



LUND UNIVERSITY

Vulnerable children. A social perspective on health and healthcare.

Köhler, Marie

2017

Document Version:

Publisher's PDF, also known as Version of record

[Link to publication](#)

Citation for published version (APA):

Köhler, M. (2017). *Vulnerable children. A social perspective on health and healthcare*. [Doctoral Thesis (compilation), Department of Clinical Sciences, Malmö]. Lund University: Faculty of Medicine.

Total number of authors:

1

General rights

Unless other specific re-use rights are stated the following general rights apply:

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Read more about Creative commons licenses: <https://creativecommons.org/licenses/>

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

Vulnerable children

A social perspective on health and healthcare

MARIE KÖHLER

DEPARTMENT OF CLINICAL SCIENCES, MALMÖ | LUND UNIVERSITY 2017



Vulnerable children

Vulnerable children

A social perspective on health and healthcare

Marie Köhler



LUND
UNIVERSITY

DOCTORAL DISSERTATION

by due permission of the Faculty of Medicine, Lund University, Sweden.
To be defended at Lilla Aulan, Malmö, Skåne University Hospital,

Thursday, first of June 2017 at 9.00.

Faculty opponent
Professor Boel Andersson Gäre

Jönköping Academy for Improvement of Health and Welfare,
Jönköping University, Sweden

Organization LUND UNIVERSITY		Dissertation
		Date of issue 26/4/2017
Marie Köhler		Sponsoring organization
Vulnerable children. A social perspective on health and healthcare.		
<p>Abstract</p> <p>Aim: To investigate health and healthcare for selected groups of vulnerable children in Scania, Sweden with a child rights perspective and based on the concept of Child Public Health.</p> <p>Material and methods: Two of the studies use the Child Health Services (CHS) health records comparing data on 100 Malmö children 0-16 years in family foster care with data on 100 Malmö children, matched for age and sex, who were not in out-of-home care. The third study uses data from 9791 schoolchildren in the 9th grade participating in a large cross-sectional public health survey of children and adolescents in Scania, Sweden, during 2012. The fourth study uses data from the 2013 public health survey of 4 year-old children and their parents in Scania, Sweden (n=6728). Three of the studies (Paper I, III and IV) are quantitative and one (study II) is a mixed methods study using both quantitative and qualitative content analysis.</p> <p>Results: Paper I and II: The children in family foster care had greater health risks e.g. lower levels of breastfeeding and higher exposure of tobacco smoke than children not in out-of-home-care. Their participation in Child Health Services key visits were lower, they had more missed appointments and were immunized to a lower degree. The records rarely included information regarding PKU-test and parents' occupations. The documentation of social determinants was more voluminous for the family foster care group but focused primarily on parental problems and rarely on living conditions, had lack of child perspective and indicated professional actions without reporting of maltreatment to the Social Services.</p> <p>Paper III: Disability was reported in 24.1 % of the boys and 22.0 % of the girls. Disability regarding reading-writing was most common (9.5 %). Children with disability reported more exposure to both traditional bullying (TB) and cyber harassment (CH) compared with non-disabled children and they were more exposed to daily smoking, had more intense alcohol consumption, lacked a friend and had more difficulties communicating with their parents than non-disabled children. In addition they had higher odds of daily subjective health complaints (SHC). Children with disability with exposure both to TB and CH had the highest odds of psychological and SHC in an adjusted model.</p> <p>Paper IV: Children with recurrent abdominal pain (RAP) (5.1 %) had more often experienced violence in the family and had parents with poor self-rated health and economic worries than children without recurrent abdominal pain. Parents with poor self-rated health (SRH) more often had low educational level, were born outside Europe, were unemployed or on sick leave, had economic worries, weak emotional support, every day stress, a higher level of alcohol use and violence in the family, compared to parents with good SRH. Poor SRH was, for both parents, associated with having more insufficiency perceptions regarding showing affection as well as attention to the child. A graded relationship was found between self-rated health in both parents and the presence of recurrent abdominal pain in the child. Logistic regression analysis showed higher odds of recurrent abdominal pain among children whose parents reported poor self-rated health (mothers: Odds Ratio (OR) = 2.1 (95% CI: 1.6, 2.7) and fathers: OR = 1.5 (95% CI: 1.1, 2.0)). The OR for RAP in the child was reduced after adjustments for sociodemographic, life style and psychosocial factors, but stayed statistically significant for mothers with poor SRH.</p> <p>Conclusion: Children's health is influenced by social determinants including impacts from peers as well as circumstances within the family which in turn are influenced by living conditions and structures in the society. Some of the most vulnerable children are those who are placed in out-of-home care, those who have disabilities and those whose parents have poor health. Healthcare professionals, who meet adult patients should clarify if any child is affected, in need of support or protection or at risk of poor health, and act if needed. Healthcare professionals who meet children have a great responsibility to see the child in its context and act if there is a risk of poor health or a need of support and/or protection. Systematic education and training about social determinants of health, children's human rights and needs of support and protection are necessary to improve healthcare professionals' knowledge and to increase their competence in acting accordingly. Intersectoral cooperation with actors outside healthcare might strengthen the actions for vulnerable children and thereby improve their health.</p>		
Key words: Child health, Child Public Health, social determinants, family foster care, parental self-rated health, living conditions, harassment, child disability, subjective health complaints		
Classification system and/or index terms (if any)		
Supplementary bibliographical information		Language English
ISSN 1652-8220		ISBN 987-91-7619-435-5
Recipient's notes	Number of pages	Price
	Security classification	

I, the undersigned, being the copyright owner of the abstract of the above-mentioned dissertation, hereby grant to all reference sources permission to publish and disseminate the abstract of the above-mentioned dissertation.

Signature  Date 26/4/2017

Vulnerable children

A social perspective on health and healthcare

Marie Köhler



LUND
UNIVERSITY

Coverphoto by Ebba Köhler Jakobsson

Copyright Marie Köhler

Lund University, Faculty of Medicine,
Department of Clinical Sciences.

Lund University, Faculty of Medicine Doctoral Dissertation Series 2017:55

ISBN 978-91-7619-435-5

ISSN 1652-8220

Printed in Sweden by Media-Tryck, Lund University
Lund 2017



In the footsteps of mothers and fathers,

for the children,

with belief in the present and in the future.

Content

Content	9
List of publications	11
Abbreviations	13
Introduction	15
Aims and objectives	17
Background.....	19
Child Health in Sweden.....	19
Theoretical framework	20
The United Nations Convention on the Rights of the Child.....	20
Health	22
Social determinants of health	23
Child Public Health	25
Swedish Child Health Services	26
Child maltreatment.....	27
Healthcare professionals' roles.....	28
Vulnerable groups of children.....	28
Children in out-of-home care	28
Children with disabilities.....	29
Children of parents with poor health	30
Materials and methods.....	33
Overall study design.....	33
Documentation of health, healthcare and social determinants of children in and not in family foster care (<i>Papers I and II</i>)	35
Subjective health complaints and peer victimization among disabled and non-disabled schoolchildren (<i>Paper III</i>).....	37
Parents' self-rated health and recurrent abdominal pain among their children (<i>Paper IV</i>).....	37
Definitions of main variables used in the quantitative analyses (<i>Papers I, III, IV</i>).....	38
Ethical considerations	39

Results	41
What is the impact of being in family foster care on selected health determinants and participation in Child Health Services? (<i>Paper I</i>).....	41
What do Child Health Service professionals document about social determinants of health for children in family foster care compared to other children? (<i>Paper II</i>).....	42
What is the impact of bullying and cyber harassment on psychological and somatic health for children with disability? (<i>Paper III</i>)	44
Is there an association between parental self-rated health and recurrent abdominal pain among their preschool children? (<i>Paper IV</i>)	45
Discussion.....	47
Methodological considerations	52
Conclusions	55
Future directions.....	57
Populärvetenskaplig sammanfattning.....	61
Konklusion	63
Acknowledgements	65
References	69

List of publications

This thesis is based on the following papers.

- I. Köhler M, Emmelin M, Hjern A, Rosvall M. *Children in family foster care have greater health risks and less involvement in Child Health Services*.
Acta Paediatrica (2015). 104, 508-13. DOI:10.1111/apa.12901
- II. Köhler M, Rosvall M, Emmelin M. *"All is well": Professionals' documentation of social determinants of health in Swedish Child Health Services health records concerning maltreated children – a mixed method approach*.
BMC Pediatrics (2016). 16, 127. DOI:10.1186/s12887-016-0646-2
- III. Fridh M, Köhler M, Modén B, Lindström M, Rosvall M. *Subjective health complaints and exposure to peer victimization among disabled and non-disabled adolescents: A population-based study*.
Accepted for publication in Scandinavian Journal of Public Health.
- IV. Köhler M, Emmelin M, Rosvall M. *Parental health and psychosomatic symptoms in preschool children. A cross-sectional study in Scania, Sweden*.
Accepted for publication in Scandinavian Journal of Public Health.

Permissions to publish the articles in this thesis have been obtained from Acta Paediatrica, BMC Pediatrics and Scandinavian Journal of Public Health.

Abbreviations

BO	Barnombudsmannen [The Ombudsman for Children in Sweden]
CH	Cyber harassment
CHS	Child Health Services
CHC	Child Health Center
CHCP	Child Health Care Programme
CI	Confidence Interval
CSDH	Commission of Social Determinants of Health
HSL	Hälsö- och sjukvårdslagen [Health and Medical Services Act]
ICT	Information and Communications Technology
LVU	Lag med särskilda bestämmelser om vård av unga [Care of Young Persons (Special Provisions) Act]
MDG	Millenium Development Goals
MFR	Medicinska Forskningrådet [Medical Research Council of Sweden]
OR	Odds Ratio
PKU	Phenylketonuria
RAP	Recurrent abdominal pain
RCPCH	Royal College of Paediatrics and Child Health
SDG	Sustainable Development Goals
SDH	Social Determinants of Health
SHC	Subjective health complaints
SoL	Socialtjänstlag [Social Services Act]
TB	Traditional bullying
UN	United Nations
UNICEF	United Nations Children's Fund
UNCRC	United Nations Convention on the Rights of the Child
UN OCHR	United Nations Human Rights Office of the High Commissioner
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
WHO	World Health Organization
WMA	World Medical Association

Introduction

Living conditions influence people's health and this understanding is part of a growing knowledge about and interest in the *social determinants of health*, which have been in focus in public health during the last decades. In addition increasing national and international inequities in income and wealth have led to increasing inequities in health, both in mortality, morbidity and well-being, in adults as well as in children (Pickett & Wilkinson, 2015). A *health gap* has been identified and suggestions have been made how to change this and to *close the gap* (Commission on the Social Determinants of Health, 2008). According to the global Commission on Social Determinants of Health (CSDH) it is possible to change the unequal distribution of health and it is furthermore an ethical imperative (ibid.). An overriding recommendation of the CSDH to create equity from the start is improvement of daily living conditions with early child development and education as central issues (ibid.). Further work has been performed in European context recommending increased investment in early years including provision of good quality of the early years of education and childcare and support to families to develop children's skills (Marmot Review, 2010). Still new reports from Great Britain find that differences in child health increase between the rich and the poor (Royal College of Paediatricians and Child Health, 2017).

Child health in Sweden is generally good, particularly in an international perspective (Hjern, 2012). However, Sweden, in comparison with other "rich" countries, has dropped in ranking during the last decade (Unicef, 2007 & 2013). There are considerable differences between in health between groups of children, differences which in addition are increasing (Socialstyrelsen, 2013a; Bremberg, 2011). Mental ill-health and psychosomatic problems are growing especially among teenagers. Socioeconomic conditions, e.g. low maternal education or reduced material resources in the family, increase the risks of poor child health. Among the especially vulnerable groups of children are those who are exposed to homelessness, children having a parent with serious physical, mental or social problems including substance abuse or sudden loss of a parent, children who are adopted, living in out-of-home care, who are disabled or victims of violence (Vinnerljung, Hjern, Ringbäck Weitoft, Franzén & Estrada, 2007; Socialstyrelsen 2013a).

The influence of social determinants on child health has been incompletely explored in Sweden. The present thesis investigates differences in health focusing on vulnerable groups of children from a child public health perspective.

Aims and objectives

The overall aim of the thesis is to investigate the role of social determinants for health and healthcare in selected groups of vulnerable children in Sweden from a child rights perspective and based on the concept of Child Public Health.

The specific aims are:

- to investigate the impact of being in family foster care on selected health determinants and participation in Child Health Services (*Paper I*)
- to analyse what Child Health Services professionals document about social determinants of health for children in family foster care compared to other children (*Paper II*)
- to study subjective health complaints (SHC) (psychological and somatic, respectively) among disabled and non-disabled adolescents, focusing on the impact of traditional bullying (TB) and cyber harassment (CH) (*Paper III*)
- to assess the association between parental self-rated health and recurrent abdominal pain in their preschool children (*Paper IV*)

Background

Child Health in Sweden

Swedish children are generally very healthy, particularly seen in an international perspective. The infant mortality rate is among the lowest in the world, infant breastfeeding are at relatively high levels, childhood accident rates are low, the vaccination coverage of children is high and few children experience corporal punishment (Hjern, 2012). However, all is not well. In the latest decades young girls have more often reported ill-health. From the 1990s fewer schoolgirls report life satisfaction and good subjective health the older they get. During the same period few such changes are reported for boys. In addition, from the middle of the 1980s until 2010, both girls and boys report more often that they feel depressed, have difficulties in sleeping, feel nervous or have headache. In a Nordic study an increase in psychosomatic complaints was found in teenaged (13-17 years) children, especially girls, in all Nordic countries since the 1980s (Berntsson, Ringsberg, Eriksson & Köhler, 2016). In comparison with the other Nordic countries, Sweden during this period fell from the top place, with the lowest percentage of psychosomatic complaints, to the second place.

With an even broader perspective the well-being of children in the "rich" countries of the world, to which the Nordic countries belong, was analysed in two reports from Unicef (Unicef, 2007 & 2013). Here the collected data consisted of several dimensions of children's well-being, including economic conditions, housing and environment, health and safety, education, family and peer relationships, behaviours and risks and subjective well-being. The first report placed Sweden in the top position when it comes to physical health and safety as well as material well-being, but in place seven regarding subjective well-being (Unicef, 2007). Concerning family and peer relations Sweden ended in place 15 due to the high occurrence of children living with a single parent or in stepfamilies. The overall ranking placed Sweden in second place after the Netherlands. In the Unicef report published a few years later Sweden had dropped to place five in the overall ranking and was found together with three other Nordic countries – Norway, Iceland and Finland – placed just below the Netherlands (Unicef, 2013). This time Sweden was not found in place one in any dimension, but instead had dropped in material well-being, behaviour and risks and particularly in education.

Transformations not only occur between countries. Within Sweden, just as in many other countries, the differences in health have widened between groups of people including children (Bremberg, 2011; Folkhälsomyndigheten (Public Health Agency of Sweden, 2016). Children in families with low maternal education level face higher risks of poor mental health, drug abuse and mortality. A higher risk of ill-health is also found in children in economically vulnerable families (Hjern, 2012). Children whose parents are mentally ill have higher risks of suicide and injuries (Vinnerljung et al., 2007). Another especially vulnerable group of children are those who are placed in out-of-home care, who face higher risks of health problems including suicide (ibid.). Notably, these groups are often overlapping giving more disabled children and children in out-of-home care in economically disadvantaged families.

The last years' catastrophic global development has driven an unprecedented number of people fleeing war and persecution to take dangerous, life-threatening journeys trying to find safety in Sweden and in other countries in Europe. Among them is a great number of children, thus forming yet another vulnerable group with excessive needs of care and support of various kinds.

In this thesis three of these vulnerable groups of children are studied:

- children in family foster care
- children with disabilities
- children whose parents have poor self-rated health

Theoretical framework

The United Nations Convention on the Rights of the Child

In 1989 the General Assembly of the United Nations (UN) adopted and opened the resolution about the Convention on the Rights of the Child (CRC) for signature, ratification and accession and in 1990 it entried into force (UN Human Rights Office of the High Commissioner (UN OHCHRa). The moment was preceded by many years of discussions and negotiations in national and international organizations. Sweden was one of the first states in the world to ratify the convention in 1990 (SOU 2016:19).

The starting point includes important principles about human rights, based on earlier conventions. Human rights are indivisible, interdependent and interrelated

(United Nations Population Fund). They make up an entirety and include all human beings implicating that all rights apply to all children without exception.

