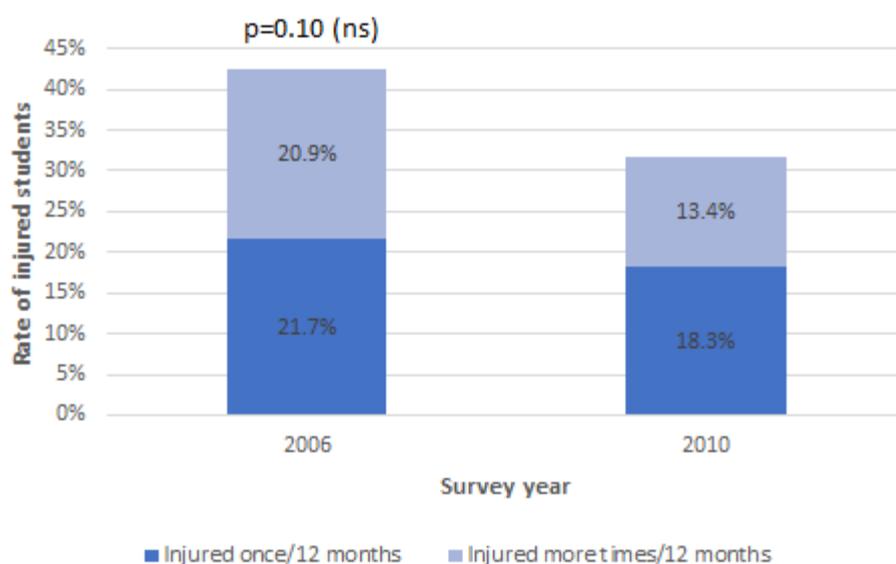


Note:  $N_{2006}=5192$ ;  $N_{2010}=7663$ .

**Types of injury: traffic and non-traffic injuries ratio**

In 2006, 26.2% who had at least one medically treated injury were involved in traffic injuries (either as a pedestrian or as a passenger or driver of a vehicle) and 73.8% in non-traffic injuries (accidents during sports, work, leisure time or other activities). These rates in 2010 were similar at 23.2% and 76.8% respectively ( $p=0.10$ , not significant (ns)) (Fig. 2.5.2).

**Fig. 2.5.2. Traffic and non-traffic injury ratio, 2006 and 2010**

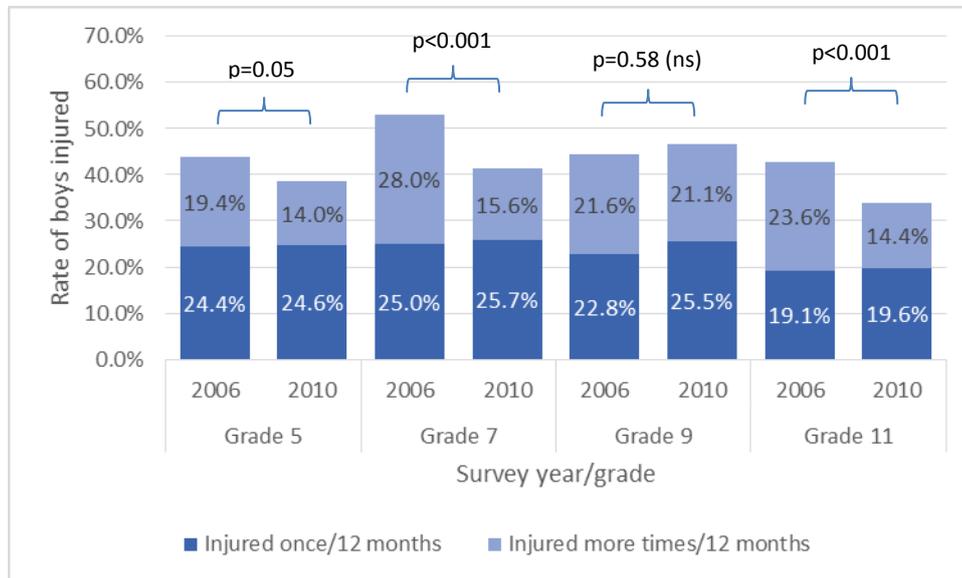


Note:  $N_{2006}=2376$ ;  $N_{2010}=2226$

**Prevalence of injury by gender and age**

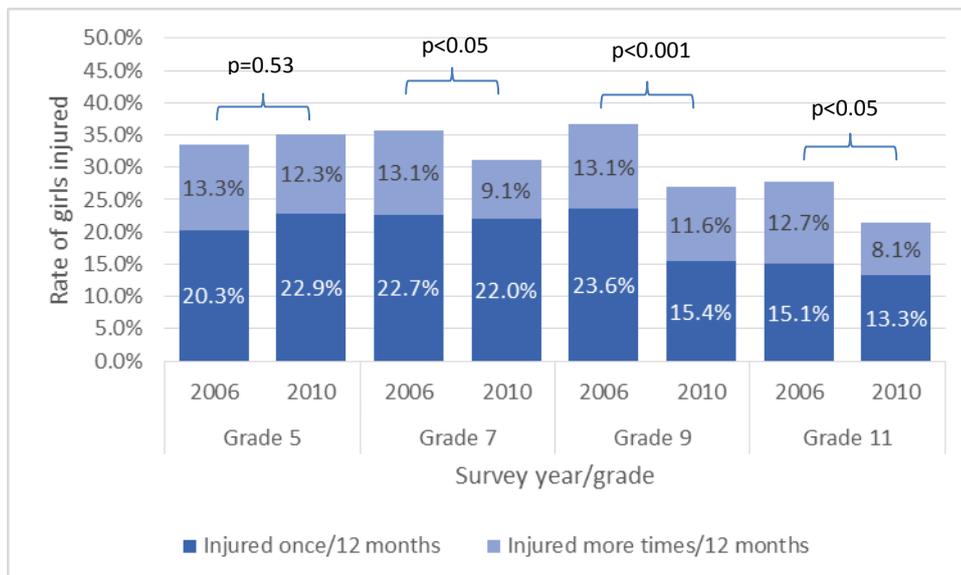
Prevalence rates of single and multiple injuries by gender and age are shown in Fig. 2.5.3 and Fig. 2.5.4. Girls had lower rates in every age group and in both years.

**Fig. 2.5.3. Rate of 11–18-year-old boys reporting medically treated injury in previous 12 months by grade, 2006 and 2010**



Note: grade 5: N<sub>2006</sub>=622, N<sub>2010</sub>=906; grade 7: N<sub>2006</sub>=663, N<sub>2010</sub>=879; grade 9: N<sub>2006</sub>=623, N<sub>2010</sub>=975; grade 11: N<sub>2006</sub>=566, N<sub>2010</sub>=938.

**Fig. 2.5.4. Rate of 11–18-year-old girls reporting medically treated injury in previous 12 months by grade, 2006 and 2010**



Note: grade 5: N<sub>2006</sub>=612, N<sub>2010</sub>=871; grade 7: N<sub>2006</sub>=661, N<sub>2010</sub>=926; grade 9: N<sub>2006</sub>=767, N<sub>2010</sub>=1143; grade 11: N<sub>2006</sub>=678, N<sub>2010</sub>=1025.

The highest injury prevalence for boys was in the grade 7 group (53%) in 2006 and 11 (46%) in 2010. The lowest prevalence in both years was in grade 11 (42.7% in 2006 and 34% in 2010).

For girls, the highest prevalence was among grade 9 in 2006 and 5 in 2010. Lowest prevalence in both years was found in grade 11 students (27.8% in 2006 and 21.4% in 2010).

Injury prevalence was significantly lower among grade 5 and 11 boys and grade 5, 7 and 11 girls in 2010 (in all cases,  $p < 0.05$ ). The decrease was due to the rate of those who had multiple injuries.

### Changes in odds of injury (in general, traffic and non-traffic injury) and effect of education category

Survey year was a significant predictor in all three models (Table 2.5.2). The odds for having at least one injury (in general, and traffic or non-traffic injury specifically) in the previous 12 months were lower in 2010. The chances of high-school students having medically attended injuries decreased by 19–29% between the two survey years.

**Table 2.5.2. Effect of survey year and education category on the prevalence of medically treated injuries in previous 12 months**

Outcome variable	Predictors	Odds ratio <sup>a</sup>	95% CI	p-value
<b>I. Model: INJURY</b> Had at least one injury in past 12 months (reference: had no injury) (N=6 654)	<b>Survey year</b>			
	2006	reference		
	2010	0.74	0.65–0.84	<0.001
	<b>Education category</b>			
	non-GCSE	reference		
	GCSE	0.80	0.65–0.97	<0.05
<b>II. Model: TRAFFIC INJURY</b> Had at least one traffic injury in past 12 months (reference: had no injury) (N=4 736)	<b>Survey year</b>			
	2006	reference		
	2010	0.81	0.58–1.14	>0.05, ns
	<b>Education category</b>			
	non-GCSE	reference		
	GCSE	0.46	0.29–0.74	<0.001
<b>III. Model: NON-TRAFFIC INJURY</b> Had at least one non-traffic injury in past 12 months (reference: had no injury) (N=5 978)	<b>Survey year</b>			
	2006	reference		
	2010	0.71	0.62–0.82	<0.001
	<b>Education category</b>			
	non-GCSE	reference		
	GCSE	0.93	0.75–1.16	>0.05, ns

<sup>a</sup>Controlled for gender, grade, community size and FAS.