There are *four main principles* of the convention (Figure 1).

- **Article 2: Non-discrimination.** Every child has the right to be protected against discrimination of any kind, irrespective of the child's or his or her parent's or legal guardian's race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- **Article 3: Best interests of the child.** The best interest of the child shall be a primary consideration.
- **Article 6: Survival and development.** Every child has the inherent right to life, survival and development.
- **Article 12: Respect for the views of the child.** Every child has the right to form his/her views freely, to express them and the views to be given due weight in accordance with age and maturity of the child.

Figure 1. The main principles of the UN Convention on the Rights of the Child.
Source: UN OHCHRa.

In addition the following articles are of particular interest for this thesis (Figure 2):

- **Article 19: Protection from all forms of violence.** Children have the right to be protected from being hurt and maltreated, physically or mentally.
- **Article 23: Children with disabilities.** The right to special care and support, as well as all the rights in the Convention.
- **Article 24: Health and health services.** The right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. The right to access health care services.
- **Article 27: Adequate standard of living.** The right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development.

Figure 2. Articles in the UN Convention on the Rights of the Child of special interest for this thesis. Source: UN OHCHRa..

The UN Committee on the Rights of the Child (UNCRC) monitors the implementation of the CRC by its state parties and regularly reports on the progress achieved in every country (UN OHCHRb).

In 2015 the Committee in its Concluding observations stated several areas of concern regarding Sweden (UNCRC, 2015).

Among the Committee recommendations to Sweden are the following:

To ensure equal access to all rights at the regional and local levels; to step up the efforts to improve the health status of children from disadvantaged and marginalized groups; to focus on preventive activities against discrimination and to protect children in vulnerable situations including children from marginalized and disadvantaged families; to prevent, identify and address the root causes of suicide in children with disabilities; to protect the privacy of children and training on safe use of information and communications technology (ICT) and to raise awareness among children on the severe effects online bullying might have on their peers; to create a child protection system and to raise awareness about child abuse and neglect, to encourage the reporting of cases of child abuse and violence against children as well as to create a strategy for preventing child abuse and neglect. The Committee in addition recommends education for professionals about several aspects of the CRC.

Implementing the governmental suggestion to make the CRC a law is in actual process in Sweden (SOU 2016:19).

Health

The World Health Organization (WHO) defined, when the organization was started after World War II, health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1946). This health concept has been further developed later on and healthy spiritual development has been suggested to complete the definition (UN, 1992). A few decades after the start of WHO the global strategy for Health for All in year 2000 was launched and the right to "the attainment by all peoples of the highest possible level of health" was here the starting point (WHO, 1981 p.31). The strategy was to a great part based on the Alma-Ata conference on primary health care which in its final document identified "the existing gross inequality in the health status of the people and particularly between developed and developing countries as well as within countries" being "politically, socially and economically unacceptable" (WHO, 1978). To further develop health for all promotion of health was, in the Ottawa Charter, described as "a process of enabling people to increase control over and to improve their health" (WHO,

1986). The fundamental resources and conditions for health include peace, shelter, education, income, food, sustainable resources, a stable ecosystem as well as social justice and equity. Improvement in health requires a secure foundation in these prerequisites. Health promotion is a process of enabling people to increase control over and to improve their health and it goes beyond health care. This statement was confirmed and emphasized in the Vienna Declaration on Public Health 2016 (European Public Health Association, 2016).

Social determinants of health

The WHO regularly reports on the world health and the latest report supports earlier findings of unequal distribution of health between different regions and countries of the world (WHO, 2016). The foundation in the report consists of the UN Sustainable Development Goals (SDGs) which were agreed upon by the UN member states in 2015 with the purpose to achieve them in 2030 (WHO, 2015). The SDGs include 17 goals and 169 targets creating a broader set of topics regarding health such as reproductive, maternal, newborn and child health, infectious diseases, noncommunicable diseases, mental health, road traffic injuries, universal health coverage, environmental health consequences and health systems strengthening (WHO, 2015). With words from the World Health Statistics, 2016: "Health monitoring will have to look beyond the health sector and consider economic, social and environmental indicators, as well as intersectoral actions" (Executive Summary, p V, WHO World Health Statistics, 2016).

The social determinants of health (SDH) as described by Dahlgren and Whitehead involves living conditions on individual as well as on community and societal/environmental levels (Dahlgren & Whitehead, 2007). The main health influences are described as layers one on top of the other (Figure 3). Overall is the major structural setting regarding socio-economics, culture as well as the environment. One layer includes the material and economic circumstances involving e.g. housing, education and healthcare. Another layer concerns social network such as family and friend relations and local environment and one additional layer regards life style e.g. tobacco and alcohol use, diet and physical activity. In addition age, sex and hereditary factors play a role. The main influences may be protective, promotive or threatening health.

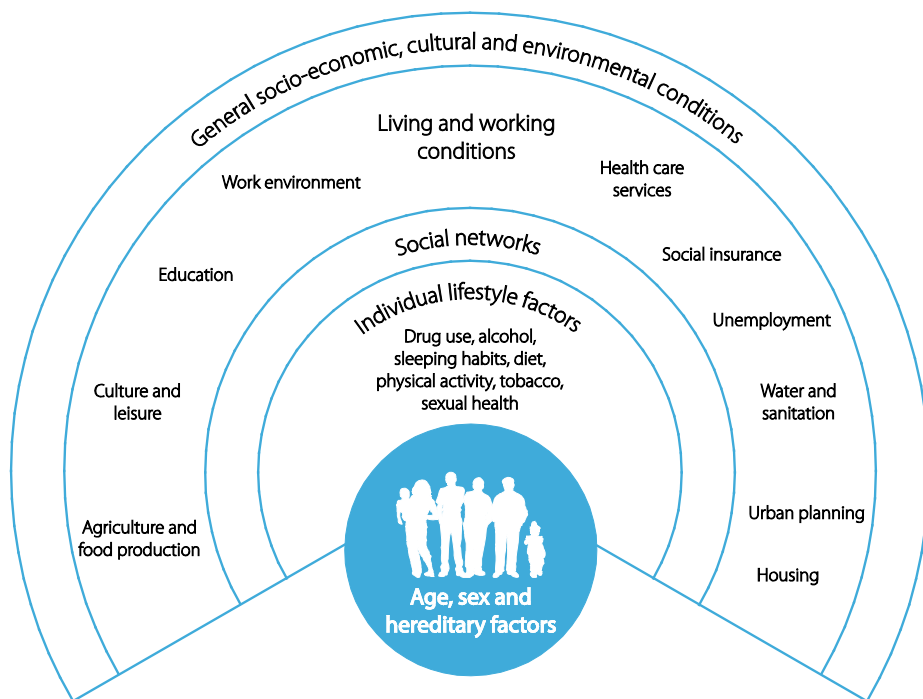


Figure 3. Social determinants of health. Developed from Dahlgren and Whitehead, 2007. Source City of Malmö, 2013.

As stated by the WHO the SDHs are “the conditions in which people are born, grow, work, live and age, and the wider set of forces and systems shaping the conditions of daily life” (WHO, 2017). Studies from Great Britain have shown the clear relation between health and status in society (Marmot, 2004 & 2015). Not only between population groups within countries, but also between countries, the great inequities in health have been described as wide gaps (WHO, 2008). The WHO Global Commission on Social Determinants of Health identified the SDHs, using the concept *the causes of the causes*, being crucial to influence with the purpose to *close the gap* and to develop equity in health. Furthermore the commission inspired to similar work on national and regional level and in Sweden a local commission was formed in the third biggest municipality in the country - Malmö in Scania - with the assignment to describe the general level of health and the degree of inequity in the distribution of health in the population of the city (City of Malmö, 2013). This commission produced more than 30 subreports, including reports about children (Köhler M & Djurfeldt, 2012). The subreports were based on data and research findings and resulted in a common final report with a multitude of suggestions how to proceed to act for a socially sustainable

development with focus on improvement of the health of Malmö inhabitants as well as reduction of health inequities (City of Malmö, 2013). Furthermore, the Swedish government has set up a national Commission on Equity in Health which has presented two preliminary reports highlighting the importance and need of national and regional strategic guiding and monitoring of actions directed towards equal health and sustainable public health policies (SOU 2016:55; SOU 2017:4). The final report is planned to be presented in May 2017.

Child Public Health

During the latest decades a specific area of concern has developed within Public Health – Child Public Health. The concept embraces the broad WHO view on health, the Public Health view of a multidisciplinary, multiprofessional and multisectoral approach to health and the specific needs and conditions of children and childhood, as formulated by the UN Convention on the Rights of the Child.

The three principle concerns of child public health are education, research and practice (Köhler L, 1998; Blair, Stewart-Brown, Hjern & Bremberg, 2013). Education and training together with career development are important both on the ground level and in specialized training and professional careers, not only for child health workers but also for other professions. Research is preferably interdisciplinary and related to the society and to practice. One increasing task in actual research is the systematic monitoring of children's health on local, national or international levels by indicators and indices (Ben-Arieh 2008 a; Bradshaw, 2009). These monitoring systems are useful in reserach, but they are also important tools for planners and politicians (Ben-Arieh, 2008 b).

Particularly significant targets for Child Public Health activities are vulnerable groups such as disabled children, children with chronic diseases, refugees, immigrants or abused children and other underprivileged groups. Practice is how the knowledge gets to action through structures that make policy changes and improvements possible. Key actors for the implementation are health care institutions such as Child Health Services, School Health Services, pediatric wards, child psychiatry etc.but also the communities, political structures and administration on national, regional and local levels.

Child Public Health in this way implies a full concept, which widens the professionals' perspective and change the scenario from narrow to broad, taking not only diagnostic skills into use but making professionals aware of the social context in which children live. It is a way to better understand the complex pattern of children's health and to promote the collaboration of disciplins and professions.

Mitch Blair, professor of Paediatrics and Child Public Health in London and colleagues have described Child Public Health as: "*The art and science of promoting and protecting health and well-being and preventing disease in infants, children and young people, through the skills and organized efforts of professionals, practitioners, their teams, wider organizations and society as a whole*" (Blair, Stewart-Brown et al., Waterston & Crowther, 2010, italics added).

And in an editorial in a British journal Child Public Health is called "*potentially the most important – and most effective – activity in improving outcomes for children, encompassing as it does work in health, welfare, education, housing and public policy*" (Petticrew & Roberts, 2004 p.667, italics added).

Swedish Child Health Services

In the national public health goals societal circumstances are mentioned as crucial in creating equal health (Regeringen, 2002). To improve health for the most vulnerable safe and equal childhood living conditions are emphasized.

The Child Health Services (CHS) in Sweden are important parts of the welfare system and have offered health care to all children up to school start at six or seven years of age for a long time (Magnusson, Blennow, Hagelin & Sundelin, 2016). Participation is voluntary and free of charge and the CHS reach 99 % of all children in Sweden. The CHS offer preventive advice and promote child health care for newborns and preschool children and their parents, including regular health and development check-ups, immunisations and parental support as well as admittance of the child to specialized or inpatient care when needed and involves both physicians, nurses and psychologists.

The Child Health Care Programme (CHCP) has changed over time due to varying healthcare needs in the population (Medicinska Forskningsrådet, 1999). To meet the new public health panorama in childhood the Swedish National Board of Health and Welfare recommends focus on preventive and promotive health care regarding mental, physical and social health in combination with targeted initiatives towards individual children as well as groups of children with increased needs (Socialstyrelsen, 2014a). Paying attention to environmental factors of the child and family is emphasized and in addition interdisciplinary cooperation within the CHS as well as collaboration with other functions.

Child maltreatment

Child maltreatment includes physical, psychological and sexual abuse as well as neglect regarding e.g. physical, emotional, medical/dental or educational needs (Gilbert, Spatz Widom, Browne, Fergusson, Webb & Janson, 2009). In addition, witnessing intimate partner violence is increasingly considered as a form of child maltreatment. Child abuse has a big impact on child health concerning mortality and morbidity and in addition has long-lasting consequences into adulthood in terms of e.g. poor mental health as well as poor self-rated health, suicide attempts, drug and alcohol abuse and obesity (Gilbert, Widom et al., 2009; Felitti et al., 1998). Child maltreatment is not seldom a combination of various forms and adults, who in childhood have been exposed to different types of maltreatment, have a graded over risk of ill-health the more types they have been exposed to (Felitti et al., 1998). A Swedish study confirms the negative health effects in adulthood (Andersson, Heimer & Lucas, 2014).

There are some risk factors in the child such as gender, e.g. girls having higher risks of being sexually abused, but also disability and chronic disease generally increase the risks (Gilbert, Widom et al., 2009). Parents' risk factors are poverty, mental health problems, low educational level, drug and alcohol abuse as well as exposure to maltreatment in their childhood as well as intimate partner violence (ibid.). Poor economic standard produces more deaths from child abuse and neighbourhood socioeconomic status as well as social climate might explain variations in child health including maltreatment (Gilbert, Widom et al., 2009; Janson in Köhler M, 2012).

Sweden, in the late 1950ies prohibited physical punishment of children at school and during the following decades the discussion about physical punishment as a tool of upbringing in the homes was heated (Kommittén mot barnmisshandel, 2001:72; SOU 2001:18). In 1979 Sweden as the first country in the world, in the Swedish Parental Act, legislated against violence and other humiliating behaviour towards children in their homes (SFS 1949:381).

The reports to the police have increased during the following years, which is regarded a consequence of increased tendency to report to the police from the Social Services and due to more attention of child neglect and not as a result of increased prevalence of child maltreatment (Janson, Jernbro & Långberg, 2011). Investigations in Sweden about attitudes to upbringing practices show that 92 percent of the parents studied stated that they found it wrong to beat or slap their child (Janson et al., 2011). Still 14 percent of 15 to 16 year old schoolchildren state that they have been beaten some time in their life and three percent several times. The strongest risk factor for corporal punishment of the child was violence between the adults, showing a ten-fold risk increase compared to families without

inter-partner violence. In the same investigation children with chronic disease or disability stated twice as often that they had been beaten and they also lived more often in families where violence occurred between the adults.

Healthcare professionals' roles

Professionals in healthcare have historically had a great influence on the view on child maltreatment both internationally and in Sweden (Kempe, Silverman, Steele, Droegemueller & Silver, 1962; Selander, 1957; Frisk, 1964.) Healthcare professionals, including CHS professionals, still have an important function in child protection and are, together with other professionals working in different functions with children in Sweden, obligated to report to the Social Services if a child is abused or neglected or is suspected to be so (Socialtjänstlagen 14 kap. 1 §). National data concerning the number of children being reported to the social authorities is lacking but professionals in healthcare are estimated to highly under-report actual cases of child abuse and neglect both internationally and in Sweden (Gilbert, Kemp, Thoburn, Sidebotham, Radford, Glaser, MacMillan, 2009; Socialstyrelsen, 2014b; Tingberg, 2010).

Vulnerable groups of children

Children in out-of-home care

The Social Services, and more specifically the Social Welfare Board, should act to secure safe and good circumstances for the child/the young person (Socialstyrelsen, 2014c). If a child, or a young person, is at risk of adverse development the Board should, in close cooperation with the home, ensure that the child/young person gets the protection and support he or she needs.

Placement of children in out-of-home care is one type of measure to be taken and is regulated by law (Socialtjänstlagen [SoL]; Lag med särskilda bestämmelser om vård av unga (LVU)). SoL is applicable when the parents, or the child if at least 15 years of age, agree to the placement. LVU is applicable if there is no such agreement but still a need to care for the child connected to deficiencies in the child's or young person's (up to 20 years) home environment or to the behaviour of the child or young person. In the youngest ages environmental circumstances are the most common reasons of out-of-home care, while behaviour problems are most common for the teens (Vinnerljung et al., 2007).

SoL is the most common legal basis for out-of-home care and family foster care is, in contrast to residential care, the dominating form (Socialstyrelsen, 2015a).

During 2013, 32 600 children in Sweden were in out-of-home care at any time. An increase of placements between the years 2006 and 2013 has been observed, especially among boys 13 – 17 years (Socialstyrelsen, 2014c). One explanation is the actual global situation where many young boys are fleeing unaccompanied and come to Sweden seeking asylum without parents or legal guardians. Later national reports exclude children without a complete Swedish national identification number, resulting in a lower number – 28700 – of children in out-of-home care at any time in 2014 (Socialstyrelsen, 2015a).