Education category was a significant predictor of injury in general and of traffic injury in particular. GCSE students had 20% less chance of medically attended injury than non-GCSE students. The relationship was stronger in relation to traffic injury, where GCSE students had 54% less chance even after controlling for sociodemographic factors. Education category was not a significant predictor of non-traffic injury.

## Discussion

Injury has been the dominant cause of death in young men (10–24 years) in all regions since the late 1970s (15,16). International organizations such as WHO and the EU have urged EU countries to implement extensive injury-prevention initiatives to reduce injury occurrence in adolescence (17).

The national action plan on child and youth safety aims to reduce injury mortality by 30% over 10 years (2). Evaluation of effectiveness requires a monitoring procedure with appropriate indicators. The HBSC study, which collects data every 4 years on health (including injuries) and lifestyle among national representative samples of young people aged 11–17, allows systematic analyses of medically attended injuries (6,7). Changes in injury data between the HBSC surveys of 2006 and 2010 indicate the effectiveness of implemented injury-prevention actions.

Research has examined the effect of well-defined and conceptualized injury-prevention methods on certain type of injuries (such as the effect of helmet use on skull fractures in skiers and snowboarders (18) and seatbelt use among teenage drivers (19)), but spreading the message about effective fatal-injury preventing programmes among adolescents is challenging. No recent study reporting improvement in injury prevalence at population level for any kind of injury could be found during the development of this case study. HBSC is capable of analysing non-fatal medically treated unintentional injuries among young people, but serious and fatal accidents may be underreported in the study due to student absenteeism when the survey is being administered. Injuries among children dropping out of school are also underrepresented.

Traffic and non-traffic injuries were examined separately to distinguish the effects of prevention work. The prevalence of medically treated unintentional injuries among students in grades 5–11 (11–18-year-olds) significantly decreased between 2006 and 2010, but the proportions of traffic and non-traffic injuries within the total injury prevalence remained the same. About three times more injuries occurred during sports, leisure time, work and other activities than during transport and travelling in both years.

Total injury prevalence and prevalence of multiple injuries within the previous year were significantly higher among boys. Unintentional injury prevalence significantly reduced in three out of four grades for both genders between the two survey years.

Possible sample differences in the two survey years need to be taken into account in interpreting these results, as factors influencing unintentional injury occurrence are very broad: they include gender, age, SES, school type, living environment and parental education. To test whether the changes remained significant even after controlling for some significant sociodemographic variables, separate logistic regression analyses were carried out for total, traffic and non-traffic injuries. The odds ratio of total injuries decreased, with 26% in the sample of grade 9–11 students, and there was a greater decrease in the odds of non-traffic injuries (29%) than traffic injuries (19%) between 2006 and 2010.

School type was a significant predictor of total injury, especially for traffic injury. Non-GCSE students had a 55% higher chance of experiencing a non-fatal medically treated traffic injury even after controlling for gender, school class (grade) and SES. Further studies are necessary to explore and identify associations between school type and certain types of injury.

The consistently higher occurrence of traffic injuries among vocational school students suggests that they should be the priority in further preventive programmes. Education programmes can lead to positive changes if tailored to the needs of this specific population group. Germeni et al. evaluated the effect of the same school-based helmet promotion programme in public, private and vocational high schools. Significant improvement was found in knowledge about helmet use, but attitudes and practices appeared to vary across different school types (20).

These findings support the notion that the HBSC study is appropriate for monitoring changes in prevalence of medically attended injuries in adolescence. The improvements shown through the data can relate to many background factors, including coordinated prevention activity in the child health sector. It has to be noted that HBSC is a cross-sectional study, but its findings are important, as they suggest that significant improvement in injury prevention for adolescents can be attained.

## Conclusion

The HBSC surveys of 2006 and 2010 suggest that Hungary could experience significant improvement in the prevalence of medically treated unintentional injuries among adolescents. Strategic planning processes of recent years and the start of implementation of the national child and youth safety programme may play an important role in achieving this aim.

Key factors that may contribute to success have been identified, but difficulties were experienced during the action-planning process and monitoring. These have led to the following conclusions.

- High-level political support is a prerequisite to effective and successful child safety activity, which requires coordinated multisectoral work. In Hungary, the national plans for infant and child health (1) and child and youth safety (2) provide a framework for strategic planning and facilitate the process.
- Potential partners in intersectoral work need to be identified, with their responsibilities, previous relevant work, level of competence and commitment defined. Strong leadership of the intersectoral process is accepted by all participating partners in Hungary.
- Connections and links should be made with ongoing programmes, such as transport safety, to ensure lack of duplication of effort and good communication.
- Data on morbidity and mortality rates from injuries were available, but accessing them called for special effort. Data gaps on issues such as influencing factors for injuries in young children were identified. More work needs to be done to fill these gaps during the implementation phase of the child and youth safety action plan. This is critically important in monitoring progress on addressing the problem of social inequity.
- HBSC is a valuable method of monitoring the prevalence of medically treated unintentional injuries among 11–18-year-olds and investigating underlying factors, including socioeconomic determinants such as education type.
- Indicator-based monitoring at national level required a set of national child safety indicators, which are now in the first phase of implementation.
- The child and youth safety action plan development process resulted in some very positive outcomes in stakeholder involvement. The challenge now is how to manage ongoing expectations.

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## 2.6. The development and use of a set of children's well-being indicators in Ireland

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### Context

The UNCRC entered into force in 1990, recognizing that “the child, by reason of his physical and mental immaturity, needs special safeguards and care, including appropriate legal protection, before as well as after birth” (1). It calls for the voice of children to be heard and respected and for the well-being of children to be considered a primary concern.

The UNCRC was ratified in Ireland in 1992 following extensive consultation with parents, groups working with children and with children. The national children's strategy was published in 2000 (2), outlining a 10-year action plan with a vision of:

An Ireland where children are respected as young citizens with a valued contribution to make and a voice of their own; where all children are cherished and supported by family and the wider society; where they enjoy a fulfilling childhood and realize their potential (2).

The strategy provided the first comprehensive national policy document for the full range of services, adopting a whole-child perspective and recognizing the multidimensional nature of all aspects of children's lives. The recognition that all parts of children's lives are interlinked has implications for public policy-making and the integration of services relating to children.

### The national children's strategy

#### *Background*

The strategy's publication was seen as a key step in implementation of the UNCRC in Ireland. UNCRC principles guided the strategy's development:

- all children should be entitled to basic rights without discrimination
- the best interests of the child should be the primary concern of decision-making
- children have the right to life, survival and development
- the views of children must be taken into account in matters affecting them.

While children actively shape their own lives, they also require support from many others to make the most of their childhood. It was therefore considered important to find a way for people supporting children (families, friends, neighbours, staff and volunteers) to work together for and with children.

The strategy set out six operational principles that had emerged from its consultation process (which included children as stakeholders) as a means of achieving collaborative working. The principles dictate that all actions from the strategy will be:

- child-centred, with the best interests of the child being a primary consideration and children's wishes and feelings being given due regard;
- family-oriented, acknowledging that the family generally provides the best environment for raising children and external intervention should aim to support and empower families within the community;

- equitable, with all children having equality of opportunity to access, participate in and derive benefit from services and receive quality support to achieve this;
- inclusive, recognizing and giving expression to the diversity of children's experiences, cultures and lifestyles;
- action-oriented, with service delivery clearly focused on achieving specified results to agreed standards in a targeted and cost-effective manner; and
- integrated, with measures being taken in partnership by relevant players (2).

### ***Key goals***

Within these principles, the strategy set three goals for its work:

1. children will have a voice in matters that affect them and their views will be given due weight in accordance with their age and maturity;
2. children's lives will be better understood: their lives will benefit from evaluation, research and information on their needs, rights and the effectiveness of services; and
3. children will receive quality support and services to promote all aspects of their development (2).

### ***Implementation***

The National Children's Office was established in 2001 to lead and oversee the strategy's implementation. It was given lead responsibility for children's participation, research and progressing key policy issues in relation to service provision that require cross-departmental action. Individual government departments retain responsibility for implementing relevant actions, with the Office of the Minister for Children and Youth Affairs (OMCYA) monitoring progress and supporting coordination where appropriate.

The Dáil na nÓg, [National Children's Parliament] was established to provide a national forum in which children can raise and debate issues of concern on a periodic basis. It meets under the auspices of the Minister for Children and has clear objectives to support its operation.

A Children's Ombudsman was established by legislation as an independent office. Rather than just examining individual complaints, the Ombudsman's office has adopted a broader role in promoting children's welfare and rights, raising public awareness and promoting children's issues at government level. The office also investigates children's complaints, consults with children on issues of importance to them, advises the government and promotes awareness of the UNCRC. Its annual report provides children with a significant new voice at national level.

The initiatives above address the strategy's first goal, but the case study now focuses on the second goal, which aims to achieve better understandings of how children grow up in Ireland, their needs, the different spheres that contribute to their well-being and how well-being is perceived by children. The strategy identified a need to develop a set of child well-being indicators to support this effort. While some potential indicators, such as child immunization levels and percentages of children consuming tobacco or alcohol, were deemed fairly straightforward, other were perceived as more complicated. It was therefore agreed that a range of indicators related to the three national goals and to the whole-child perspective set out in the strategy would be developed. The next section details the process undertaken to develop the indicators.

The biennial “state of the nation’s children” report series provides, in readily accessible form, regularly updated statements on key child well-being indicators. The reports provide general information and chart progress on achieving strategy goals for national and international audiences, with international comparisons made where possible. The last section of this case study present time trends for some of the key indicators presented in reports published in 2006, 2008 and 2010.

## **Developing a set of well-being indicators for children**

### ***Defining well-being***

The first step was to choose a definition of well-being to inform the National Children’s Office’s work. The definition of Andrews et al. (3) was subsequently adopted. It states that well-being is:

healthy and successful individual functioning (involving physiological, psychological and behavioural levels of organization), positive social relationships (with family members, peers, adult caregivers, and community and societal institutions, for instance, school and faith and civic organizations), and a social ecology that provides safety (e.g., freedom from interpersonal violence, war and crime), human and civil rights, social justice and participation in civil society.

This definition encompasses many dimensions of the child and is therefore coherent with the whole-child perspective adopted in the national strategy (4).

### ***Reviewing literature***

Reviewing literature and existing national and international indicators formed the first part of the multistage approach to indicator development. The National Children’s Office commissioned two background papers, the first to review existing approaches to child well-being and indicator development (5) and the second to explore the availability and quality of existing Irish data (6). The literature review encompassed recommendations from 80 international, national and regional collaborations, with the authors identifying different domains, subdomains and indicators for potential use. Identified indicators were assessed according to the degree to which:

- they were significant, useful, relevant and representative: the authors also examined the significance of the burden they represented and the level of their modifiability following effective action;
- data on the indicator were available or whether it was feasible to collect such data in a timely and cost-effective manner: it was also important to examine the degree to which the data could be disaggregated by gender, age and geographic location; and
- the indicator was valid, reliable, sensitive, consistent and easy to understand.

Following the review of the literature, existing data and indicators and using the above criteria, a final inventory of more than 2500 child well-being indicators was published (5).

The indicators were drawn from:

- 6 international collaborations, including UNICEF (7) and the European Commission (8);
- 39 national indicator sets, including examples from the United States (9), Australia (10) and Canada (11);
- 28 regional indicator sets drawn largely from Canada, the United States and Australia; and
- a review of youth indicators in use in states of the United States (12).

Indicators were also sourced from work undertaken in Ireland, including:

- the Chief Medical Officer's second annual report on children's health (13);
- a health board publication on the health and well-being of children in the mid-west of the country (14); and
- the Combat Poverty Agency's recommendations (15) and those outlined in their children's well-being literature review (16).

### ***Empirical studies***

The second phase involved two empirical studies: a participative research study with children aiming to gain better understanding of their well-being, which is the focus of this section; and a Delphi process with expert adults aiming to achieve consensus about the set of well-being indicators.

The UNCRC (1) and the national children's strategy (2) emphasize the importance of children's participation in decision-making and the importance of them voicing their opinions. Children's participation was therefore perceived as being central to the indicator development process and influenced the outcomes achieved. Nic Gabhainn & Sixsmith (17,18) used a participative approach to investigate how children describe and understand well-being. This section details the methods used in the study.

Acknowledging the limitations of the "draw and write" technique and the availability of other technologies, Nic Gabhainn & Sixsmith supplied schoolchildren with disposable cameras and invited them to take photographs of things that "make them well" and "keep them well" (17,18). Children were asked to write on the back of the photographs how the captured object made or kept them well. Overall, 266 children from primary and post-primary schools took 5334 photographs. Another group of children then viewed and categorized the photographs, identifying what they felt was missing and discussing interrelationships between the categories.

Once the data were categorized, a sample photograph was chosen for each category and was labelled with the category name. A second set of category names was also prepared on flashcards and some blank flashcards were prepared. The labelled photographs and labelled and blank flashcards were then brought to a third group of children who had not been involved in the earlier stages. The children were divided into groups and asked to develop a schema from the categories, looking at the labelled photographs and arranging them in a pattern on A1 sheets. They were not asked to order them in any way or to place them in a hierarchy.

The placement of the photographs provoked discussion about the categories and their relationships with each other. Children were told that categories could be merged or amalgamated to enable better understanding of well-being and were invited to use the blank flashcards to add new categories to the schema if they felt that some were missing. Finally, the groups were asked to relate the categories to each other using markers to draw arrows on the schema.

The final stage of the study was integration of the developed schemata in youth cafes and youth centres with older children. The different groups of children were asked to identify similarities and differences across gender, age groups and between those from urban and rural areas of the country.

After working in smaller groups, the children were brought together and asked to develop one schema of well-being to represent all children across all groups. They developed their own category names and identified 22 they felt represented those developed by the other children. The category at the top of the outer pyramid-shaped schema, which was deemed most important, was “family”. “Friends” and “food” were joint second, followed by “school” and “houses” in joint third. Other categories in the outer structure were, in order of importance: “bed”, “pets”, “music”, “sports”, “TV”, “phones”, “opposite sex”, “money”, “religion” and “books and reading”. The inner pyramid consisted of seven categories but with no agreed hierarchy. It featured: “cars”, “environment”, “clothes”, “playing toys”, “computers and video games”, “travel and holidays” and “art”.

The children were then asked if there was anything missing from the integrated schema. One of the agreed gaps was “happiness”, with the children reporting that being happy was one of the main things that made and kept them well.

This empirical study assisted the expert group in developing the set of indicators and fed into the other empirical study. The categories developed by the children were regarded as domains of well-being, with some specific indicators derived from the annotated photographs.

### ***Gaining consensus***

The second empirical study, which ran parallel to the participative study, involved a three-round Delphi process with key informants, including parents, policy-makers, researchers and service providers. The aim was to achieve consensus on key domains and indicators (4,5).

The expert group reached agreement on a range of domains and indicators that were, in most parts, consistent with those emerging from the participative work with children. It was agreed that the children’s contribution should be honoured when inconsistencies between the expert group and the children’s indicators arose, with the latter being included in the final set.

The expert group agreed on a set of indicators comprising 42 child well-being indicators and 7 demographic indicators to assist in contextualizing children’s lives in Ireland. The vast majority of expert group participants indicated satisfaction with the overall set. Most indicators were either readily available or could have been made available relatively easily, and a few, including “pets and animals”, “the quality of early childhood care and education”, “values and respect” and “nutritional outcomes”, required further development.

### ***Indicators***

The final set of indicators is divided into six domains:

- sociodemographics, including: child population, family structure, parental education level, traveller children, foreign-national children, children with disabilities and separated children seeking asylum;
- children’s relationships, including: relationships with parents, parental involvement in schooling, eating meals together, friendships, pets and animals, and bullying;
- education outcomes, including: enrolment in early child care, parental satisfaction with early child care, transfer to second-level education and achievement in reading, mathematics and science;
- health outcomes, including: birth weight, breastfeeding, health conditions and hospitalization, injuries, nutritional outcomes, disabilities, and child welfare and protection;

- social, emotional and behavioural outcomes, including: participation in decision-making, reading, substance use, sexual health behaviour, self-esteem, self-reported happiness, youth suicide, physical activity and eating habits; and
- formal and informal support, including: public expenditure on education, poverty, availability of housing, community characteristics, environment and places, childhood immunization, antenatal care, accessibility of health care, children in care and mental health referrals.

## **“State of the nation’s children” reports**

### ***Background***

One of the actions detailed in the national children’s strategy is the biennial publication of reports entitled “state of the nation’s children”. The reports employ the full set of nationally agreed indicators as the basis for action and are used to inform local strategic development and monitor change over time at national and regional levels. The series of reports is seen as the first step in ensuring that information about the lives of children living in Ireland is made publicly available to anyone interested in knowing more or in acting to improve children’s lives.

The first report was published in 2006 (19) and presented data compiled by the OMCYA research division in association with the Central Statistics Office, the Statistics Division of the Department of Health and Children and the Health Promotion Research Centre in the National University of Ireland, Galway. The report presented for the first time an overview of children’s well-being in Ireland and set a benchmark for further developments.

The indicator development process allows some degree of flexibility to reflect future changes and developments and consequently retain their contemporary relevance. New indicators were added in 2008 (20) and 2010 (21).

### ***Trends in key indicators***

The time that lapses between reports allows the identification of some trends. This section presents emerging trends in selected indicators, focusing on indicators for which new data were available at each of the points in time.

#### **Child population**

Children under 18 years comprise almost a quarter of the population, which is the largest proportion of children among countries belonging to the EU27. This figure has remained stable since 2006.

#### **Asylum seekers**

The number of separated children seeking asylum decreased from 564 in 2006 to 354 in 2008.

#### **Talking to parents**

In 2006, 65% of children aged 15 reported that their parents spent time just talking to them several times a week, compared to 60% in 2009.

#### **Parental involvement in school**

In 2006, 48% of 15-year-olds reported that their parents discussed how well they were doing at school with them several times a week, compared to 43% in 2009.

### **School attendance**

Around 12% of primary students and 17% of post-primary were absent from school for 20 days or more in the school year. This figure has remained unchanged over the years.

### **Literacy, numeracy, scientific literacy**

The Programme for International Student Assessment (PISA) literacy mean score in Ireland decreased from 517.3 in 2006 to 495.6 in 2009. The mean score in mathematics decreased from 502.8 in 2003 to 501.3 in 2006 and to 487.1 in 2009. The mean score in combined scientific literacy remained unchanged at 508.0.