Regarding children in out-of-home care associations have been shown in this group with having a parent hospitalised for a mental disorder, a parent who attempted suicide or who had drug/alcohol abuse, a mother with low education, who got social assistance, was unemployed, single or disabled, younger or older at first pregnancy or smoking during pregnancy (Vinnerljung et al, 2007; Franzén, Vinnerljung & Hjerm, 2008; Simkiss, Stallard & Thorogood, 2013). Children from families with low educational background are generally over-represented in the group of children placed in care. These children run a greater risk of poor development in comparison with other children, even after long time in care. Numerous international, as well as Nordic, studies have in this group found high prevalences of poor mental and somatic health (Nelson, Smith, Thompson, Epstein, Griffith, Duppong Harley & Tonniges, 2011; Egelund, Skovbo Christensen, Böcker Jakobsen, Jensen & Fuglsang Olsen, 2009) as well as low access to healthcare, including dental care (Williams, Jackson, Maddocks, Cheung, Love & Hutchings, 2001; Socialstyrelsen, 2015b).

Children with disabilities

Disability among children in Sweden is more common at higher ages in childhood and is estimated to involve about 17 percent of 16-year-old children, compared with 6 percent among the youngest children, and rises to 20 percent among 16- to 19-year-old young persons (Socialstyrelsen, 2013a). Some disabilities make their debut later on in childhood and some are diagnosed first at higher ages. The prevalence figures differ in statistics since there is no general or international definition on disability, a matter that has been approached by the UN Child Rights Committee (2006).

The Swedish national health statistics about disabilities in children shows that boys are slightly over represented (Socialstyrelsen, 2013a). The statistics includes long term diseases and disabilities and among the most common conditions are asthma, allergy, reading and writing disabilities and gastrointestinal problems. A

possible shortage concerning public health statistics, leading to an under estimation of the proportion of disability, mentioned in this report, is that disabled children, since they join special schools, sometimes are excluded in studies performed by questionnaires given to the schoolchildren only in regular schools.

Disabled children's rights are specifically protected in two conventions: the UN Convention on the Rights of Persons with Disabilities (UNCRPD) and the UNCRC. With the purpose to let the disabled children's voices be heard the Children's Ombudsman recently published a report with interviews of children and young persons with disabilities (Barnombudsmannen, 2016).

Children of parents with poor health

Many children grow up with parents having health problems and some children even have a parent who dies.

In Sweden about eight percent of all children have a parent who was hospitalized due to mental health problems or substance/alcohol abuse during their childhood, and the corresponding figure including outpatient care is 17 percent (Hjern & Manhica, 2013). In comparison with other children, children of parents who have been hospitalized because of mental health problems have higher risks of being patients in specialized psychiatric care as young adults, as well as suicide attempts (Hjern, Arat & Vinnerljung, 2014; Vinnerljung et al., 2007). Children of parents with abuse are at a higher risk of getting abuse problems themselves and in addition more commonly have incomplete grades from school (Hjern, Arat & Vinnerljung, 2014). Around 13 percent of Swedish children have, during their childhood, experienced a parent being hospitalized due to somatic disease (Hjern & Manhica, 2013). Many more parents, around 28 percent, state that they have a chronic disease (ibid).

Six percent of all children have, during their childhood, a parent with cancer and they are at a higher risk of having school failures, and as adults, abuse and criminality (Hjern, Berg, Rostila & Vinnerljung, 2013; Berg & Hjern, 2016). Children in this situation are also at risk of having anxiety, depression and psychosomatic symptoms (Visser, Huizinga, van der Graaf, Hokstra & Hoekstra-Weeber, 2004). Among three percent of all children are, during childhood, affected by the death of a parent and this increases the risks of anxiety, suicide attempts as well as mental health problems as adults and premature death (Socialstyrelsen, 2013b,c). Children whose parent died by accident, suicide or violence have higher risks to receive treatment of abuse or suicide attempts or to die themselves as young adults (Hjern, Arat, Rostila, Berg & Vinnerljung, 2014). The Swedish mapping of children as next of kin shows an unequal distribution of parental health problems and deaths and a social gradient with families with the

lowest socioeconomic position most affected (Hjern & Manhica, 2013). The most powerful relation is found in suicides, violent deaths as well as accidents. Children in out-of-home care are to a very high extent affected by parental deaths - 20.4 percent have lost one parent and 2.5 percent both parents at 18 years of age (ibid.).

According to Swedish legislation regarding responsibilities in healthcare some critical situations for children should be paid attention to concerning any need of information, advice and support (SFS 2009:979; SFS 2017:30). The situations approached in the actual legislation in Chapter 5, 7 § are if a parent or another adult person, with whom the child permanently lives, has a mental health problem or disability, a serious somatic disease or injury, abuses alcohol or other substances or unexpectedly deceases.

Materials and methods

Overall study design

To respond to the research questions the thesis is structured around four sub-studies, each leading to one paper. For the studies various designs were chosen with the purpose to broaden the perspective and give a deeper understanding of complex associations.

Paper I investigates the impact of being in family foster care on selected health determinants and participation in Child Health Services. *Paper II* analyses what Child Health Services professionals document about social determinants of health for children in family foster care in comparison to other children.

These two studies both used Child Health Services health records as data sources with the aim to retrospectively study child health, healthcare participation and content of the health records documentation. The overall design using a case group (children in family foster care) and a comparison group (children not in foster care) was chosen. To study health indicators and healthcare participation a quantitative design was chosen (*Paper I*). Descriptive statistics was used to identify differences between the case group and the control group. With the purpose to, in addition, get a better understanding of the content of the documentation a mixed method design with both quantitative and qualitative methods was used (*Paper II*). The qualitative content analysis performed as described by Graneheim & Lundman (2004) was complemented by descriptive quantitative data about selected information documented in the health records. This combined approach included different perspectives thereby making a more comprehensive understanding possible (Östlund, Kidd, Wengström & Rowa-Dewar, 2011).

Paper III studies subjective health complaints (SHC) (psychological and somatic, respectively) among disabled and non-disabled adolescents, focusing on the impact of traditional bullying (TB) and cyber harassment (CH). *Paper IV* assesses the association between parental self-rated health and recurrent abdominal pain (RAP) in their preschool children. Both these studies used cross-sectional designs with health surveys concerning children in Scania as the basis of the analysis regarding schoolchildren in 9th grade and preschool children and their parents,

respectively. Quantitative methods, predominantly multiple adjusted logistic regression analyses, were used to analyse health indicators in relation to selected social determinants.

The table gives an overview of the study designs as well as research questions and aims, data sources, information and informants and analytical approach (Table 1).

Table 1. An overview of the studies presented in the thesis.

Research question or aims	Study design	Data sources	Information /informants	Analytical approach	Paper
To investigate the impact of being in family foster care on selected health determinants and participation in Child Health Services	Case-control study	Child Health Services health records	Standardised information filled in by Child Health Services professionals about children from Malmö, Scania, in or not in family foster care at 0-16 years of age. (n=200)	Quantitative - descriptive statistics	I
To analyse what child health service professionals document about social determinants of health for children in family foster care compared to other children	Mixed methods	Child Health Services health records	Free text information filled in by Child Health Services professionals about children from Malmö, Scania, in or not in family foster care at 0-16 years of age. (n=170)	Quantitative and qualitative content analysis	II
To study subjective health complaints among disabled and non-disabled adolescents, focusing on the impact of traditional bullying and cyber harassment	Cross-sectional study	Questionnaires	Schoolchildren in 9th grade in Scania. (n=9 791)	Quantitative - descriptive and analytical (multiple logistic regression)	III
To assess the association between parental self-rated health and recurrent abdominal pain in their preschool children	Cross-sectional study	Questionnaires	Parents and their 4-year-old children in Scania, filled in by the parents. (n=6 728)	Quantitative - descriptive and analytical (multiple logistic regression)	IV

Documentation of health, healthcare and social determinants of children in and not in family foster care (*Papers I and II*)

Data sources and analysis

In *Study I* and *II* the same population was used – 100 children 0 to 16 years in Malmö, Sweden, who on the 15th of September 2008 were placed, or had been placed, in family foster care for at least three months. Out of 223 children who met the inclusion criteria, 100 children joined the study. The data source in both studies was Child Health Services (CHS) health records. The cases were compared with a control group of 100 children, matched by age, sex and city (=Malmö in Scania, Sweden) who were not, and had not been, placed in foster care. This means that for the case group data included information about the child before, during and/or after placement in family foster care. The CHS health records of the control group were used for comparison. For the analyses in study II, 15 out of the 100 health records were incomplete for the case group and therefore excluded together with the corresponding 15 matched health records for the comparison group.

The health records, from which data were retrieved were collected in de-identified format mainly from the regional archive. The records were in paper format and included both standardized and free text information concerning the CHS visits during the child's preschool period. Data included family sociodemographics, child health indicators such as breastfeeding, parental smoking and child development and healthcare issues such as investigations, treatments, contacts and referrals. Documents from the maternal health visits and obstetrical care, as well as from paediatric clinics and referrals were also attached.

For *Study I* mainly standardized information was used. The CHS visits as well as some screening types, e.g. speech screening, were documented in the free text. Data of both groups was analysed regarding means, frequencies and standard deviations for sociodemographic factors. The proportions of health determinants (e.g. breastfeeding and passive smoking) and healthcare indicators (PKU-test, CHS nurse visit at four weeks of age, CHS physician visit at 10 to 12 months of age, speech screening at two-and-a half to three years of age, vision screening and immunisation at 5 years of age) were estimated. In addition referrals to specialized care were analysed. In the chi-square and T-test for significance children with incomplete information were excluded.

For the analysis in *Study II* mainly the free text notes in the 85 complete health records were used.

The focus was to understand what the professionals – mostly nurses and physicians – wrote about different types of social determinants of health concerning the child. This implied selecting notes about the child's or the parents' psychosocial health, the family's social network e.g. indicating the involvement of parents, siblings or relatives as well as psychosocial life style matters and societal and environmental issues. Also notes about the child's or its family's contacts with other healthcare were selected together with the professionals' documentation of what contacts they had taken or meetings they had had with Social Services, preschool or other healthcare. The qualitative analysis included getting an overview of the total content of the records, by reading the total content of all the CHS health records to select the relevant documentation. The text was then transcribed and the data about children in the case group and the comparison group were entered into separate files in the Open Code 4 software to facilitate the analysis process (Umdac, 2012). Figure 4 illustrates the type of text included in the analysis.

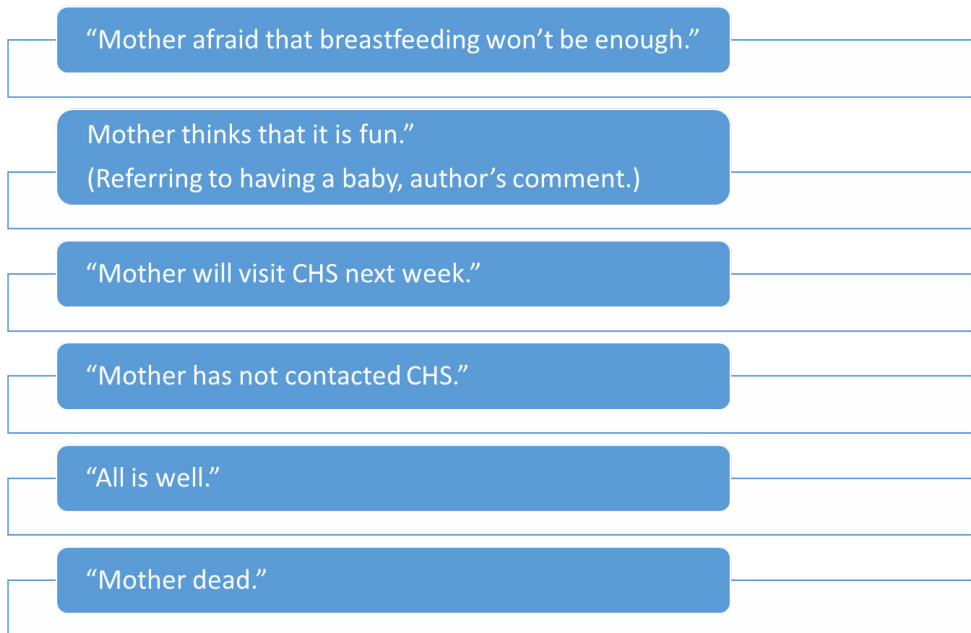


Figure 4. Text related to the content area 'actions by professionals'.

Qualitative content analysis as described by Graneheim & Lundman (2004) was used to interpret the free text of both groups, but focused specifically on the health records of the fostercare group. There was no need to condense the meaning units because they were all short and concise. The notes of both groups were coded and clustered into four content areas relating to the research questions. Later the analysis continued by interpreting the manifest meaning of the text regarding the

fostercare group by developing categories and sub-categories in relation to the identified content areas. The coding of the health records for the comparison group was then used to mirror and compare differences and similarities in the documents of the two groups.

The quantitative analysis of the text included a simple word count of the documentation together with a description of the distribution of the codes divided into the four content areas that had been identified in the qualitative analysis. A comparison could then be made between the case and comparison group regarding the number of codes used for each content area. Finally the results from the qualitative and quantitative analysis of the text were intergrated to develop a deeper understanding of the CHS documentation in terms of both content and space (Östlund et al., 2011).

Subjective health complaints and peer victimization among disabled and non-disabled schoolchildren (*Paper III*)

Data sources and analysis

The study is a substudy of 9th grade schoolchildren participating in a large cross-sectional public health survey of children and adolescents in Scania, Sweden, which was performed in 2012 to outline their health, health-related behaviours and living conditions. The data collected in this study originated from answers from 9 791 children, who answered the survey questionnaire. The response rate was 83 percent. Chi-square test was used to analyze significance regarding the sociodemographic, psychosocial and life style factors. Multi-adjusted analyses were performed by logistic regression using four models: Model 1 adjusted for sociodemographic factors (age, background, parental occupation), Model 2 further adjusted for life style factors (daily smoking, intense alcohol consumption), Model 3 further adjusted for psychosocial factors (close friend, communication with parents) and Model 4 further adjusted for exposure to traditional bullying (TB) or cyber harassment (CH). The analyses combining disability and TB and CH as well as subjective health complaints (SHC) across subcategories of disability were performed for boys and girls combined and adjusted for gender.

Parents' self-rated health and recurrent abdominal pain among their children (*Paper IV*)

Data sources and analysis

Study IV is based on data from the 2013 public health survey of 4 year old children and their parents in Scania, Sweden. This was a cross-sectional population based

study. The purpose of the survey was to outline the health situation, living conditions and lifestyles among young children and their parents. Each child's parents were sent a questionnaire with questions about the child, the family and separate questions for each parent to answer. Parents of 6 728 children (out of 15434) answered, giving a response rate of 43.6 percent.

Descriptive statistics was used to show child and parental sociodemographic factors, lifestyle and psychosocial factors stratified by presence of recurrent abdominal pain (RAP) in the child. Descriptive statistics was also used to show parental sociodemographic, life style and psychosocial factors stratified by parental self-rated health (SRH). Statistical significances were estimated using chi-square tests. Logistic regression analyses were used to estimate odds ratios (OR) and 95 percent confidence intervals (95% CI) of child RAP in relation to parental SRH. Data were analysed in a five steps model (Model 1: adjusted for country of birth, parents cohabiting, educational level, occupational status; Model 2: adjusted for alcohol risk consumption, child's breakfast habits; Model 3: adjusted for emotional support, every day stress, economic stress, violence in the family; Model 4: adjusted for variables in Model 1, 2 and 3).

Definitions of main variables used in the quantitative analyses (*Papers I, III, IV*)

The variables used in the quantitative analyses included sociodemographic data, psychosocial factors, health and healthcare participation. To get an overview of the data analysed in the studies the main variables used are presented here (Table 2). The use of these variables made it possible to get a deeper understanding of the complexity of the situation for the children, the parents and the whole family as well as draw conclusions about important associations and differences.

Table 2. The main variables in the studies included in the thesis. Q = question used, A = alternative answers, D = dichotomization.