### **Breastfeeding**

Fifty-one per cent of infants were breastfed on discharge from hospital in 2008 (44% were exclusively breastfed and 7% had a combination of breastfeeding and bottle), up from 45% in 2004, 48% in 2005, 49% in 2006 and 50% in 2007.

### **Injuries and poisonings in children under one year**

Hospital discharges of children under one year with a diagnosis of external cause of injury or poisoning rose from 786 in 2005 to 895 in 2007 and 972 in 2009. Accidental poisoning among 0–17-year-olds decreased from 503 in 2005 to 454 in 2007 and 340 in 2009.

### **Child abuse**

Confirmed child abuse cases rose from 1797 in 2006 to 1978 in 2007 and 2164 in 2008.

### **Happiness**

The percentage of children reporting they were happy with their lives at present remained constant at around 90%.

### **Suicide**

Suicides rates among 15–17-year-old boys rose slightly from 14 per 100 000 in 2005 to 15 in 2009, but doubled from 5 in 2005 to 10 in 2009 among girls of the same age.

### **Poverty**

The percentage of children considered to be at risk of poverty dropped from 23.1% in 2005 to 18.6% in 2009. Those experiencing consistent poverty fell from 11% in 2006 to 6% in 2008.

### **Social housing**

The number of households with children identified as being in need of social housing increased from 22 335 in 2005 to 27 704 in 2008.

### **Immunization**

MMR immunization at 24 months increased from 84% in 2005 to 90% in 2009.

## **Conclusion**

The 2000 national children's strategy, driven by and encompassing the UNCRC, set an agenda for children living in Ireland. Its three main goals, to be achieved within 10 years, identified specific activities, some of which have been cited in this case study. Progress was reported annually between 2002 and 2005 (22–25). These reports show substantial progress year on year, culminating in the 2005 version confirming that all activities had been addressed and progress achieved on all.

The strategy aim of developing a set of children's well-being indicators has also been achieved. The indicator set is now being used to describe, monitor, goal-set, assign accountability and evaluate the state of children in Ireland.

The indicator development process fully reflected the principle that children's voices should be heard. Children took active part in identifying the dimensions of well-being relevant to their lives and experiences and some of the indicators were taken directly from the work and data children provided. Making these data publicly available is of substantial importance to children and those working with and for them.

The "state of the nation's children" report series represents not only an achievement in and by itself, but also enables identification of issues related to children's lives in Ireland. The first report, for example, enabled the prioritization of key issues for development, including alcohol misuse among young people. The 2006 report included international comparisons of alcohol use and highlighted that children in Ireland, especially girls, report very high rates of binge drinking. These findings led to a national consultation with young people on alcohol misuse (26). One of the dimensions identified in this consultation highlighted the need for better availability of youth cafes and other alcohol-free facilities for teenagers (27).

These reports not only facilitate cross-national and time-trend analyses, but also provide regional and local area comparisons (where data are available), allowing benchmarking in specific areas against the national picture and providing a sense of where local priorities need to focus. Some of the trends presented in this case study suggest deterioration in some of aspects of children's lives, but it is important to remember that the 2006 report reflected on Ireland at the height of the "Celtic Tiger" economic phenomenon, while the 2010 report included data collected during a very difficult and complicated economic crisis that continues to affect many people. While this may send a somewhat gloomy message, it is the availability of the data that allows the story to be told, highlights the areas where problems exist and directs policy-makers to respond. Without these data and the publications that present them, these areas and problems could go unnoticed and unaddressed.

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## 2.7. Actions to equalize social and health opportunities in Norway through schools

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### Context

Research over the last 10–15 years has identified increasing social inequities in health in Norway, leading to government policy responses (1). Reducing health inequities was identified as a key priority in Parliament (2) and the Directorate of Health and Social Affairs launched an action plan in 2005 to systematically initiate policies and actions to reduce health equity imbalances (3), followed by two more action plans on physical activity and improved public nutrition addressing the same issue (4,5). These two plans emphasize the important role schools can play in promoting health through encouraging healthy behaviours and equalizing health imbalances. Several action points were identified for schools on how they can facilitate physical activity and healthy eating through physical, organizational and curriculum interventions.

Although development of the two action plans was driven by the Directorate of Health and Social Affairs, the education sector and seven other ministries contributed. This collaborative approach aimed to ensure that action points would be addressed by relevant sectors. Partnerships for health involving different sectors were first introduced through Parliament in 2002 (1) and have subsequently been reinforced (6).

Action points on physical activity and improved public nutrition identified for the education sector complement the Norwegian Government's education policy, the overarching aim of which is to develop an education system that offers equal opportunities for participation and learning to everyone and contributes to equalizing social inequities (7). Education authorities perceive school as a setting from which healthy lifestyles can be promoted, emphasizing daily physical activity and healthy eating during school time as not only being good for health, but also being good for learning (8).

The Norwegian Government decided in 2007 to increase teaching hours as a means of creating more time for daily physical activity and healthy eating in school, promoting basic learning and matching the mean for OECD countries (8). The new approach, called "The comprehensive school day", is based on the idea that physical activity and healthy eating contribute to a more complete and balanced school experience. However, while five more hours for Norwegian, mathematics and English were provided for all grades in primary school from autumn 2008, only two hours were allocated to physical activity for grades 5–7 and no new time was earmarked for physical activity and healthy eating. No changes were introduced at secondary level. Schools were encouraged to develop closer collaboration with staff involved in before- and afterschool care for younger children (an offer available at all schools for children up to 10 years).

National guidelines for healthy school meals were introduced in 2003, encouraging schools to allocate 20 minutes for eating, offer milk supplements and provide options for students who did not bring their lunch to school. Scientists, principals and parent representatives appointed by the Ministry of Education evaluated school meal arrangements in 2004/2005, concluding that 98% of primary-school children brought their own lunch, frequently including fruit, and

that offering school meals to this group was not warranted (9). Data on secondary school students indicated that up to 25% did not bring, or eat, lunch daily. The committee therefore recommended that lunch should be made available to students in secondary schools, with the introduction of free fruit being an important first step. A free fruit programme was introduced to secondary schools in autumn 2006 to meet the observed need to increase fruit and vegetable intake among adolescents (9,10). It was not introduced to primary schools, as the need for public intervention was not seen to be as necessary for this age group (9).

## **Approach**

The ministries and directorates of health and education use three overall strategies to promote adolescent health and well-being and equalize health and social imbalances:

- using existing national and international research to inform the development and implementation of policies and actions;
- collaborating with researchers to access input and advice on which actions to initiate, frequently achieved through national boards or network groups composed of researchers that aim to promote continuing long-term research-based approaches; and
- initiating national projects to stimulate and support staff to meet health and education aims.

### ***Research findings as the basis for action***

Both ministries use existing research knowledge to identify needs and actions. International and national research is used to underpin government white papers, reports and action plans. The HBSC study is one of those used systematically. Norway participates in HBSC, surveying nationally representative samples of 11-, 13- and 15-year-olds every 4 years on their health and well-being perceptions and developing correlates that can contribute to explaining these perceptions. Students' perceptions of the school environment have been given high priority within successive surveys since the early 1990s and are used as a platform for identifying needs for change in learning environments.

Authorities are interested in both national (Norwegian) and international HBSC data. National data are available through reports following each survey which are sent to national and local authorities in health and education sectors. Authorities can also request specific data or analyses to support the development of topic-specific reports and action plans. International comparisons can be made through reference to the HBSC international report, the most recent of which covers the 2009/2010 survey (11).

Findings from other national and international studies are also used to identify priorities for white papers and action plans, with particular emphasis being given to local projects and actions that are effective in stimulating further development locally and nationally.

### ***National scientific boards and groups providing advice to authorities***

The Norwegian Government has a long tradition of systematically seeking advice from scientists to inform the development of national health policies and actions. Health authorities often facilitate dialogue with scientists through national scientific boards. Nutrition was the first area to be allocated a national scientific board back in 1937, with tobacco (1972) and physical activity (1999) following. An expert group on social inequalities was created in 2000 and achieved scientific board status in 2011.

National scientific boards normally have 12 members from different research institutions and sometimes from practice areas. Members are appointed for four years and provide advice to national health authorities on necessary actions based on current research knowledge.

Education authorities do not use national scientific boards but initiate network groups in specific areas such as social competence and mental health. They also have a long tradition of commissioning research summaries and evaluations of current practice in schools with the aim of identifying recommendations for practice. Task forces of researchers are set up to write the reports and recommendations. Short-term advisory groups for ministers are established from time to time: for example, an advisory group of researchers and high-profile athletes was created to provide concrete advice to the Minister of Education on what actions should be taken to ensure the introduction of daily physical activity in schools.

### ***National projects***

Health and education authorities initiate national projects as a strategy to implement their aims and policies. School is frequently identified as the most viable setting to reach children and adolescents with concrete interventions. Health and education authorities often join forces and resources to initiate programmes and actions for topics that cross health and social fields, such as healthy eating, physical activity and social inequities. Three such projects focused on promoting health and well-being and equalizing health and social imbalances are presented below.

#### **Daily physical activity and healthy eating in school**

The joint health/education intervention programme “Physical activity and healthy meals in school” was launched in 2004, aiming to identify models to facilitate 60 minutes of daily physical activity in the course of the school day and ensure implementation of national guidelines for healthy school meals. All schools were invited to apply to participate in early spring 2004, with 400 schools taking part between 2004 and 2006. Each was given a small sum of money to stimulate development of efficient models following principles developed through the Norwegian Network of Health Promoting Schools on how to develop and implement strategies and activities to promote physical activity and healthy school meals (2).