Sociodemographic variables	Psychosocial variables	Health measures	Healthcare indicators
Sex Male/female. (Paper I, II, III and IV)	Worries about economy Q: "How often are you worried about your economy for the coming years?" A: "Never", "More seldom than once a month", "Once a month", "Not more than once a week", "A few times a week" or "Largely every day". D: having economic worries at least a few times a week or more often, or not. (Paper IV)	Passive smoking Mother's and father's smoking habits when the child is four weeks old and eight months old. (Paper I)	Immunisations Full participation in the national immunisation programme during the preschool period or not. (Paper I)
Age The child's age. (Paper I, II and III, IV) Parental age at child's birth. (Paper I and II)	Stress in daily life Q: "Do you feel stressed in your everyday life?" A: "No (almost never)", "Yes, sometimes" or "Yes, often". D: "yes" ("Yes, often") or "no" ("Almost never" and "Yes, sometimes"). (Paper IV)	Parental self-rated health (SRH) Q: "How would you rate your general health?" A: "Very good", "Good", "Fair", "Poor", and "Very poor". D: "Good" ("Good" and "Very good") and "Poor" ("Fair", "Poor" and "Very poor"). (Paper IV)	Vision screening Participation in vision screening or not at five years of age (+/- 1 month). (Paper I)
Parental education Elementary school (9 years or less), upper secondary school (for 2, 3 or 4 years), university level and other education. (Paper IV)	Violence in the family Q: "Has violence occurred in the family since the child was born?" A: "No" or "Yes". Both parents' answers were analyzed and if any parent answered "Yes" it was considered that violence had occurred in the family. (Paper IV)	Recurrent abdominal pain (RAP) Q: "How often has the child had abdominal pain during the past six months?" A: "Practically every day", "More than once a week", "Approximately once a week", "Approximately once a month" and "Seldom or never". D: "Yes" (more than once a week) and "No" (more rarely than once a week). (Paper IV)	Language screening Participation in language screening or not at two-and-a-half-years to three years (+/- 1 month). (Paper I)
Parental occupation Parental occupation (both parents working/ one or no parent working). (Paper III) Employee, student, unemployed or on sick leave. (Paper IV)	Serious experiences since the child was born included separation, a deceased parent, death within close family (not parent), other adult/other child/children moving into the household or none of these things. D: "No" - none of these things happened - and "Yes" - if any of these occurred. (Paper IV)	Disability Q: "Do you have any of the following disabilities? (yes/no) listing six categories: "hearing disability", "visual disability that cannot be corrected by glasses or contact lenses", "moving disability", "reading-writing disability, dyslexia", "ADHD/ADD", "other disability". D: "no disability" versus "any disability". (Paper III)	PKU-test Registered or not registered in the health record. (Paper I)
Country of birth Sweden, or outside Sweden. (Paper I and III) Sweden, other European country or other country outside Europe. (Paper VI)	Emotional support Q: "Do you have anyone or a few persons who can give you a proper personal support to manage stress and problems of life?". A: "Yes, certainly", "Yes, probably", "Not certain", or "No". "Yes, certainly" was defined as high emotional while the other answers were defined as low emotional support. (Paper IV)	Subjective health complaint (SHC) How often had the child experienced any of eight different symptoms during the last six months on a five grade scale from "about every day" to "rarely or never". Psychological SHC: "feeling low", "feeling irritable or bad tempered", "feeling nervous", "sleeping difficulties". Somatic SHC: "headache", "stomachache", "backache", "dizziness". High symptom load = at least one SHC on a daily basis (dichotomization "about every day" versus less often). (Paper III)	Child protection needs report to the Social Services. (Paper I, II)

Ethical considerations

Research on human beings requires ethical considerations, not least when it concerns children. The scope of this thesis, vulnerable children, underlines this fact. The four fundamental principles derived from Beauchamp and Childress – respect for autonomy (respect of the decision-making capacities of autonomous persons), non-maleficence (no causing harm to others), beneficence (prevent harm, provide benefits and balance benefits against risks and costs) and justice (appropriate distribution of benefits, risks and costs fairly) (Beauchamp, 2007) - have guided the planning, data collection and presentation of the study results. The studies also have been planned in accordance with the World Medical Association (WMA) Declaration of Helsinki- Ethical Principles for Medical Research Involving Human Subjects (1964/2013), the Swedish Act concerning the Ethical Review of Research Involving Humans (SFS 2008:192) and guided by the Universal Human Rights Declaration (UN, 1948) as well as the UN Convention on the Rights of the Child (1989). The information given to potential participants in all four studies, stressed that participation was voluntary, that confidentiality was assured and that results of the survey would be used in research and presented as

group statistics. The results of the studies have been, and will be, presented in different contexts to spread knowledge about the living conditions and health situation of vulnerable groups of children. It is a great responsibility as a researcher to speak out for groups of children that, due to age and position, have very few ways of being listened to.

Studies I and II were approved by the Regional Ethical Review Board, University of Gothenburg, Sweden (Dnr 633-08 and T946-13). Informed consent was obtained from all participating children's parents, as well as from the children themselves when 15 years and older, after having received written information about the studies. As stated in the Helsinki Declaration: "groups that are underrepresented in medical research" should be provided "appropriate access to participation in research" (WMA, 2013, p.199). The population of children investigated in these two studies represent a vulnerable group that according to these recommendations should be empowered. Regarding the children 15 years and older, they themselves, as well as both their parents, should consent to participation. This fact made it difficult for some children to participate even if they wanted, since their parents were hard to reach for their consent. To summarize, children have the right to be protected in research but also the right to be listened to. Sometimes these important principles in practice are conflicting.

Study III and IV were approved by the Regional Ethical Review Board, Lund University, Sweden (Dnr 2013/317; Dnr 2014/474). For Study III schoolchildren 15-16 years of age and their parents were informed about the study. The children completed the questionnaires anonymously at school. For Study IV all parents in Scania with 4-year-old children were sent information about the study together with a self-reported questionnaire. Contact data to professionals for receiving more information if needed was included. Since the questionnaire was in Swedish, families without sufficient knowledge in Swedish might be excluded.

Results

What is the impact of being in family foster care on selected health determinants and participation in Child Health Services? (*Paper I*)

Data from the Social Services acts about the children in family foster care showed that the most common reasons for placement, collected through the social acts of the children, were parental or drug abuse (35 %), neglect (30 %), parental mental health problems (13 %) parental health issues (7 %) and/or child physical abuse (6 %). A vast majority, 70 %, of the children were placed in out-of-home care before they were seven-years-old, and the median age for placement was three-and-a-half-years.

Sociodemographic data did not significantly differ between the two groups regarding country of birth of the child or parental age, but information on parental occupation was missing for 72 % of the mothers in the foster care group and 75 % of the fathers compared to 29 % of the mothers and 33 % of the fathers in the control group. Among children in family foster care, 25 % had one or two parents who had died. Some 10 % of these children had five or more siblings or half siblings compared to none in the comparison group.

Selected indicators regarding health and healthcare were compared between the groups and the analysis showed that the children in the family foster care group had higher health risks, with lower rates of breastfeeding and higher levels of parental smoking during the first months of life (Table 3).

There was a higher level of missing data on these health determinants in the foster care group. These children were also less likely to have received immunisations (87 %) compared to the control group (97 %). In addition participation in key nurse or physician visits as well as speech screening was lower. As an example participation in the CHS nurse visit when the child is four-weeks-old was 69 % in the case group compared to 93 % in the control group. The number of total visits to the CHS was not significantly different, but the family foster care group had significantly more missed appointments (4.2 versus 1.0 appointments). In addition frequent change of CHS was also noted in this group (3 versus 1.7 changes).

Missing data for the phenylketonuria (PKU) test were more common in children in family foster care (21% versus 8 %). In the foster care group referrals were more common and 73 % of the children had been referred at least once during the preschool period compared to 50 % of the children in the comparison group.

Table 3. Selected health and healthcare indicators for children in family foster care compared to children not in family foster care.

	Children in family foster care N = 100	Children not in family foster care N = 100	P-value
Breastfeeding when the child is 4 months old			
Yes (exclusive)	10	31	<0.001
Yes (partial)	13	44	
No	77	25	
Missing	n = 9	n = 0	
Mother smokes when the child is 8 months old			
Yes	69	19	<0.001
No	31	81	
Missing	n = 47	n = 27	
Father smokes when the child is 8 months old			
Yes	68	26	<0.001
No	32	74	
Missing	n = 58	n = 28	
PKU in the newborn baby			
Yes	99	100	NS
No	1	0	
Missing	n = 21	n = 8	
Visit to the CHS nurse at 4 weeks of age			
Yes	69	93	<0.001
No	31	7	
Missing	n = 9	n = 0	
Immunisation			
Yes	87	97	0.02
No	13	3	
Missing	n = 0	n = 0	

What do Child Health Service professionals document about social determinants of health for children in family foster care compared to other children? (*Paper II*)

Data about social determinants of health in the CHS health records of the children in family foster care was more voluminous than in the health records of the comparison group with 2.6 times more words in the free text (20 663 versus 7987 words). The qualitative content analysis identified four content areas: the child; the family; living conditions and actions by professionals. For both groups the highest

percentage of codes were found in the content areas *Actions by professionals* (40 % in the foster care group and 29 % in the comparison group and *The Family* (33 % respectively 42 %). For both groups the content area *The Child* had a lower percentage (21 versus 26 %) and codes related to *Living Conditions* were documented to a very low extent (6 respectively 3 %).

Figure 5 gives an overview of the results of the qualitative analysis of the CHS health records of children in family foster care for the four content areas. *Lack of child perspective* was indicated by the text being problem-oriented, describing the child as having a problem or even being the problem. *Parents' problems dominated* with parental ill-health such as mental problems and abuse as well as violence in the family. The text illustrated unstable and chaotic family situations with new or broken relationships. The few notes on living conditions concerned housing problems, unemployment and economic problems, painting a picture of a difficult life full of social misery but still *invisible social structures*. The professionals documented interaction with healthcare and social functions, but very few reports to the Social Services were noted, illustrating a *limited focus on child protection*. For only nine of the children in family foster care and for one in the comparison group, reports to the Social Services were noted.

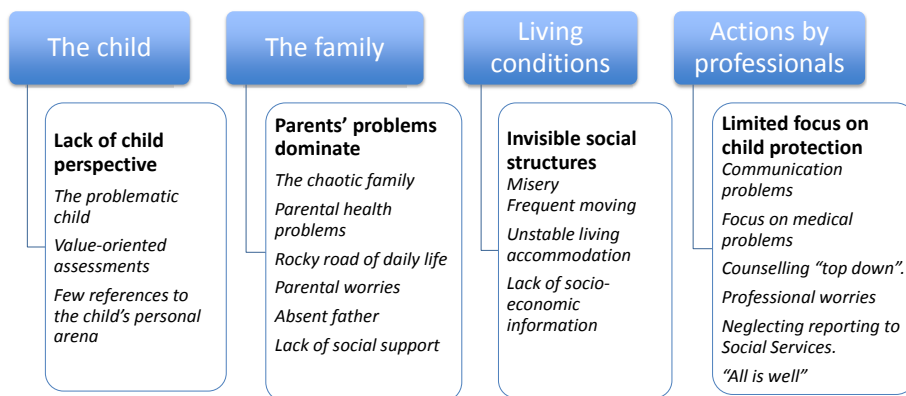


Figure 5. Overview of the results for the children in family foster care with categories and sub-categories related to the four content areas identified. Adapted from Table 3 in Paper II.

Comparison between the two groups showed that the child's own experiences were neglected, however more leisure activities were noted in the records of children in the comparison group. In this group the families were documented having more stable situations, fewer parental health problems and access to social support. Fathers were generally absent in the documentation, however more present in the documentation in the health records of the comparison group. The living conditions noted were few in both groups, but quite different in their content with social misery in the foster care group and stable situations with more parents

being employed in the other group. Actions by professional had a different content in the comparison group with communication with the family in focus but in contrast social problems were not prominent. The counselling was more medically oriented in the comparison group although less specialized healthcare was involved. The note "All is well" was used in both groups (146 in the foster care group versus 145 times in the other group), often the only comment made by the physician.

What is the impact of bullying and cyber harassment on psychological and somatic health for children with disability? (*Paper III*)

In this study the prevalence of subjective health complaints (SHC) – psychological and somatic – in schoolchildren in ninth grade in Scania, Sweden, was explored in relation to disability as well as traditional bullying (TB) and cyber harassment (CH). Any disability, including hearing, vision, moving, reading-writing, ADHD/ADD or other disability, was reported by 24.1 % of the boys and 22.0 % of the girls. Disability regarding reading-writing was most common (9.5 %).

Disabled children reported significantly higher exposure to TB (boys 7.4 % and girls 7.3 %) compared with non-disabled (boys 3.4 % and girls 3.2). The disabled children were even more exposed to CH (boys: 20.0 %; girls: 28.2 %) than non-disabled peers (boys: 11.8 %; girls: 18.1 %). They were also daily smokers to a higher extent, had intense alcohol consumption, lacked a close friend and had non-easy communication with their parents. Their parents were more often non working.

Disability alone was found to double the OR of daily SHC compared to non-disabled children. Children with ADHD/ADD had the highest odds of daily psychological SHC as well as exposure to TB compared to the six different types of disability studied.

In general the odds of daily SHC increased with exposure to CH or TB and the highest odds were seen among disabled children exposed to both CH and TB. When adjusted for possible confounders (sociodemographic factors; living habits and psychosocial factors) disabled children who were both victims of traditional bullying and cyber harassment were shown to have the highest odds regarding daily psychological SHC: OR 6.7 (95 % CI: 3.9,11.5) and daily somatic SHC: OR 4.2 (95 % CI: 2.4,7.3).

Is there an association between parental self-rated health and recurrent abdominal pain among their preschool children? (*Paper IV*)

In this study 5.1 % of four-year-old children in Scania, Sweden, were reported by their parents to have recurrent abdominal pain (RAP). The differences in selected sociodemographic and life style factors between the group of children with RAP and the group without this symptom were small, except that the children with RAP significantly more often experienced violence in the family. In addition they less often had breakfast every day.

Regarding parental characteristics the children with RAP more often had mothers or fathers with poor self-rated health (SRH) and economic worries than children without RAP. Additionally the mothers to the children with RAP more frequently reported every day stress and had lower educational level, while the fathers more often reported low emotional support and being on sick-leave or unemployed.

Poor parental SRH in turn was associated with lower educational level in both mothers and fathers, higher frequency of being born outside Europe, unemployment or sick leave, economic worries, weaker emotional support and every day stress compared to parents with good SRH. Higher levels of alcohol risk use and violence were also reported.

Poor SRH was also associated with more perceptions of insufficiency regarding showing affection as well as showing attention to the child. In addition, parents with poor SRH less often read books to the child.

Logistic regression analysis showed higher odds of RAP among children whose parents reported poor SRH. The odds ratio (OR) of RAP in the child was OR=2.1 (95 % CI:1.6,2.7) for mothers with poor SRH and OR=1.5 (95 % CI:1.1,2.0) for fathers with poor SRH. Adjustment for sociodemographic, lifestyle and psychosocial factors reduced OR for RAP in the child for mothers with poor SRH: OR=1.6 (95 % CI:1.2,2.2) and for fathers with poor SRH: OR=1.2 (95 % CI: 0.8,1.7).

Discussion

This thesis presents results regarding the health and life situation of three especially vulnerable groups of children: children in out-of-home care, disabled children and children whose parents have poor self-rated health.

The two studies comparing children in family foster care with those who were not add an early childhood perspective to existing knowledge about children in out-of-home care. Through exploration of the CHS health records, health risks and access to healthcare are examined. In addition, new data about the CHS professionals' documentation both regarding quantitative and qualitative content are presented. The two studies in combination make it possible to get a more comprehensive view on Swedish Child Health Services actions directed towards vulnerable children and their families and how children in family foster care are included in the CHS health promoting program.