County councillors were invited to a seminar in which the Norwegian Network of Health Promoting Schools planning model was presented. The model emphasizes the importance of establishing ownership of the process among students and staff and the principal’s key role in motivating and facilitating the change process. It also focuses on the importance of addressing structural and organizational elements to facilitate physical activity and healthy eating, rather than aiming to change students’ motivation and knowledge.

Schools were recommended to limit and focus their actions on issues such as identifying target groups or building staff competence before initiating activities for students, with the aim of encouraging the schools to work extensively in an identified area to develop efficient topic-specific models. Cumulatively, the schools went on to develop in-depth and efficient models across a large number of areas, from which a database has emerged. Schools were also requested to establish a project task force involving students, staff, school health services (SHS) and other relevant partners. The information given to county councillors was also made available to the participating schools via the Internet and they were encouraged to organize local school networks to stimulate the development of local models.

The project was systematically evaluated (see next section) through observations, surveys and interviews, with successful models for facilitating daily physical activity and healthy eating being identified. These models are described in a guidance booklet made available to all schools after the project which also includes a video with clips of concrete activities at different schools (12).

### **National web-based tool for teachers on school-based physical activities**

The project “Daily physical activity and healthy eating” aimed for all teachers to facilitate daily physical activity for students as integrated parts of curriculum activities or through breaks. It became evident throughout the project, however, that teachers not trained in physical education did not feel competent in this area. They felt that they lacked ideas and skills to make use of available time slots (13).

The Minister of Education consequently started an initiative to establish a web-based tool for teachers to facilitate daily physical activity in 2008. The tool (14) was launched in August 2009 and includes concrete activities that teachers can use with their students. Users can select activities by defined age groups, level and challenge, curriculum aims (subject or social aims) and indoor or outdoor, with different search options combined if necessary.

### **“The comprehensive school day”**

This project was initiated in autumn 2009 and aims to:

- stimulate closer collaboration between schools and before- and afterschool care attended by younger children before 08:30 and after 14:00 to ensure an hour of physical activity is achieved across the day, with arrangements to promote healthy eating, homework completion and exposure to cultural activities in place; and
- increase students’ total learning outcomes.

Nine schools were selected to test three different models over three years to assess how best collaboration can be organized to ensure that activities are implemented satisfactorily and increased learning is achieved. The models test different ways of managing resources and competences in the settings and methods of organizing activities. The project is under evaluation by Rambøl Consultant Management.

## **Evidence**

Health and education authorities aim to evaluate national projects they initiate, but challenges exist in relation to the projects’ financing systems. Funds are usually available only for one year (or one year at a time), making it difficult to plan the size and scope of activities and to prepare for evaluation. If longer-term funding is provided, it tends to be for only 2–3 years. This presents difficulties in establishing strong and robust research designs to identify the effect of implemented changes in practice: a school normally needs one year to prepare implementation of an intervention, leaving only 1–2 years for the intervention to have an effect – this is generally insufficient to enable robust outcome effects to be identified. Evaluation results for the “Daily activity and healthy eating in school” and “The comprehensive school day” national projects are nevertheless summarized below.

The Research Centre for Health Promotion at the University of Bergen was responsible for evaluating the “Daily activity and healthy eating in school” project, identifying efficient models to support 60 minutes of daily physical activity and implementation of the national guidelines for healthy school meals (15). Emphasis was given to identifying structural aspects important to facilitating physical activity and healthy meals in schools, which involved

changes in organizational aspects and physical structures. In addition, behaviour data were collected from 16 000 students.

Results indicated that primary schools were better able to develop models where physical activity and healthy eating were integrated in daily teaching through the teachers' initiative (13). Secondary schools seemed more successful when physical activity was integrated in the teaching schedule and included learning objectives, involving all students as part of compulsory teaching. Restructuring the school day and setting aside an hour in the middle of the day for physical activity, rather than leaving it for teachers to integrate within their teaching of subjects, was also successful in secondary schools.

Student activity levels were higher in schools where activities were organized by teachers rather than students and where there were many facilities to promote activity (16). Teachers participating in the project asked for training and an online resource of concrete activities to help them in their efforts to facilitate daily physical activity during the school day.

As was mentioned above, "The comprehensive school day" project is currently being evaluated by Rambøl Management Consulting. Analyses of collected data indicate that schools where the project is well established tend to have made greatest progress in implementation (17). Staff in care teams seem to have been more involved in the project than teachers at many schools, possibly because many activities are designed for before- and afterschool settings. This signals, however, a need to develop initiatives to promote teachers' involvement: their input into planning activities is necessary to ensure pedagogical quality.

Most schools facilitate daily physical activity for an hour in the middle of the day. Some make this compulsory for all, thereby ensuring everyone's involvement: this in turn may help to equalize social inequities. Other schools allow students to choose the activities in which they will participate. Most schools struggle with facilitation of healthy school meals and help with homework, with major reported concerns and barriers including inadequate facilities and human resources to organize activities.

Given the developmental structure of the national projects, the most appropriate evaluation design seems to be to adopt an open exploratory approach, aiming to identify success factors and barriers within and across schools and consequently developing guidelines for other schools. A mixed-method approach combining surveys, interviews and observations is needed to capture the mechanisms at work and important implementation components.

Considering the fairly short period allocated to these projects, a two-step model could be considered. The first step would follow the current approach, in which schools develop functional models to achieve identified national health and education outcomes and the models are then analysed and described through a systematic evaluation process. The second step is to test identified functional models in other schools. This would involve a more rigorous baseline and follow-up design, testing whether the identified mechanisms and implementation factors have the intended effects. Following the second step, recommended interventions could be implemented nationally.

Such an approach would secure a better evidence base for dissemination of good practice developed through the national projects. An important element of the projects, however, is to motivate schools to address national health and education project goals in their daily practice: open invitations to participate sent to all schools may incline some to place the national goals

on their agendas, even if they do not become a project school. This in itself may stimulate important development of daily practice at school.

## **Implementation**

Building on the evaluation reports and papers from the presented studies, six factors for successful implementation have been identified.

### ***Dedicated teaching time and resources***

These are highly important in implementing any initiative that aims to equalize health inequities through physical activity, healthy eating and general teaching strategies in school. All students can become involved in activities when teaching time is protected. Dedicated resources such as equipment for physical activities are also necessary to ensure the activities have sufficient quality.

### ***Teacher training***

Teachers are requesting training in areas such as organization of physical activity. Many report that they do not feel competent to organize activities and therefore do not give priority to allocating time to them. Teachers need to be informed about project aims and be part of the process of building competence and embedding the project at school level if they are to be motivated and to understand what they are expected to contribute.

### ***Tools for teachers***

This is partly related to resources, but also highlights teachers' requests for pedagogical tools to facilitate physical activity.

### ***The physical school environment***

The environment is important for physical activity and healthy eating. Few or bad facilities lead to lower-quality activities. Haug et al. (16) showed that students in schools with many facilities for being physically active were four times more active than those in schools with few facilities. Similarly, schools that have a small or dysfunctional area for serving healthy school meals will reach a smaller percentage of students and will be unable to have a positive effect on students' lunch behaviours (18).

### ***Written policies***

Written policies committing schools to facilitating concrete activities are vital in ensuring that they do what they have agreed to do (19,20).

### ***Leadership support***

Leadership support is also crucial for the achievement of project aims. Supportive leadership tends to be associated with more resources (fiscal and human) and higher teacher motivation (21).

## **Barriers**

The evaluations have also identified factors representing barriers to implementation and, ultimately, to success. The biggest barrier reported across studies is lack of time and human resources (13,18,20). "Lack of time" relates to both teachers' time when planning activities and to no scheduled time being set for activities. Individual teacher motivation will determine the amount and character of activities implemented in the absence of dedicated curriculum time. Unmotivated teachers and those who believe themselves to lack competence will only do a minimum, and unmotivated students will not take advantage of available time and opportunities if participation is optional.

Inadequate time spent on preparing the implementation process also seems to be a barrier. Teachers are unlikely to be sufficiently motivated to contribute to project aims if schools do not spend time to get them on board. Building motivation is strongly related to spending time

on how the project contributes to overall school aims and visions (20). Building organizational capacity for implementation is therefore an important part of the preparatory phase, offering opportunities to address professional development issues for teachers and prepare physical and organizational school elements to facilitate implementation (18,20).

## Conclusion

Norwegian health and education authorities employ three strategies to equalize social inequities and promote health, well-being and learning in the population.

First and foremost, they use research to guide national policy and action development. Second, they ensure close collaboration between staff in the ministries and directorates and researchers through national scientific boards and expert or working groups, strengthening the influence of research on policy. Several ministries also collaborate on developing action plans and policy documents and with actors across different sectors at local levels. The Ministry of Health has spearheaded collaboration with ministries and the approach has proven highly successful, resulting in some actions being taken outside the health sector (such as the education sector identifying physical activity and healthy eating as important for learning and the Ministry of Transport providing cycling and walking paths to stimulate active transport). Such actions are outside the control of the health sector, but commitment from relevant ministries has been secured through close collaboration.

Third, the ministries have initiated national projects to stimulate development in areas they identify as being important to meeting health and education aims. School is identified as a key arena for equalizing health and social imbalances: as all children go to school, it is possible to offer interventions to whole cohorts at a stage when health behaviours and perceptions are still under development. Interventions may also influence parents.