In *Paper I* the analysis of selected health determinants showed that the level of breastfeeding was lower and parental smoking higher for children in family foster care in comparison to children in the control group. These results might be an effect of lower socioeconomic status among the parents in the foster care group, an observation also made in international reviews and other Swedish studies focusing on children in out-of-home care (Simkiss et al., 2012, Vinnerljung et al., 2007). However, due to the high level of missing data regarding parental occupation in the present study – a result per se - this cannot be confirmed. In addition information about the PKU-test was more often missing for the foster care group compared to the controls, a sign of less safe medical documentation for this group. The participation in the CHS program was lower for children in family foster care, regarding for example immunizations, key visits to the nurse or physician and speech screening. These results are in line with both earlier and more recent research (Rodewald, Szilagyi, Shiu, Humiston, Lebaron & Hall, 1995; Walton & Bedford, 2017). Change of caregiver and missed appointments were found more often in the foster care group and this has also been noted in previous studies (Williams, Jackson, Maddocks, Cheung, Love & Hutchings, 2001; Friedlaender, Rubin, Alpern, Mandell, Christian & Alessandrini, 2005; Woodman, Brandon, Bailey, Belderson, Sidebotham & Gilbert, 2011). More referrals were made for specialized healthcare for the foster care group. This can be seen as a sign of unmet needs of both healthcare and dental care in children in out-of-home care

that has been reported by others (Kling, Vinnerljung & Hjern, 2016). There are studies from other counties in Sweden (Wallby, 2012) showing that CHS equally, when analyzing parental age, educational background and country of birth, reach all families with infants with the universal program, except for parenting groups. As concluded by Wallby (ibid.) this still does not indicate equality since certain population groups might need extra support from the CHS to achieve equity in health outcome. The findings of this thesis indicate that children in one of the most vulnerable groups do not receive adequate healthcare during the preschool period – at least not in the Scania setting.

In *Paper II* the quantitative and qualitative analysis of the content of the documentation of social determinants of health in the CHS health records were integrated using the triangulation metaphor suggested by Östberg et al to illustrate the findings (Figure 6).

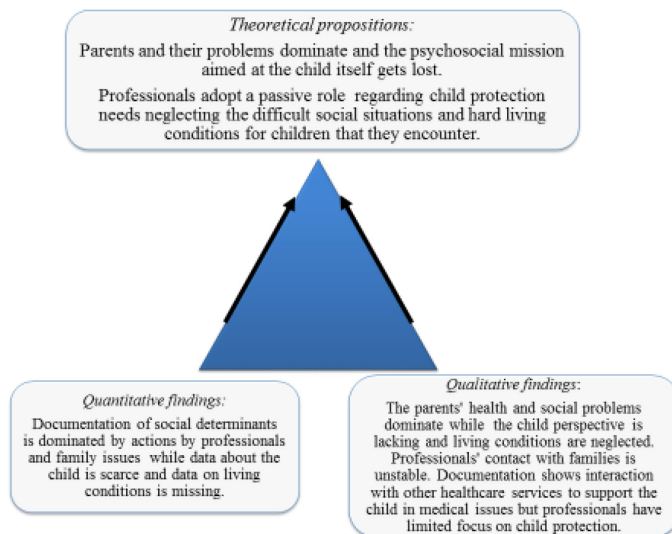


Figure 6. Triangulation of quantitative and qualitative results from the documentation of children in family foster care.

The analysis showed that a lot was known about the parents' health and social problems, but that these were not connected to the child's situation in the family and the child's own experiences were neglected. The documentation indicated that professionals interacted with healthcare and social functions, but still very few reports to the Social Services for the children's benefit were made. The note "*All is well*" and similar expressions were frequently used, especially by physicians, although signs of hard living conditions for the family were obvious. Data about

parental occupation, especially fathers' occupation was missing to a very high extent in the health records of the children in family foster care, something that have been noted in earlier research (Hagelin, Lagerberg & Sundelin, 1991). For both groups of children, notes about social structures were almost absent. Earlier research have found that Swedish health records mainly focus on somatic health (Ståhl, Granlund, Gäre-Andersson & Enskär, 2011), especially in the standardised parts and that psychosocial factors are documented in free text notes (Ståhl, Granlund, Simeonsson, Andersson Gäre & Enskär, 2013). Still professionals leave out psychosocial data from school health records (Clausson, Petersson & Berg, 2003), something that they justify by worries about stigmatization, risk of future misunderstandings as well as lack of time (Clausson, Köhler L & Berg, 2008). In the present study the reasons for missing data about parental occupation and social structures are unknown.

In *Paper III* schoolchildren in 9th grade reported both traditional bullying (TB) and cyber harassment (CH). Both were associated with subjective health complaints (SHC) – psychological and somatic - with higher levels in children with disabilities. Children with disabilities reported both more TB and CH as well as more smoking, alcohol use, lacking a close friend and having non-easy communication with their parents. Daily SHC were found with doubled odds in children with disability compared to children without disability. When adjusting for confounders the children with disabilities were found to be victims of both TB and CH to a higher extent than their non-disabled peers. They also had higher odds for daily psychological SHC and daily somatic SHC with the highest odds if both exposed to TB and CH. These findings are supported by earlier studies showing that combined TB and CH exposure have a particularly negative impact on mental health including depression and suicidality (Pham & Adesman, 2015; Landstedt & Persson, 2015). The most prevalent type of disability in the present study – reading-writing disability – had the lowest odds of daily psychological and somatic SHC. The highest odds of daily psychological SHC as well as the highest odds of exposure to TB were found for children with ADHD/ADD. Earlier studies confirm that disabilities that include interpersonal and behavioural difficulties are, to a higher extent, associated with a risk of victimization compared with other forms of disabilities (Turner, Vanderminde, Finkelhor, Hamby & Shattuck, 2011). The Swedish Ombudsman for children (BO) has highlighted the situation for children with disabilities (BO, 2016) and specifically focused on the risk of traditional bullying and harassment in school in another recent report (BO, 2015). Together this information clearly indicate a need for actions to prevent bullying and harassment in society and to protect all children against bullying and harassment in all arenas, including cyberspace. Children with disabilities are especially vulnerable and need strengthening of their rights and to be focused on in the preventive, promotive and protective work.

In *Paper IV* the analysis of the parents' answers regarding the health of their four-year-old children showed higher odds for recurrent abdominal pain (RAP) when certain social determinants of health were at stake. An association was found with higher odds of RAP in the child when the parents reported violence in the family. This finding is supported by earlier studies of children who have witnessed partner violence where psychosomatic complaints as well as emotional, cognitive and behavioural problems were more common in children who had experienced domestic violence (Martin, 2002). Higher odds for RAP in the case of reported economic worries in both mothers and fathers in the present study was a result in line with those of a Nordic study showing more frequent RAP in children in low educated or low-income families (Grøholt, Stigum & Nordhagen & Köhler L, 2003). For fathers who reported low emotional support higher odds for RAP were found, a finding partly supported by a Swedish study showing higher prevalence of RAP in families lacking social support (Alfvén, 1993). For mothers higher odds for RAP were found when reporting everyday stress.

A new finding in the present study was that children having parents with poor self-rated health (SRH) had higher odds of RAP. For the mothers, in contrast to for the fathers, the significant association persisted after adjustment for sociodemographic, lifestyle and psychosocial factors. In addition a graded relationship between SRH of both parents and the presence of RAP in the child was shown. Both physical and mental ill-health in parents have separately been found to be associated to RAP in children (Hotopf, Carr, Mayou, Wadsworth & Wessely, 1998; Ramchandani, Hotopf, Sandhu & Stein, 2005.) Various kinds of negative child health outcomes have been shown when parents have cancer (Visser et al., 2004), mental health problems (Vinnerljung et al, 2007) or die (Pearlman, Schwalbe & Cloitre, 2010; Dowdney, 2000). Poor SRH among the parents is, strongly associated both with morbidity and mortality in adults (Kaplan, Goldberg, Everson, Cohen, Salonen, Tuomilehto & Salonen, 1996), and is thus an important indicator to follow when monitoring children's health and wellbeing. However, more other studies are needed to fully understand the association between RAP in children and parental SRH.

Furthermore, this study shows that social determinants of health, living conditions and other social circumstances are associated with poor parental SRH. As in several other studies and reports associations were found between poor SRH and lower educational level, birth outside Europe, unemployment or sick leave, economic worries, weaker emotional support and everyday stress (Olivius, Östergren, Hanson & Lyttkens, 2004; Johansson, Midlöv, Sundquist, Sundquist & Calling, 2015). In addition higher levels of alcohol use was found as well as higher levels of reporting of violence in these families, the latter supported in earlier research (Andersson, Heimer & Lucas, 2014). The new knowledge presented in Study IV is that poor parental SHR health is associated not only with RAP in the

child, but also by parental insufficiency perceptions in showing affection and attention to the child. Parents with poor SRH read books together with the child significantly less often, possibly reducing valuable moments stimulating positive attachment and speech development for the child. These findings all have relevance for professionals meeting adults with poor SRH as well as children with RAP.

The vulnerable groups of children studied in this thesis - children in family foster care, children with disabilities and children whose parents have poor health - have all greater risks of poor health during childhood and into adulthood. They are also often connected in various ways.

Children with disabilities have more subjective health complaints than other children (Berntsson, & Gustafsson, 2000). In addition children who are maltreated have more psychosomatic symptoms, a fact to be noted by professionals meeting children with those symptoms (Jernbro, Svensson, Tindberg & Janson, 2012). A Swedish study of children with chronic conditions found that they have higher risk for physical abuse than children without a chronic condition (Svensson, Bornehag & Janson, 2011). Children with ADHD, physical dysfunction, mental illness or stomach pain were among those having higher risks of being abused. The risk of physical abuse was increased for children with disability who in addition were born outside Sweden and lived in a low-income area. Nevertheless, and in spite of the legal obligation, studies have shown that professionals meeting children with disabilities in the Child and Youth Habilitation Services in Sweden under-report maltreatment or suspicion of maltreatment of children to the Social Services (Mallén, 2011). Several reasons for under-reporting have been identified and the major obstacle was the *closeness* between the child, their parents and the professional.

Children whose parents have poor health, e.g. mental ill-health, abuse or who decease, have more health problems such as mental disorders, suicide attempts or abuse compared to other groups of children, also into adulthood (Vinnerljung et al., 2007; Hjern, Arat & Rostila, 2014; Hjern, Arat & Vinnerljung, 2014). Still, and despite the legal recommendation to inform and support these children when needed, professionals in for example Swedish psychiatric healthcare to a high extent have been found to under-register underaged children in the family when meeting adult patients (Priebe & Afzelius, 2015). About two thirds of the families with underaged children were not registered to receive any targeted action towards the children. These children are at a higher risk of being placed in out-of-home care especially if a parent is hospitalized (Vinnerljung et al., 2007).

A fact that the groups of children studied in this thesis have in common is that they are at higher risk of living their childhood with vulnerable financial situations, including economic problems and receiving social assistance. Children whose

mother receives social assistance for three successive years are more likely than other children to be placed in out-of-home care (Vinnerljung et al., 2007). Children of mentally ill parents live in families with higher frequency of financial difficulties (ibid.). Likewise as shown by Hjern, Arat & Vinnerljung (2014) and Hjern, Arat & Rostila (2014) children whose parents have poor mental health, abuse or die to a higher extent have economically vulnerable situations as adults. Low income and socioeconomic inequalities within societies on the other hand are risk factors for child maltreatment, which is important information on a structural level (Janson, 2012; Gilbert, Widom et al., 2009).

Methodological considerations

One of the strengths with the studies based on health records (*Paper I and II*) was that they gave the opportunity to compare children in family foster care with other children matched for age, sex and geographic location. The broad research approach using both quantitative and qualitative methods in combination, in a mixed methods analysis, displayed new data on one of the most vulnerable groups in society. The studies together also contributed with a broader and deepened view of the Swedish CHS regarding access to healthcare, documentation and action by the healthcare professionals. Studies on the youngest children are unusual and these studies therefore add important knowledge, needed for relevant planning of curative, preventive and promotive health services for preschool children.

Health records are based on data that may be selectively reported by the professionals but might nevertheless give indications of what is happening in the CHS. The missing data on the parents' occupation and about the PKU-test findings are examples that might be signs of a negative selection of data, indicating that these children are monitored less frequently and less thoroughly by the healthcare system than other children. The studies only analysed 100 cases and 100 controls which might be considered a small number. There is, however, no obvious reason to believe that the children not joining the studies are better off. It might well be that the parents not consenting to the study were those having worse living conditions e.g. lacked a stable housing situation, were abusing or were in jail, factors with definite negative impact on a child's situation and health. Some health records of children, for whom consent was obtained, were impossible to locate in the regional archive. Since the data emanate from only one city in Sweden it is hard to draw far-reaching conclusions for the whole country.

The strengths of the study concerning children with disabilities (*Paper III*) is the large population studied with a high response rate, and including information on several relevant confounders as well as data allowing separate analyses of children

with different types of disabilities. Still, the associations might be biased since not all adolescents with disability took part of the investigation. In addition information about severity of disability and parental health is lacking and causality cannot be inferred due to the cross-sectional nature of the study.

The study based on preschool children and parental health (*Paper IV*) also presented a broad span of sociodemographic and psychosocial factors and health related behaviours, thus giving a comprehensive picture of the child's living conditions. The use of parental SRH is another strength, since SRH has been shown to be a valid independent predictor of morbidity and mortality. The questionnaire was anonymously responded enabling the participants to reveal possible sensitive information e.g. about alcohol use, violence in the family and poor health. The parents being the informants about their child's health is considered a strength since they are close to the child. However, sensitive information about the child's health and environment such as violence exposure or parental alcohol use might be excluded by the parents. A limitation of the study was the rather low response rate, especially among the fathers, and that the questionnaire only was in Swedish, which might exclude immigrant families that are likely to have worse health problems. Furthermore, using a cross-sectional study, conclusions regarding causation can not be drawn. Further longitudinal studies within this field are needed.

Conclusions

Children's health is to a high extent influenced by social determinants, that is circumstances in childhood and daily life. The early environment and above all the family has a great impact on the development, health and wellbeing of the child. Family life and possibilities are in turn affected by living conditions and social structures and in that way basic risk and protective factors are created.

The latest decades an increasing health gap has been noted globally – both between and within countries. In Sweden child health is generally good, but rising levels of mental health problems and also unequal distribution of health have been shown.

With this as background this thesis has explored health in relation to certain social determinants in groups of particularly vulnerable children – those who are in out-of-home care, those who have a disability and those whose parents have poor self-rated health. All three groups of children turned out to have greater health risks and more health problems than other children.

Children in out-of-home care had higher health risks and lower participation in child health services than other children. The health records documentation by the professionals regarding these children was voluminous, with problem oriented content dominated by parental health and social problems while the experiences of the child, as well as social structures, were lacking. Few reports were made to the social services.

Disabled children had more subjective mental and somatic health complaints than children without disability and were more exposed to traditional bullying and cyber harassments.

Recurrent abdominal pain in 4-year-old children was observed to a higher extent when the parents reported poor health, in families exposed to violence or experiencing economic stress.

The findings support the special vulnerability of these children and thereby their particular needs. In addition they confirm that the healthcare of children in out-of-home care does not fulfil its goals and thereby also violates national and international laws and conventions.

With the starting point in the UN CRC, where every child's right to the highest attainable health is declared, attention to all children and each child is necessary in all societal functions. Even if the most effective interventions lie on a societal level still much can be done by health professionals, who on a daily basis have direct contact with children and adults. These healthcare meetings make professionals' engagement in promoting child health and preventing ill-health possible. Attention to the social determinants of health is included in this work.

Healthcare is one arena of all where professionals meeting children have the possibility to engage in promoting child health and preventing child ill-health. This includes paying attention to the social determinants of health.

Healthcare professionals who meet adults should clarify if any child is affected, investigate if it needs support or protection or are at risk of poor health, and act accordingly.

Healthcare professionals who meet children have a great responsibility to see the child in its context and act if there is a risk of poor health or a need of support and/or protection.

To improve the healthcare professionals' knowledge about social determinants of health, children's human rights and needs of support and protection and to increase their competence in acting accordingly, systematic education and training is necessary. What is needed is a multiprofessional, multidisciplinary and multisectorial collaboration. That is the aim and role of Child Public Health.

Future directions

Children have, according to the UNCRC, the right to enjoy the highest attainable standard of health and to access Healthcare services. The health concept includes mental, somatic, social and spiritual health and these factors should be taken into account in the healthcare system.

Children's health is influenced by the social determinants of health including circumstances within the family, living conditions and structures in the society. Thus, these areas are important targets when improving child health and diminishing inequity of health between groups of children.

In spite of generally high health standards in Swedish children there are still vulnerable groups who are left behind. Some examples are shown by the studies in this thesis. A most important fact that needs highlighting, is that a child during the lifetime or even simultaneously, might be part of more than one vulnerable group, and thus have an additional higher risk of ill-health.