Promoting physical activity and healthy eating in schools has been selected as a means of equalizing health and social inequities. New national projects have been initiated every 2–3 years over the last decade to stimulate schools to develop actions and share good practice. The Directorate of Health and Social Affairs commissioned evaluations of each project to ensure good practice that can be shared with all schools is captured. The evaluation process also reinforces contact between ministries and researchers as they are commonly contracted to universities and colleges.

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## 2.8. Improving education and health outcomes for children with chronic disease in Poland – from social campaigns to systemic changes

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### Context

The main objective of this case study is to describe approaches used to support the intellectual development and social integration of schoolchildren at risk of exclusion in Poland. The approaches aim to reduce social inequalities in health from the life-course perspective.

Poland is drafting a national strategy for combating health inequalities, which is identified as a primary objective in the current national health programme for 2007 to 2015 (1). Actions aim to achieve sustainable regional growth and development and to implement a more general strategy of social cohesion (giving each individual the opportunity to fully and actively participate in society), in compliance with EU directives.

Three types of social exclusion have been cited in the literature:

1. structural, caused by education, income or place of residence
2. physical, including health and disability
3. normative, related to alcohol and substance abuse and delinquency (2).

The case study includes a description of applied interventions and focuses on supporting the development of children with chronic disease. Comparisons of studies using different definitions shows variation in prevalence of chronic disease in school-aged children, but it is usually in the range of 20–30%.

### Education system

There are about 5.6 million schoolchildren in Poland. By the 2012/2013 school year, 5-year-olds will receive a year-long preschool preparation, children aged 6–12 will attend primary schools (for two stages of education) and those aged 13–15 will attend lower-secondary schools, completing the third stage of compulsory education.

Almost all students (96.4% in 2009/2010) attend public schools financed by the state (3). Non-public schools are entitled to state subsidies awarded according to student numbers. Education policy is defined at national level, but administration and management of education establishments is decentralized. The Ministry of National Education supervises schools, with regional education authorities conducting specific tasks on its behalf. The Ministry of Science and Higher Education is in charge of higher education.

Special education is offered for children and youth (including young disabled people) identified as having special education needs. It is delivered in special or mainstream schools (in “special”, “integration”, “mainstream” or “therapeutic and compensatory” categories) and in special education centres or health care institutions (4–6). As a rule, children with chronic

conditions (not disability) attend mainstream schools: most of these children do not have special education needs.

### ***Education and social determinants of health***

Education is a fundamental health determinant with an effect far beyond employment and income level. People with higher education are less at risk from premature death and less likely to take part in unhealthy activities. A deepening gap in health status among those of low and high education has been observed in countries with developed public health systems. Increasing the level of education to (at least) ensure widespread secondary education may promote the reduction of health inequalities.

Comparison of data on income and living conditions from the 1988 Polish national census and EU-SILC research from 2009 reveals a significant improvement in general education levels. The percentage of people over 16 years with higher education grew from 6.5% to 15.9% during the period. Other reports, however, indicate some worrying tendencies that have emerged despite these general improvements. The child poverty indicator in 2004 was at 29%, the highest of all EU countries, and while it fell to 22% in 2008 before increasing slightly to 23% in 2009, it is still above the average level for EU states. The risk of poverty significantly rises with the number of dependent children in the household and in single-parent families (7).

Significant differences in regional living conditions, with consequent differences in health, have also been noted. Forty-five per cent of people under 19 years live in rural areas where access to high-quality education is less than in big cities and where the level of parents' education is lower. Limited access to education may impede the reduction of health inequalities more than limited access to other services, such as specialist health care and recreation.

Widespread secondary education does not ensure that the standard of education is equalized across the system. Upper-secondary schools have been popular, providing opportunities to take secondary school final exams for most lower-secondary school leavers. According to Mikiewicz (8), however, the democratization of education is more illusory than real, as schools with exceptionally accomplished students exist alongside those with young people of relatively limited competences. The chance of getting into one of the best upper-secondary schools is mostly based upon individual talents (results of the final lower-secondary school exam), but is also linked to parental affluence, place of residence and parental education. Fewer opportunities to undertake and complete the highest-quality studies are available to young people from what are considered "inferior" secondary schools and those who have to move outside their original community, as this in many cases exceeds the families' financial capacity. Unequal education (and, consequently, vocational and career) opportunities are also bolstered by social attitudes that value self-promotion over teamwork, encourage acquired passivity and support prejudices such as the belief that villages or small towns are inferior to big cities.

## **Approach**

### ***Creating equal education opportunities***

Poland has used a range of systemic approaches over many years to create equal education opportunities for young people. Support for young people from poor regions has included scholarships for those whose secondary education was hampered by financial barriers and who had limited opportunities to undertake tertiary education. At present, schools and

education establishments are running numerous local programmes around equal education opportunities using finance from local authorities accessed through EU structural funds.

Comprehensive reform of the education system structure began in 1999. The main objectives of current changes include:

- strengthening the position of teachers;
- developing a common preschool curriculum;
- lowering the compulsory education age to six;
- developing a programme of reform for general education aimed at describing the precise effects of education at every stage; and
- increasing schools' autonomy in creating the education process.

The Centre for Education Development (9) opened on 1 January 2010 to support schools and oversee professional teacher training. Centre teams deal with health-promotion programmes and prevention of child and youth problems which may indirectly contribute to reducing health inequalities, even though this issue is not their primary objective. The centre also:

- provides national coordination of the SHE and Healthy Eating and Physical Activity in Schools projects;
- develops standards for educating students identified as having special education needs; and
- raises standards in addiction prevention programmes.

### ***Educating chronically ill students as a new systemic solution***

Attempts have been made in recent years to implement systemic changes that aim to enhance the functioning at school of students identified as having special education needs. The measures aim to broaden the knowledge of teachers, educationalists and psychologists working with such students. Education information systems report that 12% of students in Poland have psychological and pedagogical assistance, but mostly outside schools. Estimates suggest that the number of students in need of such assistance is much higher.

The first systemic project, "Raising the effectiveness of educating students identified as having special education needs", was approved for implementation in 2010/2011 by the Ministry of National Education in cooperation with the Academy of Special Education in Warsaw, co-financed by the European Social Fund (ESF). The project's main objectives are to prepare teachers to provide psychological and pedagogical assistance as close to students as possible and to enhance quality of teaching for students identified as having special education needs (10,11).

Around 500 leaders were trained to run courses and support teachers to familiarize themselves with the new system. A range of materials was developed, including guidance on assisting students identified as having special education needs, templates for devising an individual educational and therapeutic curriculum, guidance on identifying students' individual needs and expert assessment of levels of functioning, and a handbook on special education needs (12). Separate models for working with students at preschool, elementary, middle and high school levels were devised for students with complete or partial hearing or visual impairment, mild, moderate or severe intellectual disabilities, multiple disability, autism, chronic disease and ADHD. A separate working model was included for exceptionally talented students, who are also considered to be a group that needs an individual approach and tailored support.

A working model for chronically ill students presents an example of the system in action. The first level – diagnostic – identifies psychophysical determinants of the students' functioning, with particular emphasis on behaviour changes the teacher may notice. The next level relates to specifying education process indicators, with examples of diagnostic instruments used in working with chronically ill students, methods for conducting classes at different education levels and means to determine conditions that impede and facilitate students' development. Negative characteristics include: self-perception being focused on the disease and limitations; difficulties in interpersonal contact; demanding attitudes; learned helplessness syndrome; difficult family financial situation; lack of family support; and inability to create a peer environment for the child due to characteristics associated with where he or she lives.

The situation of children officially diagnosed with special education needs has also been addressed. Their access to public education had been limited because public schools were not obliged to admit them, meaning they might have to attend special or integration schools. Changes introduced in 2010 put an obligation on all schools, particularly public schools, to admit every child officially diagnosed with special education needs. The school's responsibility is to create an individual education and therapy programme for the child and devise a plan of supporting actions.

The second project, "Safe and friendly school", was commissioned by the Minister of National Education in cooperation with the Minister of Health and the Polish Government Plenipotentiary for Equal Treatment and is being implemented as one of many elements of the government programme. Booklets that include information on dealing with chronically ill students at school were developed as part of the project's implementation. Publications include studies on children with epilepsy, diabetes, haemophilia, asthma, psychotic disorders, depression, tic disorders, ADHD, autism, Asperger's syndrome, eating disorders and anxiety disorders. These brief studies, edited by experts, explain in a simple way how school principals, teachers and others working in schools should deal with children with particular chronic diseases (13).

These are the first changes designed to bring Poland closer to implementing an inclusive education system. The idea of inclusion and striving for unity in education cannot and should not function only at a theoretical level, but should be delivered in specific situations relating to students' everyday life. Creating inclusiveness for students identified as having special education needs requires prejudices and stereotypes to be overcome. An inclusive "space" for these students will be:

- focused on the individual and family
- aimed at providing strength to overcome difficulties
- sensitive to all environments in school
- flexible according to changing student needs
- inquisitive to identify the best work methods
- positive, taking into account students' developmental powers (14).

Apart from important practical changes, those relating to social awareness of children identified as having special education needs, including chronically ill children, are also of key importance. Chronically ill or disabled children now join a normally functioning school environment. The school is responsible for providing for their individual needs and promoting good relationships with all members of the school community.