A few examples are:

- a child who is placed in out-of-home care due to parental drug abuse

- a child with a disability having a parent who is suffering from cancer

- a child who is neglected by a parent with a mental illness

- a child with a disability who is physically abused by a parent and then is placed in out-of-home care

Although much at this time is known and accepted about the importance of social determinants of health we still need more knowledge (CSDH, 2008; Jones, 2009; Bambra, Gibson, Sowden, Wright, Whitehead & Petticrew 2010). In addition we need to work with the social determinants of health in daily practice in healthcare and take advantage of positive experiences emerging from many places around the world - particularly in prevention and promotion (Blair, 2010). A Northamerican study investigated the frequency of and parental attitudes to discussions about family and community health risks in well-clinic visits (Kogan, Schuster, Yu, Park, Olsen, Inkelas, Bethell, Chung & Halfon, 2004). The health risks selected were parental smoking habits, alcohol or drug use, emotional support, financial difficulties, parental physical health and violence. Parents to preschool children

reported that there were few discussions about the topics when they met the pediatric providers, especially for the oldest children (35 months). However, most parents considered the questions, except the one about violence, as natural parts of the meeting with a professional, the conclusion of the study was that family needs remained unmet in the present setting. In another Northamerican study training programs for pediatric interns in an out-patient primary health care setting were investigated (Klein, Kahn, Baker, Fink, Parrish & White, 2011). The professionals who were educated about the impact of social determinants developed increased comfort with and knowledge about social issues compared with colleagues who had not been trained. In practice, when meeting the parents and the children, the physicians used questions exploring parts of the families' social situation e.g. the housing situation, economic stress, depression in the parent, preschool/school participation and safety for the child in the present relationships. In addition this group identified domestic violence and had more referrals to the Social Services.

Child health is strongly connected to the social determinants and poverty in the 'rich countries' still is connected to low child birth weight and mental health problems (Spencer, 2003). Parents who face unemployment, no housing or who struggle economically have greater challenges regarding their own health as well as their parenting (Vinnerljung et al., 2007; Hjern, Arat & Vinnerljung, 2014). Thus national and regional political and economic planning of issues regarding e.g. education, employment, housing, family economics and parental support to a high extent have impact on child health (CSDH 2008; Braveman & Gottlieb, 2014).

The children's own voices have to be listened to in general in society, as suggested by the Children's Ombudsman regarding children in out-of-home care (BO 2011; BO 2014b), children with disabilities (BO, 2016), violations and harassment of children in school (BO, 2015) as well as mental illness in children and young people (BO, 2014a). The vulnerable group of children fleeing to Sweden from war and persecution has also been focused in a recent report from the Children's Ombudsman (BO, 2017).

We need to continue to carefully monitor and follow children's health and well-being, how their healthcare is organized and structured, how the professionals are educated and trained and not least how the knowledge and handling of social determinants and child rights perspective are considered regarding attitudes and behaviours. Paediatricians might be important in the work reducing child health inequities (Spencer, 2010) and promoting children's health (Blair et.al., 2010).

The ultimate goal is obviously to improve the health, well-being and living conditions for all children and every child, to avoid new generations of vulnerable children who in turn will become the parents of the next generation of vulnerable children.

That is what child health public health is about.

And with the words of Sir Michael Marmot: “At the end of each scientific paper there is a familiar coda: *more research is needed, more reserach is needed*. What, I wondered, if we added a new coda: *more action is needed*. It need not be discordant with the first.” (Marmot, 2015, p 17.)

Populärvetenskaplig sammanfattning

Enligt Konventionen för barnets rättigheter har alla barn rätt till bästa uppnåeliga hälsa (Förenta Nationerna: Konventionen om barnets rättigheter, 1989). Barns hälsa och utveckling påverkas i hög utsträckning av de sociala determinanterna för hälsa bl a via relationerna med föräldrar och syskon/kamrater, föräldrarnas hälsa, ekonomi, levnadsvanor, utbildning och sysselsättning, tillgången och kvaliteten på förskola/skola, bostäder och hälso- och sjukvård och samhällsstrukturen i stort (WHO, 2008).

Globalt sett är ojämlikheten i hälsa stor och insatser görs för att minska orättvisor i fördelning av resurser och makt och förbättra människors livsvillkor så att skillnaderna i hälsa minskar mellan regioner och länder. Även inom många länder är hälsoskillnaderna mellan olika grupper stora och t.o.m. ökande.

I Sverige har barn generellt sett god hälsa, men en ökning av psykisk ohälsa och psykosomatiska symptom har observerats de senaste decennierna (Hjern, 2012). I internationella jämförelser har Sverige länge legat högt vad gäller barns hälsa, men de senaste undersökningarna visar att Sverige hamnar längre ner på listan i jämförelse med andra höginkomstländer (Unicef, 2007 & 2013). Även inom Sverige har skillnaderna i barns hälsa setts öka de senaste åren (Bremberg, 2011). Vissa grupper av barn har högre risk för ohälsa, t ex barn till föräldrar med låg utbildning och ekonomisk utsatthet (Vinnerljung m fl, 2007).

I avhandlingen har tre grupper av särskilt utsatta barns hälsa närmare studerats:

- barn i familjehem
- funktionsnedsatta barn
- barn till föräldrar med dålig självskattad hälsa

I en första studie undersöktes malmöbarn, som var eller hade varit, familjehemsplacerade, avseende hälsorisker och tillgång till barnhälsovård under småbarnsåren genom studier av deras journaler. Utvalda mått för hälsa och hälsovård jämfördes med motsvarande för en grupp lika gamla pojkar och flickor, som inte varit placerade i samhällsvård.

Barnen i familjehem hade, i förhållande till jämförelsegruppen, ökade hälsorisker med lägre amningsfrekvens och de var mer utsatta för tobaksrök i hemmet. Dessa

barn deltog i lägre utsträckning vid nyckelbesök till sjuksköterska eller läkare samt var även vaccinerade i mindre utsträckning än barnen i jämförelsegruppen. De uteblev oftare från hälsobesöken och bytte även barnavårdscentral oftare än den andra gruppen barn.

I en andra studie undersöktes innehållet i barnhälsovårdsjournalerna för samma grupp av familjehemsplacerade malmöbarn och för jämförelsegruppen, för att se vad hälso- och sjukvårdspersonal, såsom läkare, sjuksköterskor m fl, dokumenterade gällande sociala determinanter för hälsa.

Dokumentationen för barn i familjehem var mer omfattande än för jämförelsegruppen. Innehållet var problemorienterat och dominerades av allvarliga hälsoproblem hos barnens föräldrar och sociala problem, medan barnets egna erfarenheter saknades. Personalen dokumenterade samverkan med hälso- och sjukvård och andra verksamheter, men noterade mycket få anmälningar gällande oro för barnet till Socialtjänsten. För båda grupperna saknades information om livsvillkor och sociala strukturer nästan helt.

I en tredje studie undersöktes hälsan hos skolbarn i nionde klass i grundskolan genom frågor som de själva svarade på.

Av pojkarna rapporterade 24,1 % och av flickorna 22,0 % någon funktionsnedsättning. Barn med funktionsnedsättning var mer utsatta för nätmobbning (20,0 % av pojkarna och 28,2 % av flickorna jämfört med kamrater utan funktionsnedsättning (11,8 % av pojkarna och 18,1 % av flickorna). Utsatthet för traditionell mobbning visade samma mönster, men på en lägre nivå. Barn med funktionsnedsättning hade omkring dubbel risk för dagliga psykiska och kroppsliga besvär. Generellt sett ökade oddsen för besvär vid mer utsatthet för nät- eller traditionell mobbning. Högst odds sågs bland funktionsnedsatta barn som var utsatta för båda mobbnings typerna. Barn med ADHD/ADD hade högst odds för dagliga psykiska besvär och utsatthet för traditionell mobbning.

I en fjärde studie tillfrågades föräldrar till fyraåringar i Skåne fr a avseende familjens livsvillkor, självskattad egen hälsa och barnets hälsa.

Vid analys av data framgick att det var högre odds för att barnet hade magont om föräldrarna (både mammor och pappor) rapporterade dålig hälsa, våld i familjen eller oro för ekonomin. Med hänsyn tagen till bl a utbildning/sysselsättning, levnadsvanor och psykosociala faktorer sjönk oddsen för magont hos barnet vid dålig självskattad hälsa hos bägge föräldrarna, och förblev statistiskt signifikant för mammorna, men inte för papporna. Dåligt självskattad hälsa var associerad med mindre läsning för barnet och även med känsla av otillräcklighet i relation till barnet hos båda föräldrarna.

Konklusion

Barns hälsa påverkas i hög grad av sociala determinanter det vill säga omständigheter i barnets uppväxt och dagliga liv. Närmiljön och framför allt familjen har tidigt betydelse för barnets utveckling, hälsa och välfinnande. Familjernas liv och möjligheter formas i sin tur av yttre livsvillkor och samhällsstrukturer och på så sätt skapas grundläggande risk- och skyddsfaktorer för barnen.

De senaste decennierna har ett ökat hälsogap noterats i världen – både mellan och inom länder. I Sverige har de barn generellt sett god hälsa, men stigande nivåer av psykisk ohälsa och ojämlik fördelning av hälsa har påvisats.

Mot denna bakgrund har avhandlingen undersökt hälsan i relation till vissa sociala determinanter hos grupper av särskilt sårbara barn - de som är placerade i samhällsvård, som har funktionsnedsättning eller som lever med föräldrar med dålig hälsa. Alla tre grupperna av barn visade sig ha sämre förutsättningar för god hälsa, löpa större hälsorisker och ha mer hälsoproblem än andra barn.

Barn i samhällsvård hade högre hälsorisker och lägre deltagande i barnhälsovården än andra barn. Personalens journaldokumentation rörande dessa barn var omfattande, med probleminriktat innehåll som dominerades av föräldrarnas ohälsa och sociala problem medan barnets egna erfarenheter, liksom sociala strukturer, saknades. Få anmälningar till socialtjänsten gjordes.

Barn med funktionsnedsättning hade mer subjektiva psykiska och somatiska hälsoproblem än barn utan funktionsnedsättning och var mer utsatta för mobbning och nättrakasserier.

Återkommande magont hos 4- åriga barn sågs i högre utsträckning när föräldrarna uppgav dålig hälsa, när våld förekom i familjen eller vid upplevelse av ekonomisk stress.

Fynden styrker dessa barns speciella utsatthet och därmed deras särskilda behov. Dessutom bekräftar de att hälso- och sjukvården för barn i samhällsvård inte lever upp till sina målsättningar och därmed också bryter mot nationella och internationella lagar och konventioner.

Med utgångspunkten i FN:s Konvention om barnets rättigheter, där det fastslås att varje barn har rätt till högsta uppnåeliga hälsa, är uppmärksamhet av alla barn och varje barn nödvändig i alla samhällsfunktioner. Även om de mest effektiva åtgärderna av förbättring ligger på samhällsnivå är det ändå mycket som kan göras av den hälso- och sjukvårdspersonal som, i sitt dagliga arbete, har direkt kontakt med barn och vuxna. Möten i vården ger möjlighet för personal att engagera sig i att främja barns

hälsa och förebygga deras ohälsa. Detta inkluderar att uppmärksamma de sociala determinanterna för hälsa.

Hälso- och sjukvårdspersonal som möter vuxna ska klarlägga om något barn är påverkat, undersöka om det behöver stöd eller skydd eller är i risk för ohälsa, och vid behov agera.

Hälso- och sjukvårdspersonal som möter barn har ett stort ansvar att se barnet i sitt sammanhang och agera om det finns risk för ohälsa eller behov av stöd och/eller skydd.

För att förbättra hälso- och sjukvårdspersonals kunskap om de sociala determinanterna för hälsa, barns mänskliga rättigheter och behov av stöd och skydd och för att öka deras kompetens för ett adekvat agerande, är det nödvändigt med systematiska insatser av utbildning och träning. Det som behövs är flerprofessionellt, tvärvetenskapligt och tvärsektoriellt samarbete. Detta är syftet och rollen för barnhälsovetenskap.

Acknowledgements

The work with this thesis started at the Nordic School of Public Health, Gothenburg and continued and finished at Lund University.

The completion of this thesis would not have been possible without a supporting environment and collaboration with colleagues and I would like to express my sincere gratitude to all of you. I would especially like to thank

- my colleagues at the Center of Knowledge Child Healthcare and the Center of Knowledge Women's Health in Region Skåne. We share the daily work of improving health as well as the availability to healthcare consequently defending the right to equal health. The community we have, with its creativity, warmth and natural ups and downs as years pass by, inspires me to go on both with strategic work for children and women and with research. I am so grateful to, together with you, be a part of a public health movement. I would also like to thank *Jenny Malmsten* and the colleagues at the Center of Knowledge Migration and Health with which we are happy to share our rooms.
- Professor *Jan Sundquist* at the Competence Center for Primary Healthcare in Region Skåne. You have supported me, being my closest chief, to go on with and complete my thesis.
- Professor *Anders Hjern* and professor *Bo Vinnerljung*, who planned the initial project concerning children in family foster care and made it possible for me to begin my research in an interesting and important field. Anders, you have also been my co-supervisor and a support throughout the years.
- Professor *Henry Ascher* for being my initial head supervisor supporting me to start up.
- my head supervisor professor *Maria Rosvall* for your persistent support and engagement the last years. You have been there for me, kindly sharing your experiences and believing in me.
- my co-supervisor Professor *Maria Emmelin*. You generously shared your wisdom, helped me to explore new research methods and was there to the end. We had some good creative moments together.

- all doctoral students at the Nordic School of Public Health, Gothenburg, and at Lund University, who shared your experiences and knowledge with me, in particular *Anders Johan W. Andersen* and *Maria Fridh*.
- all members in the first project group concerning children in family foster care and in especially *Stefan Kling*, project leader, and *Hans Bäckström*, who collected data from the social acts.
- *Mathias Grahn* who has been very helpful in statistical matters.
- my colleagues in the working group/association for maltreated children on a national level being a part of the Swedish Paediatric Association and in particular *Gabriel Otterman* and *Steven Lucas*. Together with other devoted colleagues we built a skilled and engaged network of paediatricians in Sweden.
- Professor *Staffan Janson* for, with your vast knowledge and dedication, bringing the international research arena closer.
- my fellow co-writers of the book *Leva med barn: Lars H Gustafsson*, you are someone to turn to when it comes to children and child rights. *Johanna Tell* and *Antonia Reuter*, you are always enthusiastic and knowledgeable.
- Professor *Nick Spencer* and Professor Sir *Michael Marmot* who in personal conversations both inspired me to continue my work.
- the Swedish National Board of Health and Welfare (Socialstyrelsen), The Children's Welfare Foundation (Allmänna Barnhuset) and the City of Malmö, for grants making my studies possible to complete.

I would also like to thank my family and in particular

- my very dear parents, *Eva-Mari Köhler* and *Lennart Köhler*, who together, during my childhood, introduced a strong child rights perspective to me and my siblings. You have both, as professors and through your lives, been dedicated to your professional roles and from young age have I listened to and been invited to join your engaged conversations about child health matters. Eva-Mari, you have inspired me with your commitment regarding education and child psychology, to always see the individual child as well as the social structures. Lennart, you have inspired me with your work in child public health, to see the possibilities in strengthening children's rights to good health both on a group and a societal level. I have actually walked in your footsteps and with your encouragement created my own personal professional mix.
- my very dear brother *Sven Köhler* - you have always been a stable and joyful support in my life. My very dear sister *Annika Capelán Köhler* –

you are always there for me. We have also had fruitful conversations about experiences in the academic world. With the two of you I have shared a lot of happy moments. Thank you also to your wonderful families.

- my beloved children and their families: my daughter *Frida*, my son-in-law *Johannes* and their children *Arvid* and *Nora*. My son *Rasmus*, my daughter-in-law *Sofia* and their daughter *Amanda*. My son *Kasper*. My daughter *Ebba*, my son-in-law *Johannes* and their daughter *Vira*. My son *Ale*.

You all light up my life and are most important parts of a loving environment.

I am also grateful for long-lasting friendships with

- *Anneli, Viveka, Annika, Ingrid, Pia, Toni och Anna*

and happy to be a part of

- the discussion group *M II* as well as the energizing choir *Midnattskören*.

Finally I would of course like to thank all children and parents who participated in the studies, generously telling us about their lives.

Thank you – this is for you!

References

- Alfvén G. (1993). The covariation of common psychosomatic symptoms among children from socio-economically differing residential areas. An epidemiological study. *Acta Paediatr*, 82, 484-487.
- Andersson T, Heimer G & Lucas S. (2014). *Violence and health in Sweden. A national prevalence study on exposure to violence among women and men and its association to health*. National Centre for Knowledge on Men's Violence Against Women (NCK). Uppsala University/Uppsala University Hospital. Retrieved from http://kunskapsbanken.nck.uu.se/nckkb/nck/publik/fil/visa/464/Violence_and_health.pdf
- Bambra C, Gibson M, Sowden A, Wright K, Whitehead M & Petticrew M (2010). Tackling the wider social determinants of health and health inequalities: evidence from systematic reviews. *J Epidemiol Community Health*, 64, 284-291.
- Barnombudsmannen. [The Ombudsman for Children in Sweden.] (2011). *Bakom fasaden. Barn och ungdomar i den sociala barnvården berättar*. [Behind the façade. Children and young people in social care tell.] Retrieved from <https://www.barnombudsmannen.se/globalassets/systemimporter/publikationer2/arsrapport-bakom-fasaden-2011.pdf>
- Barnombudsmannen. [The Ombudsman for Children in Sweden.] (2014a). *Bryt tystnaden. Barn och unga om samhällets stöd vid psykisk ohälsa*. [Break the silence. Children and young people about the support from the society in mental illness.] Retrieved from https://www.barnombudsmannen.se/unga-direkt/files/Global/Publikationer/bryttystnaden_web%20slut.pdf
- Barnombudsmannen. [The Ombudsman for Children in Sweden.] (2014b). *Våga fråga. Röster från barn i familjehem*. [Dare to ask. Voices of children in family foster care.] Stockholm 2014. Retrieved from <https://www.barnombudsmannen.se/globalassets/dokument-for-nedladdning/publikationer/vaga-fraga---roster-fran-barn-i-familjehem.pdf>
- Barnombudsmannen. [The Ombudsman for Children in Sweden.] (2015). *Välkommen till verkligheten. Barn och unga om samhällets stöd vid kränkningar och trakasserier i skolan*. [Welcome to the reality. Children and young people about support from society in violation and harassment.] Retrieved from <https://www.barnombudsmannen.se/globalassets/dokument-for-nedladdning/publikationer/valkommen-till-verkligheten.pdf>

- Barnombudsmannen. [The Ombudsman for Children in Sweden.] (2016). *Respekt. Barn med funktionsnedsättning om samhällets stöd.* (Respect. Disabled children on support from the society.) Retrieved from <https://www.barnombudsmannen.se/globalassets/dokument-for-nedladdning/publikationer/respekt160510.pdf>
- Barnombudsmannen. [The Ombudsman for Children in Sweden.] (2017). *Barn på flykt. Barns och ungas röster om mottagandet av ensamkommande.* [Children fleeing. Children's and young people's voices about the reception of non-accompanied minors.] Retrieved from https://www.barnombudsmannen.se/globalassets/dokument-for-nedladdning/publikationer/barn_pa_flykt_webb.pdf
- Beauchamp, T. L. (2006) The 'Four Principles' Approach to Health Care Ethics, in *Principles of Health Care Ethics*, Second Edition (Eds. R. E. Ashcroft, A. Dawson, H. Draper and J. R. McMillan). John Wiley & Sons, Ltd, Chichester, UK. doi: 10.1002/9780470510544.ch1
- Ben-Arieh A (2008a). The Child Indicators Movement: Past, Present and Future. *Child Indicators Research*, 1, 3-16.
- Ben-Arieh A (2008b). Indicators and indices of Children's well-being: towards a more policy oriented perspective. *European Journal of Education*, 43, 37–50.
- Berg L & Hjern A (2016). *Barn till föräldrar med cancer – hur många berörs och vilka är konsekvenserna i ett livsloppsperspektiv?* [Children of parents with cancer – how many are affected and what are the consequences in a lifespan perspective?] Report 5 from the project "Children as next of kin", CHESS, Stockholm University/Karolinska Institutet in cooperation with the Department of Social Work, Stockholm University. Retrieved from http://www.anhoriga.se/Global/Nyheter/Nyhetsdokument%202016/BSA_2016-2_Chess-5_webb.pdf
- Berntsson L & Gustafsson J-E. (2000). Determinants of psychosomatic complaints in Swedish schoolchildren aged seven to twelve years. *Scand J Public Health*, 28, 283-93.
- Berntsson L, Ringsberg K, Eriksson B & Köhler L. (2016). Health, economy, and social capital in Nordic children aged 13-17 years and their families: changes between 1984, 1996 and 2011. *International Journal of Healthcare*, 2, 51-61. DOI: 10.5430/ijh.v2n1p
- Blair M. (2010) Promoting children's health. *Paediatrics and Child Health*, 20, 174–78.
- Blair M, Stewart-Brown S, Waterston T & Crowther R. (2010). *Child public health.* (Sec ed.) Oxford: University Press.
- Blair M, Stewart-Brown S, Hjern A & Bremberg S. (Eds.) (2013). *Barnhälsovetenskap.* [Child Public Health.] Lund: Studentlitteratur.
- Bradshaw J (2009). *A comparison of child well-being in the EU 29.* In: The on-going debate on the assessment of children's conditions of life. The proceedings of the ChildONEurope Seminar on Child Well-Being Indicators. Istituto degli Innocenti, Florence (pp 9-18).
- Braveman P & Gottlieb L (2014) The Social Determinants of Health: It's time to consider the causes of the causes. *Public Health Reports*, 129, 19–31.

- Bremberg S. (2011). *Social health inequalities in Swedish children and adolescents – a systematic review, second edition*. Stockholm, Swedish National Institute of Public Health. Retrieved from <https://www.folkhalsomyndigheten.se/pagefiles/12698/A2011-11-Social-health-inequalities-in-swedish-children-and-adolescents.pdf>
- City of Malmö. (2013). *Malmö's path towards a sustainable future. Health, welfare and justice*. Commission for Socially Sustainable Malmö. Retrieved from http://malmo.se/download/18.51821d07143bab87ba7c486/malm%C3%B6kommisjonen_rapport_engelsk_web.pdf
- Claussion E, Petersson K & Berg A. (2003). School nurses' view of schoolchildren's health and their attitudes to document it in the school health record – a pilot study. *Scand J Caring Sci*, 17, 392–8.
- Claussion E, Köhler L & Berg A. (2008). Ethical challenges for school nurses in documenting school children's health. *Nurs Ethics*, 15, 40–9.
- Dahlgren G & Whitehead M. (2007) *Policies and strategies to promote social equity in health. Background document to WHO – Strategy paper for Europe*. Arbetsrapport/Institutet för Framtidsstudier (Institute for Futures Studies); 2007:14
- Dowdney L (2000) Childhood Bereavement Following Parental Death. *J Child Psychol Psychiat*, 41, 819-830.
- Egelund T, Skovbo Christensen P, Böcker Jakobsen T, Jensen TG & Fuglsang Olsen R. (2009). *Anbragte børn og unge. En forskningsoversigt*. [Children and young persons in out-of-home care. A research review.] 9:24. SFI – Det nationale forskningscenter for velfærd. [The Danish National Centre for Social Research.] Copenhagen, Denmark.
- European Public Health Association (EUPHA) (2016). *The Vienna Declaration*. Retrieved from https://ephconference.eu/repository/publications/Vienna_Declaration_final_version.pdf
- Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP & Marks JS. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med*, 14, 245-58.
- Folkhälsomyndigheten. (2016). *Folkhälsan i Sverige 2016. Årlig rapportering*. [Public Health Agency of Sweden. Public Health in Sweden 2016. Annual Report 2016.] Retrieved from <https://www.folkhalsomyndigheten.se/pagefiles/23257/Folkhalsan-i-Sverige-2016-16005.pdf>
- Franzén E, Vinnerljung B & Hjern A. (2008). The epidemiology of out-of-home care for children and youth: a national cohort study. *British Journal of Social Work*, 38, 1043-59.
- Friedlaender E, Rubin D, Alpern E, Mandell D, Christian C & Alessandrini E. (2005). Patterns of health care use that may identify young children who are at risk for maltreatment. *Pediatrics*, 116, 1303–7.
- Frisk A. (1964). Misshandlade småbarn. [Maltreated toddlers.] *Läkartidningen*, 61, 3005-11.

- Gilbert R, Kemp A, Thoburn J, Sidebotham P, Radford L, Glaser D & MacMillan H. (2009). Recognising and responding to child maltreatment. *Lancet*, 373, 167-80.
- Gilbert R, Widom CS, Browne K, Fergusson D, Webb E & Janson S. (2009). Burden and consequences of child maltreatment in high-income countries. *Lancet*, 373, 68-81.
- Graneheim U & Lundman B. (2004). Qualitative content analysis in nursing research: concepts, procedures, and measures to achieve trustworthiness. *Nurse Educ Today*, 24, 105-12.
- Grøholt E-K, Stigum H, Nordhagen R & Köhler L. (2003). Recurrent pain in children, socio-economic factors and accumulation in families. *Eur J of Epidemiol*, 18, 965-75.
- Hagelin E, Lagerberg D & Sundelin C. (1991) Child health records as a database for clinical practice, research and community planning. *J Adv Nurs*, 16, 15-23.
- Hjern A. (2012). Children's health. Health in Sweden: The National Public Health Report 2012. Chapter 2. *Scand J Public Health*, 40, 23-41.
- Hjern A & Manhica HA. (2013). *Barn som anhöriga till patienter i vården – hur många är de?* [Children as next of kin to patients in healthcare – how many are they?] Report 1 from the project "Children as next of kin", CHESS, Karolinska Institutet/Stockholm University/Nka. Retrieved from http://www.anhoriga.se/Global/BSA/Dokument/Rapporter_kunskaps%C3%B6versikter/Nka_rapport_Barn_som_anh%C3%B6riga_2013-1.pdf
- Hjern A, Arat A & Vinnerljung B. (2014). *Att växa upp med föräldrar som har missbruksproblem eller psykisk sjukdom – hur ser livet ut i ung vuxen ålder?* [To grow up with parents abusing or being mentally ill – how is life in early adulthood?] Report 4 from the project "Children as next of kin" at CHESS, Stockholms Universitet/Karolinska Institutet in cooperation with the Department of Social Work, Stockholm University. Linnæus University. Nka. Retrieved from http://www.anhoriga.se/Global/BSA/Dokument/Rapporter_kunskaps%C3%B6versikter/BSA_Chess-4_webbNy.pdf
- Hjern A, Arat A, Rostila M, Berg L & Vinnerljung B. (2014). *Hälsa och sociala livsvillkor hos unga vuxna som förlorat en förälder i dödsfall under barndomen*. [Health and social living conditions in young adults who have lost a parent in death during childhood.] Report 3 from the project "Children as next of kin", CHESS, Stockholm University/Karolinska Institutet in cooperation with the Department of Social Work, Stockholm University. Nka. Retrieved from http://www.anhoriga.se/Global/BSA/Dokument/Rapporter_kunskaps%C3%B6versikter/Nka_CHESS3_BSA_webb.pdf
- Hjern A, Berg L, Rostila M & Vinnerljung B. (2013). *Barn som anhöriga: hur går det i skolan?* [Children as next of kin – how is school going?.] Report 2 from the project "Children as next of kin", CHESS, Stockholm University/Karolinska Institutet in cooperation with the Department of Social Work, Stockholm University. Linnæus University. Nka. Retrieved from http://www.anhoriga.se/Global/BSA/Dokument/Rapporter_kunskaps%C3%B6versikter/Bsa-Rapport-2013-3_Chess2_Skolan.pdf
- Hotopf M, Carr S, Mayou R, Wadsworth M, Wessely S. (1998). Why do children have chronic abdominal pain, and what happens to them when they grow up? Population based cohort study. *BMJ*, 316, 196-200.

- Janson S. (2012). *Barn som far illa. Om sambandet mellan social och ekonomisk utsatthet och ökad risk för övergrepp på barn*. In: Köhler M & Djurfeldt (Eds.). *Barn i Malmö. Skilda livsvillkor ger ojämlik hälsa*. [Child maltreatment. About the connections between social and economic vulnerability and increased risk of child abuse.] A sub report for the Commission for a Socially Sustainable Malmö.
- Janson S, Jernbro C, Långberg B. (2011). *Kroppslig bestraffning och annan kränkning av barn i Sverige: en nationell kartläggning 2011*. [Corporal punishment and other violations of children in Sweden: a national mapping.] Stockholm: The Children's Welfare Foundation. Retrieved from http://www.allmannabarnhuset.se/wp-content/uploads/2013/11/Kroppslig_bestrafning_webb.pdf
- Jernbro C, Svensson B, Tindberg Y, Janson S. (2012). Multiple psychosomatic symptoms can indicate child physical abuse – results from a study of Swedish schoolchildren. *Acta Paediatr*, 101, 324–329.
- Johansson S-E, Midlöv P, Sundquist J, Sundquist K & Calling S. (2015). Longitudinal trends in good self-rated health: effects of age and birth cohort in a 25-year follow-up study in Sweden. *Int J Public Health*, 60, 363-73.
- Jones CP (2009). Addressing the social determinants of children's health. *J Health Care Poor Underserved*, 20, 1-12.
- Kaplan GA, Goldberg DE, Everson SA, Cohen RD, Salonen R, Tuomilehto J, Salonen J. (1996). Perceived health status and morbidity and mortality: evidence from the Kuopio ischaemic heart disease risk factor study. *Int J Epidemiol*, 25, 259-65.
- Kempe CH, Silverman FN, Steele BF, Droegemueller W, Silver H. (1962). The battered-child syndrome. *JAMA*, 181, 17-24.
- Klein M, Kahn R, Baker R, Fink E, Parrish D, White D. (2011). Training in Social Determinants of Health in Primary Care: Does it Change Resident Behavior? *Academic Pediatrics*, 11, 387-93.
- Kling S, Vinnerljung B, Hjern A. (2016). Somatic assessments of 120 Swedish children taken into care reveal large unmet health and dental care needs. *Acta Paediatr*, 105, 416–20.
- Kogan M, Schuster M, Yu S, Park C, Olson L, Inkelas M, Bethell C, Chung P, Halfon N (2004). Routine Assessment of Family and Community Health Risks: Parent Views and What They Receive. *Pediatrics*, 113, 1934-43.
- Kommittén mot Barnmisshandel. (2001). *Barnmisshandel – att förebygga och åtgärda*. [Child maltreatment – to prevent and remediate.] Stockholm: Final report from the Committee against Child Maltreatment, 2001:72. Retrieved from <http://www.regeringen.se/49b6bf/contentassets/e715b8a3f3de45358a87d59d2591cd3d/del-1-t.o.m.-kap.-7-barnmisshandel>
- Köhler M, Djurfeldt A (2012). (Eds.) *Barns hälsa i Malmö. Skilda livsvillkor ger ojämlik hälsa*. Ett diskussionsunderlag framtaget för Kommission för ett socialt hållbart Malmö. [Children's health in Malmö. Different living conditions give unequal health. A sub report for the Commission for a Socially Sustainable Malmö.] Retrieved from http://malmo.se/download/18.3744cbfb13a77097d8791e7/Barns+h%C3%A4lsa+i+Malm%C3%B6_Marie+K%C3%B6hler.pdf

- Köhler L (1998). Child public health: A new basis for child health workers. *Europ J Public Health*, 8, 253-5.
- Landstedt E, Persson S. (2014). Bullying, cyberbullying, and mental health in young people. *Scand J Public Health*, 42, 393-9.
- Magnusson M, Blennow M, Hagelin E, Sundelin C. (2016). *Barnhälsovård – att främja barns hälsa*. [Child Health Services – to promote child health.] Sixth edition. Stockholm: Liber.
- Mallén A. (2011). 'It's Like Piecing Together Small Pieces of a Puzzle'. Difficulties in Reporting Abuse and Neglect of Disabled Children to the Social Services. *J Scandinavian Studies in Criminology and Crime Prevention*, 12, 45–62.
- Martin SG. (2002). Children exposed to domestic violence: psychological considerations for health care practitioners. *Holist Nurs Pract*, 16, 7–15.
- Marmot M. Status Syndrome. (2004). *How Your Social Standing Directly Affects Your Health and Life Expectancy*. London: Bloomsbury Publishing.
- Marmot M. (2015) *The Health Gap. The Challenge of an Unequal World*. London: Bloomsbury Publishing.
- Marmot Review (2010). *Fair Society, Healthy Lives: A Strategic Review of Health Inequalities in England Post-2010*. Retrieved from www.ucl.ac.uk/marmotreview
- Medicinska forskningsrådet (MFR). (1999). *Barnhälsovårdens betydelse för barns hälsa – en analys av möjligheter och begränsningar i ett framtidsperspektiv. A state of the art document*. Stockholm. [The importance of Child Health Services for child health – an analysis of possibilities and limits in a future perspective.]
- Nelson T, Smith T, Thompson R, Epstein M, Griffith A, Duppong Harley K, Tonniges TF. (2011). Prevalence of physical health problems among youth entering residential treatment. *Pediatrics*, 128, 1226-32.
- Olivius, G, Östergren P-O, Hanson B, Lyttkens CH. (2004). Parental economic stress. Evidence of an overlooked public health risk among Swedish families. *Eur J Publ Health*, 14, 354–60.
- Pearlman MY, Schwalbe KD'A, Cloitre M. (2010). *Risk and protective factors, clinical presentations, and treatment interventions: a review of the literature*. Chapter 2 in Grief in childhood: Fundamentals of Treatment in Clinical Practice. American Psychological Association. doi.org/10.1037/12131-002
- Petticrew M & Roberts H. (2004). Child public health and social welfare: lessons from the evidence. *Child: Care, Health and Development*, 30, 667-9.
- Pham T & Adesman A. (2015). Teen victimization: prevalence and consequences of traditional & cyberbullying. *Current Opinion in Pediatrics*, 27, 748-56.
- Pickett K E & Wilkinson R. G (2015). Income inequality and health: A causal review. *Social Science & Medicine* 128, 316-26.
- Priebe, G., & Afzelius, M. (2015). *Barns behov av information, råd och stöd när en förälder är psykiskt sjuk – Hur efterföljs lagen? En utvärdering av implementeringen i Psykiatri Skåne*. (Children's need of information, advice and support when a parent has mental illness – How is the law followed? An evaluation of the implementation in Psychiatry Scania.) Lunds universitet.