***Examples of social campaigns for children with chronic disease***

Numerous foundations and NGOs are active in pursuing measures aiming to provide equal education opportunities and reduce social (and health) inequalities, such as organizing individual scholarship assistance and financing local programmes. Some were created by parents of children with chronic disease who work to support other families in similar situations.

NGOs initiate social campaigns to prevent social exclusion of children due to poverty, lack of parental care and chronic disease. All children have the right to access medical care free of charge, but additional financial support is required for those who need more advanced treatment or rehabilitation. Table 2.8.1 provides a summary of eight selected campaigns exclusively aimed at supporting ill children. The campaigns targeted diverse groups, such as taxpayers, parents and teachers. Some were taken forward nationwide while others focused on local initiatives, and several were repeated. The common objective was to collect funds for treatment and rehabilitation of specific children, particularly those from families who lived in difficult conditions, but the family, or someone else, had to first report the case.

POLSAT Foundation, which is linked to the main commercial television channel, has been supporting sick and disabled children for 15 years. Practically all of the funds it raises are dedicated to providing financial support for hospitals, child treatment and rehabilitation centres. It also supports the construction of schools for disabled children: the vocational school for visually impaired young people in Laski near Warsaw, which provides education in computer technology and massage, is one example. Other programmes are directly aimed at poor families, including the school lunch programme “Share your meal”, under which grants are issued to finance local programmes that combine free lunches with development opportunities.

Child support is also provided by the Wielka Orkiestra Świątecznej Pomocy [Great Orchestra of Christmas Charity] (WOŚP), described elsewhere (16), which has been active for 20 years. Of five large-scale medical programmes it recently carried out, infants were the target group for three and the other two focused on children in general. Thanks to WOŚP, Poland was one of the first countries to introduce individual insulin pumps for children with diabetes; WOŚP financed them from 2001 until the end of 2009, when the service became available through the national health fund. Priority for provision of insulin pumps is given to children from the poorest families and those with concomitant disease.

The ABCXXI Foundation, which was responsible for the “All of Poland reads to kids” campaign (17), has been active for more than 10 years and is becoming increasingly successful. Its mission is to support children’s emotional development by promoting the idea of reading to them for 20 minutes every day. The initial target group was families with small children, but programmes are now being introduced for primary and lower-secondary schools, including “Reading schools” and “Schools with character”. Equal opportunities are reflected in the foundation’s activities through support programmes for rural libraries and outreach activities in deprived regions.

**Table 2.8.1. Examples of media campaigns in Poland, 2010/2011**

Organizer	Campaign or programme	Media	Description	Web site
POLSAT Foundation	We are for children	Television	Presenting stories of children who require rehabilitation Encouraging people to provide financial support by sending text messages	<a href="http://www.fundacjapolsat.pl/">http://www.fundacjapolsat.pl/</a>
POLSAT Foundation	All you need is good will	Television	Showing children in the care of the POLSAT Foundation describing their dreams and passions, encouraging donors to support the foundation	<a href="http://www.fundacjapolsat.pl/">http://www.fundacjapolsat.pl/</a>
RAINBOW (association of parents and friends of children with vision problems)	Tame the darkness	Billboards Internet Facebook Posters Leaflets	Promoting rehabilitation methods, such as music therapy and contact with animals, for visually impaired children	<a href="http://www.tecza.org/">http://www.tecza.org/</a>
MATIO (foundation for people with cystic fibrosis and their families)	Nationwide cystic fibrosis week	Internet Leaflets Posters Stamps	Providing comprehensive care for children and adults and disseminating knowledge throughout society about the condition	<a href="http://www.murowicydoza.pl/">http://www.murowicydoza.pl/</a>
Polish ADHD Association	ADHD awareness week	Television Radio Internet Leaflets Posters Events	Raising social awareness and boosting understanding and acceptance of children with ADHD	<a href="http://www.ptadhd.pl/">http://www.ptadhd.pl/</a>
Help on Time (foundation for children)	100% parent, 100% employee	Radio Billboards Internet Print media	Encouraging employers to hire parents of disabled children	<a href="http://dzieciom.pl/">http://dzieciom.pl/</a>
SYNOPSIS Foundation	The way to a normal life	Cinema Radio Print media Leaflets Internet	Encouraging awareness of the problems of autism and the need for early intervention	<a href="http://www.synopsis.waw.pl/">http://www.synopsis.waw.pl/</a>
Adoptive Families Foundation	1% of tax	Television Cinema Radio Print media "Citylights" Internet	Raising the issue of children with the lowest chances of being adopted because of their conditions, such as fetal alcohol syndrome or HIV	<a href="http://www.adopcja.org.pl/">http://www.adopcja.org.pl/</a>

*Note:* all web sites accessed 10 June 2013.

*Source:* Factory Communication (15).

Programmes for children with chronic disease and disabilities have also been implemented. The “Reading brings us closer” programme involves events across the country for healthy and disabled children and reading to children in hospitals, sanatoria and other rehabilitation centres is promoted through the “Reading heals” programme. All these initiatives reflect the understanding that reading development programmes may have positive effects on societal education levels.

Parents’ involvement in their children’s intellectual development is emphasized through the programmes. The “Schools with character” initiative, for instance, aims to educate teachers on interpersonal communication techniques to promote appropriate attitudes towards children and to prepare them for professional work with parents.

## Evidence

### *Self-rated health in pupils with chronic disease*

Among the young people aged 13–17 participating in the 2010 HBSC survey in Poland, 951 had a chronic disease or disability, accounting for 20.8% of this age range. Low neighbourhood status had a greater effect on the frequency of chronic disease than low family status. A clear link was shown between educational achievements and family and neighbourhood affluence (18).

Chronically ill students assessed their health as “poor” or “fair” more frequently than their peers (40% versus 19.8%), but the percentage differed according to gender, school achievements and family affluence. Table 2.8.2 shows the percentages of “poor” or “fair” self-rated health in relation to academic achievements, FAS and gender. The percentage of students with lower self-rated health was two times lower than the average for the group of chronically ill boys with the most favourable combination of indicators, and almost twice as high as the average for girls from the least-privileged backgrounds.

**Table 2.8.2. Poor or fair self-rated health (%) in relation to academic achievements, FAS and gender**

Academic achievements	Girls			Boys		
	Low FAS	Average	High FAS	Low FAS	Average	High FAS
Very good/good	45.2	36.5	36.7	32.1	34.3	21.1
Average	52.5	58.4	39.7	26.8	40.0	27.9
Below average	77.8	69.2	75.0	57.1	40.0	23.1

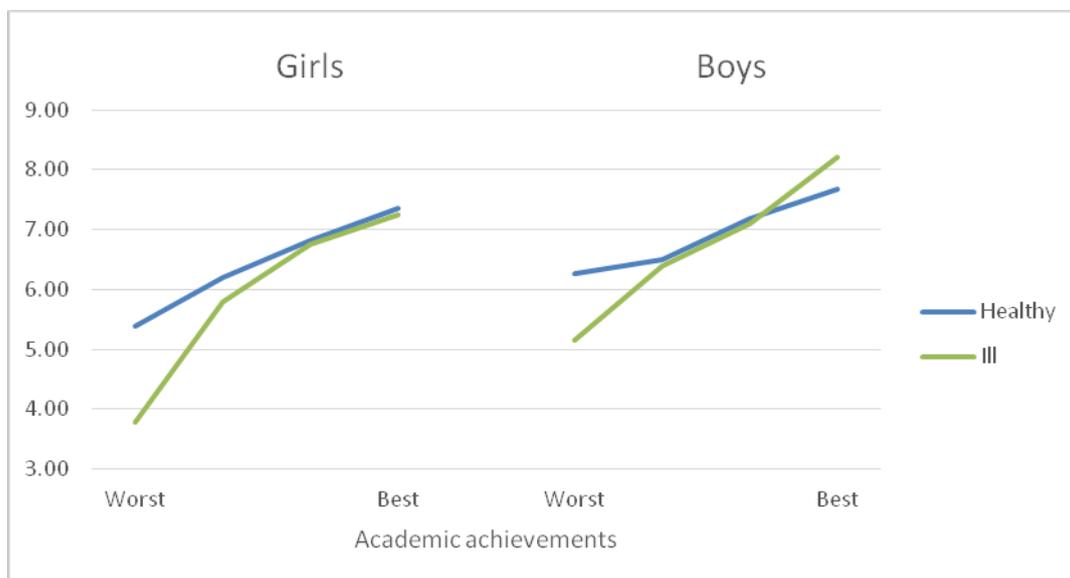
Two other studies based on the 2006 and 2010 HBSC survey results compared the functioning of healthy and chronically ill children at school. The first showed an important link between chronic disease and the perception of school requirements, with students with health problems being those who most frequently reported studying as “tiring” (19). The second indicated that chronically ill students, particularly those with other disease-related burdens, experienced more school stress than their healthy peers. The authors suggested that the sources of school stress may be different in chronically ill students (20).

### ***Social position of children with chronic conditions***

New research conducted in 2010/2011 used subjective social status indicators, which had not been used in Poland before (21). It found that subjective assessment of students' social position in class is a very important predictor of self-rated health. Perceived social status was strongly correlated with family wealth and school achievements.

In the same study, a comparison of the average assessments of healthy and chronically ill children's social position in class (based on the Child Health and Illness Profile – Adolescent Edition (CHIP–AE) questionnaire (22)) showed systematically worse assessments in the latter group. The difference was more evident when students revealed recent disease-related problems. Low school achievements were an additional factor for chronically ill students, further reducing perceptions of their social position. This was more evident in girls (Fig.2.8.1).

**Fig. 2.8.1. Perceived average social position in school class measured on a scale of 0–10 in relation to gender, chronic disease and academic achievements**



An in-depth study of adolescents with type I diabetes based on the CHIP–AE survey showed that social support appeared to be one of the most important predictors of life satisfaction measured across three domains, but especially in self-esteem (Table 2.8.3). The authors concluded that medical care should be enhanced and supplemented through support from those closest to adolescents with chronic conditions.

**Table 2.8.3. Mean life satisfaction scores in adolescents with type I diabetes in relation to perceived social support**

Social support	Life satisfaction domains					
	Physical fitness		General health		Self-esteem	
	Mean	Standard deviation (SD)	Mean	SD	Mean	SD
Low	3.67	1.96	4.17	2.93	7.67	3.33
Average	5.40	2.01	4.50	2.17	9.20	2.15
High	7.67	1.21	7.00	3.46	13.00	3.10

### ***Are these interventions effective?***

Measuring the effectiveness of social campaigns is complicated, despite the existence of various instruments, and interpretation of results is difficult. Ill children's problems (and those of their parents) are now being acknowledged across the country, stimulating further study of the systemic interventions discussed above. The growing number of campaigns in the country and the activities of increasing numbers of parents' associations also provide testimony to the success of interventions.

Strengthened societal involvement provides a measure of the success of social campaigns for ill children. According to data from the Ministry of Finance, the number of taxpayers (employees and people owning a business) who transferred 1% of their tax to public benefit organizations increased from 80 000 in 2003 to 8.6 million in 2009, with transfer sums rising from Zł 10 million to Zł 357 million. The Help on Time foundation, which provides assistance to sick children, leads the list of organizations enjoying the greatest support. It benefited from nearly Zł 68 million of taxpayers' donations in 2008, which was 7.6 times more than the next best-supported foundation (also a disability charity, but for adults).

In addition to providing support for individuals and families, campaigns for chronically ill children aim to change society's attitudes and the attitudes of ill children and their families. One 13-year-old girl with spina bifida who had outstanding achievements in swimming competitions wrote on the POLSAT Foundation web site: "With time, I learnt how to cope with my disease. At the beginning, I was sad and upset by the illness. Now I think that all is well".

It is also difficult to evaluate the new system for enhancing opportunities for students with special education needs, including chronically ill students. It has been in place in preschools and middle schools for less than a year and was not implemented in elementary schools until 2011/2012. Annual statistical information collected from the education sector includes data on numbers of students and centres in the special education system and the organization of psychological and learning support: it is anticipated that data on students with special education needs attending public schools (including chronically ill students) will also be published in the future. Data on the true number of students receiving support, trends over time and regional variations will emerge.

### ***Effect of strategic documents and intersectoral agreements on developing and implementing systemic solutions***

Education's key importance was stressed in a 2008 report on Poland's intellectual capital developed by the Prime Minister's team of strategic advisers (23). The report dealt with the problems of various age groups, including children and adolescents, placing Poland in 13<sup>th</sup> position out of 16 countries in relation to the intellectual capital index of children and adolescents. Poland's low position was attributed to the unpopularity of preschool education, continually high under-five mortality indicators and a low percentage of students interested in future research-related work. Students' very good results in reading in PISA research (24), the time they devoted to study, physical activity indicators and the percentage of children growing up in two-parent families were considered positive, but the report concluded that Polish children's life start is generally worse than their contemporaries in many European countries.

Quoting James Heckman, a Nobel Prize winner in economics, the authors emphasized that investment in the human capital of the youngest citizens pays off not only for the children,

but also for the whole of the society. Low fertility rates, inadequate family support, child poverty, limited access to early education and parents' inadequate competence and involvement in their children's upbringing and education were identified as the key challenges, with the need to develop a more effective education system clearly established.

A modern school should combine egalitarian and elite functions. This leads to equal life opportunities for children from dysfunctional families and neglected environments, with simultaneous identification and development of talents. The best results in education occur when good studying conditions coexist with adequate parental involvement, and when teaching methods are adjusted to students' individual needs.

Chronically ill children's difficulties in accessing education and health care have been described in a report published by the Government Population Council (25), an advisory body to the Prime Minister. These kinds of data may have contributed to the development and implementation of previously discussed models of inclusive education arising from the agreement between the Minister of Health and the Minister of National Education of 18 March 2009.

### ***Barriers to effective change in the education system***

Government projects aimed at enhancing working with children identified as having special education needs, including chronically ill students, are undoubtedly valuable measures that will lead to barriers being broken down. Expert publications on students identified as having special education needs comprise a valuable source of knowledge for teachers and will be helpful in implementing systemic changes. Unfortunately, however, government projects have encountered several barriers.

#### **Teacher resistance**

Psychological and learning support has been provided for students in counselling centres outside schools, but the new systemic changes oblige teachers to provide such assistance within school. This causes anxiety among teachers, who are apprehensive about their capabilities in this area. Resistance is also related to changes in ways of working with students with special education needs and inadequate teacher knowledge about the issues they raise.

#### **Parental attitudes**

An additional barrier can be created by negativity from healthy children's parents towards classes that include children with and without special education needs. Apprehension may arise from a stereotypical view of sick, disabled or socially maladjusted people and from worries that their presence in class might lower the general level of teaching.

#### **Project implementation methods**

Publications linked to the government project "Safe and friendly school" are distributed free to schools but are likely to be read only by teachers interested in working with chronically ill students. This raises concerns, as the classes of all teachers are likely to include several such students (26). Teacher training was not included in the government projects, except for a brief outline of the new system.

### **Financial problems**

Financial issues are very important in implementing change in the education system. The media reports worrying trends such as laying off staff in compensatory education settings in areas where social problems are most intense, such as Warsaw's Praga-Północ district.

### **Infrastructure**

The number of specialist psychological, pedagogical and logopaedic practices in schools increased from 7585 in 2007/2008 to 8869 in 2009/2010, a 17% rise. While encouraging, this number remains unsatisfactory given the almost 21 000 elementary middle schools in the country. This is occurring despite new regulations that put an obligation on every school to provide specialist assistance.

### **Stigmatization**

Students identified as having special education needs remain subject to stigmatization. The solution may be to eliminate divisions and devise individual education and therapy plans for all students, as is done in, for example, the United States' education system. The current system of individual education plans, education and therapy programmes fails to meet the needs of very talented chronically ill children.

### ***Experience in implementing social campaigns***

NGOs' scope of activity depends on the financing they receive. The Klon/Jawor [Maple/Sycamore] Association reported on the state of NGOs in 2010 (27), finding that the key problem is a negative financial situation and difficulties in acquiring new funds. Compared to earlier studies, however, fewer organizations reported such problems.

A frequently quoted factor that impedes everyday operations is excessive public administration bureaucracy, complicated procedures related to access to grants, sponsors and EU funds, and decreasing numbers of people willing to selflessly work for NGOs. Almost one in three NGOs surveyed in 2008 reported that leader fatigue and "burnout" of people involved in the organization was an important problem.

Some campaigns have relied almost exclusively on voluntary work. Current regulations allow organizations with "public benefit" status to be supported by taxpayers through a donation of 1% of their income tax. A small donation can be made by sending a text message (such as "I support") and some television advertisements end with an appeal. Foundations aim to attract strategic sponsors from the business world and a "snowball effect" can frequently be seen as one partner follows another.

The effectiveness of NGOs' campaigns rises if they involve celebrities, such as actors, journalists, sportspeople, politicians and business people, and have a convincing and easy-to-remember slogan: the title of a campaign for autistic children, for instance, included the idea of equal opportunities ("The future of autistic children also depends on you. Open the door to a normal life").

Social campaigns make use of new technology and instruments. Aside from traditional billboards, so-called "citylights" are used; these are illuminated boards with replaceable posters. Applications such as web sites and Facebook are also used.

The ABCXXI Foundation's "All of Poland reads to kids" campaign (17) has inspired increasing numbers of centres and people to be involved. One hundred and fifty towns and cities took part in the first nationwide week of reading to children in its first year in 2001, but the number had reached 2400 by 2011 (28). The jubilee conference marking the first 10 years of the campaign heard the Director of the National Library conclude that it had "started a positive reading 'snobbery', so important in a country where 56% of people are not ashamed to admit that they do not read at all". There are now plans to launch another regional campaign, "All of Poland talks to kids".

## Conclusion

Different life opportunities as a result of health conditions signify social injustice and may affect the future of the younger generation. The negative effect of biological factors related to health conditions and social factors is linked with SES and the living environment.

The model for educating children with chronic diseases in Poland and examples of social campaigns that aim to improve the quality of life and social integration of young people with chronic disease or disabilities have been described. Systemic solutions within the school system seem promising in supporting greater continuity of action, while NGOs have a wide geographic spread and the ability to build capacity.

Broadening NGOs' scope of activity and local initiatives is part of the process of constructing a civil society. Its further development has strict cultural determinants that manifest in a gradual disappearance of the attitude of helplessness. Active citizens are the core of a civil society. Disabled people, or people with limited mobility due to disease, have not only rights, but also obligations. Social and legislative barriers, however, often prevent them from fulfilling those obligations. Ensuring equal rights requires mechanisms to provide equal opportunities, of which access to education is of key importance.

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