- Ramchandani P, Hotopf M, Sandhu B, Stein A. (2005). The epidemiology of recurrent abdominal pain from 2 to 6 years of age: results of a large, population-based study. *Pediatrics*, 116, 46-50.
- Regeringens proposition 2002/03:35. Mål för folkhälsan. [Public Health Goals.] Proposition of the Swedish Government. Retrieved from <http://www.regeringen.se/contentassets/04207325e75943408c69a55643ea1d3e/mal-for-folkhalsan>
- Rodewald L, Szilagyi P, Shiuh T, Humiston S, Lebaron C, Hall C. (1995). Is underimmunization a marker for insufficient utilization of preventive and primary care? *Arch Pediatr Adolesc*, 149, 393-7.
- Royal College of Paediatrics and Child Health (RCPCH). State of Child Health. Report 2017. Retrieved from <http://www.rcpch.ac.uk/system/files/protected/page/SOCH-UK-2017.pdf>
- Selander P. (1957). Multipla frakturer hos spädbarn vid förnekat trauma. [Multiple fractures in infants in denied trauma.] *Läkartidningen*, 45, 611-16.
- SFS 1949:381. Föräldrabalk. [The Swedish Parental Act.] Stockholm: Ministry of Justice. Retrieved from <https://lagen.nu/1949:381#K6>
- SFS 1990:52. Lag med särskilda bestämmelser om vård av unga (LVU). [Care of Young Persons (Special Provisions) Act]. Stockholm: Ministry of Health and Social Affairs. Retrieved from https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/lag-199052-med-sarskilda-bestammelser-om-vard_sfs-1990-52
- SFS 2008:192. The Act concerning the Ethical Review of Research Involving Humans. Stockholm: Ministry of Education and Cultural Affairs. Retrieved from http://www.epn.se/media/2348/the_ethical_review_act.pdf
- SFS 2009:979. Lag om ändring i hälso- och sjukvårdslagen (1982:763). [Health and Medical Services Act.] Stockholm: Ministry of Health and Social Affairs.
- SFS 2017: 30. Hälso- och sjukvårdslag. [Health and Medical Services Act.] Stockholm: Ministry of Health and Social Affairs. Retrieved from https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/halso--och-sjukvardslag_sfs-2017-30
- Simkiss, DE, Stallard N, Thorogood M. (2012). A systematic literature review of the risk factors associated with children entering public care. *Child: care, health and development*, 39, 628-42.
- Socialstyrelsen (2013a). *Barns och ungas hälsa, vård och omsorg 2013*. [Health of and care for children and young persons 2013.] Swedish National Board of Health and Welfare. Retrieved from <http://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19016/2013-3-15.pdf>
- Socialstyrelsen. (2013b). *Barn som anhöriga. Konsekvenser och behov när föräldrar har allvarliga svårigheter, eller avlider*. [Children as next of kin. Consequences and needs when parents have serious difficulties or decease.] Retrieved from <https://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19114/2013-6-6.pdf>

- Socialstyrelsen. (2013c). *När förälder oväntat avlider. Resultat och slutsatser från tre kartläggningar om ansvar samt strukturer för information och stöd*. [When parents unexpectedly decease. Results and conclusions from three mappings about responsibility and structures for information and support.] Retrieved from <http://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19268/2013-11-31.pdf>
- Socialstyrelsen. (2014a). *Vägledning för barnhälsovården*. [Guidelines for Child Health Services.] Retrieved from <https://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19403/2014-4-5.pdf>
- Socialstyrelsen. (2014b). *Barn som far illa eller riskerar att fara illa. En vägledning för hälso- och sjukvården samt tandvården gällande anmälningsskyldighet och ansvar*. [Children who are maltreated or at risk of maltreatment. A guide to healthcare and dental healthcare concerning the obligation to report and responsibility.] Swedish National Board of Health and Welfare. Retrieved from <https://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19528/2014-10-4.pdf>
- Socialstyrelsen. (2014c). *Barn och unga – insatser år 2013. Vissa insatser enligt socialtjänstlagen (SoL) och lagen med särskilda bestämmelser om vård av unga (LVU)*. [Children and young persons – measures in the year of 2013. Certain measures following the Social Services Act (SoL) and the Care of Young Persons (Special Provisions) Act (LVU).] Swedish National Board of Health and Welfare. Retrieved from <https://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19485/2014-9-1.pdf>
- Socialstyrelsen. (2015a). *Barn och unga – insatser år 2014. Vissa insatser enligt socialtjänstlagen (SoL) och lagen med särskilda bestämmelser om vård av unga (LVU)*. [Children and young persons – measures in the year of 2014. Certain measures following the Social Services Act (SoL) and the Care of Young Persons (Special Provisions) Act (LVU).] Swedish National Board of Health and Welfare. Retrieved from <http://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/20015/2015-12-33.pdf>
- Socialstyrelsen. (2015b). *Utsatta barns hälsa*. [Vulnerable children's health.] Swedish National Board of Health and Welfare. Retrieved from <https://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19755/2015-3-5.pdf>
- Socialtjänstlagen (SoL), 2001:453. [Social Services Act]. Retrieved from http://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/socialtjanstlag-2001453_sfs-2001-453
- SOU 2001:18. *Barn och misshandel - En rapport om kroppslig bestraffning och annan misshandel i Sverige vid slutet av 1900-talet*. [Children and maltreatment – A report about corporal punishment and other maltreatment in Sweden at the end of the 20th century.] Stockholm: Ministry of Health and Social Affairs.
- Retrieved from <http://www.regeringen.se/49b6c2/contentassets/46731f4fb34a45bf8a1acaa0a67440d3/barn-och-misshandel>

- SOU 2016:19. *Barnkonventionen blir svensk lag. Betänkande av barnrättighetsutredningen*. [The Convention on the Rights of the Child becomes a Swedish law. A report from the Child Rights Investigation.] Stockholm: Ministry of Health and Social Affairs. Retrieved from http://www.regeringen.se/contentassets/7bcd0fe8815345aeb2ff0d9678896e11/barnkonventionen-blir-svensk-lag-sou-2016_19.pdf
- SOU 2016: 55. *Det handlar om jämlik hälsa – Utgångspunkter för Kommissionens vidare arbete*. Statens Offentliga Utredningar. [It is about equal health – the starting point for the commission's further work.] Stockholm: Ministry of Health and Social Affairs.
- SOU 2017:4. *För en god och jämlik hälsa. En utveckling av det folkhälsopolitiska ramverket*. Delbetänkande av Kommissionen för jämlik hälsa. [For good and equal health. A development of the public health framework. Partial report by the Commission of Equal Health.] Statens Offentliga Utredningar. Stockholm: Ministry of Health and Social Affairs. Retrieved from http://kommissionjamlikhalsa.se/wp-content/uploads/2017/01/sou-2017-4_web.pdf
- Spencer N. (2003). Social, Economic, and Political Determinants of Child Health. *Pediatrics*, 112, 704-6.
- Spencer N. (2010). Child health inequities. *Paediatrics and Child Health*, 20, 157-62.
- Ståhl Y, Granlund M, Gäre-Andersson B, Enskär K. (2011). Mapping of children's health and development data on population level using the classification system ICF-CY. *Scand J Public Health*, 39, 51-7.
- Ståhl Y, Granlund M, Simeonsson R, Andersson Gäre B, Enskär K. (2013). Psychosocial health information in free text notes of Swedish children's health records. *Scand J Caring Sci*, 27:616-23.
- Svensson B, Bornehag C-G, Janson S (2011). Chronic conditions in children increase the risk for physical abuse – but vary with socio-economic circumstances. *Acta Paediatr*, 100, 407-12.
- Tingberg, B. (2010). *Child abuse, clinical investigation, management and nursing approach*. (Dissertation.) Stockholm: Karolinska Institutet.
- Turner HA, Vanderminden J, Finkelhor D, Hamby S, Shattuck A. (2011). Disability and Victimization in a National Sample of Children and Youth. *Child Maltreatment*, 16, 275-86.
- Umdac. Open Code (version 4). Umeå: Umdac & Epidemiology and Global health, Department of Public Health and Clinical Medicine; Umeå University; 2012.
- UNICEF Innocenti Research Centre. (2007). *Child poverty in perspective: An overview of child well-being in rich countries 2007*. Report Card 7. Retrieved from <https://www.unicef.org/media/files/ChildPovertyReport.pdf>
- UNICEF Office of Reseach. (2013). *Child well-being in rich countries. A comparative overview*. Innocenti Report Card 11. Retrieved from https://www.unicef-irc.org/publications/pdf/rc11_eng.pdf
- United Nations. (1992). *Agenda 21*, Chapter 6:23. Rio de Janeiro Conference, Brazil. Retrieved from <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

- United Nations. (1948). Universal Human Rights Declaration. Retrieved from http://www.ohchr.org/EN/UDHR/Documents/UDHR_Translations/eng.pdf
- United Nations Committee on the Rights of the Child. (2006). General comment No. 9. *The rights of children with disabilities*. Retrieved from <http://www.refworld.org/docid/461b93f72.html>
- United Nations Committee on the Rights of the Child. (2015). *Concluding observations on the fifth periodic report of Sweden*. Retrieved from <https://www.barnombudsmannen.se/globalassets/dokument-for-nedladdning/publikationer/concluding-observations-2015.pdf>
- United Nations Convention on the Rights of Persons with Disabilities and Optional Protocol. Retrieved from <http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf>
- United Nations Human Rights Office of the High Commissioner (OHCHR). Retrieved from <http://www.ohchr.org/en/professionalinterest/pages/crc.aspx>
- United Nations Human Rights Office of the High Commissioner (OHCHRb). Retrieved from <http://www.ohchr.org/EN/HRBodies/CRC/Pages/CRCIndex.aspx>
- United Nations Population Fund (UNFPA). Retrieved from <http://www.unfpa.org/resources/human-rights-principles>
- Vinnerljung, B, Hjern A, Ringbäck Weitoft G, Franzén E, Estrada F. (2007). Children and young people at risk (Chapter 7). *Int Soc Welfare*, 16, 163-202.
- Visser A, Huizinga G, van der Graaf W, Hoekstra H, Hoekstra-Weeber J. (2004). The impact of parental cancer on children and the family: a review of the literature. *Cancer Treatment Reviews*, 30, 683-94.
- Wallby T. (2012). *Lika för alla? Social position och etnicitet som determinanter för amning, föräldrars rökvanor och kontakter med BVC*. [Equal for all? Social position and ethnicity as determinants for breastfeeding, parental smoking habits and contacts with CHS.] (Dissertation.) Uppsala, Uppsala University.
- Walton S and Bedford H (2017). Immunization of looked-after children and young people: a review of the literature. *Child: care, health and development*. doi:10.1111/cch.12452.
- Williams J, Jackson S, Maddocks A, Cheung W-Y, Love A, Hutchings H. (2001). Case-control study of the health of those looked after by local authorities. *Arch Dis Child*, 85, 280–5.
- Woodman J, Brandon M, Bailey S, Belderson P, Sidebotham P, Gilbert R. (2011). Health care use by children fatally or seriously harmed by child maltreatment: analysis of a national case series 2005–2007. *Arch Dis Child*, 96, 270–5.
- World Health Organization. (1946). *Preamble to the Constitution of the World Health Organization*. New York. Retrieved from <http://www.who.int/suggestions/faq/en/>
- World Health Organization. (1978). *Declaration of Alma Ata*. International Conference on Primary Health Care, Alma-Ata, USSR, 6-12, September, 1978. Retrieved from http://www.who.int/publications/almaata_declaration_en.pdf?ua=1
- World Health Organization. (1981). *Global Strategy for Health for All by the Year 2000*. Retrieved from <http://apps.who.int/iris/bitstream/10665/38893/1/9241800038.pdf>

- World Health Organization. (1986). *Ottawa Charter for Health Promotion: an International Conference on Health Promotion, the move towards a new public health, 17-21 November*. Ottawa, Geneva, Canada. Retrieved from http://www.euro.who.int/_data/assets/pdf_file/0004/129532/Ottawa_Charter.pdf
- World Health Organization. (2008). Commission on the Social Determinants of Health. *Closing the Gap in a Generation. Health Equity through Action on the Social Determinants of Health*. Final Report of the Commission on Social Determinants of Health. Geneva: World Health Organization. Retrieved from http://apps.who.int/iris/bitstream/10665/43943/1/9789241563703_eng.pdf
- World Health Organization. (2015). *Health in 2015, From MDGs Millenium Development Goals to SDGs, Sustainable Development Goals*. Retrieved from http://apps.who.int/iris/bitstream/10665/200009/1/9789241565110_eng.pdf?ua=1
- World Health Organization. World Health Statistics 2016. Monitoring Health for the SDGs, sustainable development goals. Retrieved from http://www.who.int/gho/publications/world_health_statistics/2016/en/
- World Health Organization. (2017). *Social Determinants of Health*. Retrieved from http://www.who.int/social_determinants/en/
- World Medical Association. (2013). Declaration of Helsinki: ethical principles for medical research involving human subjects. *JAMA*, 310, 2191-4.
- Östlund U, Kidd L, Wengström Y, Rowa-Dewar N. (2011). Combining qualitative and quantitative research within mixed method research designs: A methodological review. *Int J Nurs Stud*, 48, 369–83.

Vulnerable children

A social perspective on health and healthcare

Aware of the importance of social determinants of children's health, wellbeing and development this thesis has from a Child Public Health perspective analyzed groups of particularly vulnerable children, – those who are in out-of-home care, those who have a disability and those whose parents have poor health. All three groups of children turned out to have greater health risks and more health problems than other children.

The findings underline these children's special vulnerability and thereby their special needs. Besides, they confirm that the healthcare system still does not fulfill national and international objectives about equity, imposed by e.g. the Swedish Health and Medical Services Act, UN Conventions on Human Rights and on the Rights of the Child.

Although most efficient interventions are made on the political level professionals working directly with children can make a difference. To improve their knowledge about social determinants of health, children's human rights and needs of support and protection and to increase their competence in acting accordingly, systematic education and training are necessary.



Marie Köhler, MD. Medical Director and Head of Knowledge Center Child Health Services and Women's Health in Scania, Sweden, has professionally focused on preventive and promotive child healthcare, in general clinical work with children and families and also with vulnerable groups of children. She is also leading educational work on social determinants and on child rights. Marie was a commissioner in the Commission for a Socially Sustainable Malmö.

