Traditional Bullying and Cyberbullying among Swedish Adolescents

Gender differences and associations with mental health

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ABSTRACT

Background: Adolescents' social relations are associated with the state of their mental health, and while positive relations can protect against development of mental health problems, negative social relations, such as bullying, is considered a risk factor. In addition, the preconditions for establishing and maintaining social relations have changed along with the development of information and communication technology (ICT). In this new arena negative social interactions, such as bullying, can also gain a footing. Given previous research showing some distinguishing features between cyberbullying vis-a-vis traditional bullying, there may be other differences as well, some of which will be studied in the current thesis. In order to plan new and develop already-existing intervention strategies for bullying in school, it is important to clarify whether we can use previous knowledge from the field of traditional bullying or if we need to rethink our strategies. Given the harmful consequences that it entails, bullying must be considered a public health issue.

Aim: The overall aim of this thesis is to study the differences and similarities between traditional bullying and cyberbullying among adolescents, with a particular focus on gender, psychosomatic problems, and disabilities. The aim is also to gain insight into school-health staff’s experience with bullying among school students.

Method: This thesis is based on four studies. Study I, II and IV take a quantitative approach based on a web-based questionnaire. The data were collected on three occasions between 2009 and 2010 in the county of Värmland. Altogether more than 3,800 adolescents in Grade 7-9 participated all aged between 13 to 15 years. Logistic regressions and linear regression analyses were applied in order to analyse associations, with both bullying and mental health constituting outcome measures in different studies. In Study III, data were collected via focus groups. There were four focus groups comprising 16 school social workers and school nurses. The data were analysed using qualitative content analysis.

Results: Study I: The results showed discrepant gender patterns for traditional bullying and cyberbullying behaviour or victimization. Firstly, while there were almost no gender differ-
ences among traditional victims were found, girls were more likely than boys to be cybervictims when occasional cyberbullying was included. Secondly, whereas boys were more likely to be traditional bullies, girls were equally as likely as boys to be cyberbullies. Also, boys were more likely to be traditional bully-victims, that is being bully and victim, while girls were more likely to be cyberbully-victims. Study II: The results indicated an association with psychosomatic problems for victims, bullies and bully-victims. The strongest associations were seen for bully-victims and psychosomatic problems. The results do not indicate that the association between bullying and psychosomatic problems is stronger for cyberbullying than for traditional bullying. Study III: Three main categories emerged from the analysis of school social workers’ and school nurses’ experience of and work with bullying: 1) “Anti-bullying team”, 2) “Working style” and 3) “Perspectives on bullying”. The first described the organizational bullying prevention work in schools; the second indicated different roles the participants played in their schools’ prevention and anti-bullying work. The third included different views on bullying and how to handle bullying. Working Styles and Perspectives on Bullying each comprising two sub-categories: “Team member”, and “Single worker”; and “Contextual perspective” and “Individual-oriented perspective”. Study IV showed that, regardless of gender and grade, students with a disability were more likely to be bully-victims and, more particularly, bully-victims involved in both traditional bullying and cyberbullying. No differences between disabled adolescents and others were found with respect to the association between bullying and psychosomatic health.

Conclusions: Bullying is a complex phenomenon and it takes on different forms along with the changes in society. In the wake of Internet’s rapid development, we are all challenged – parents, schools and researchers alike – to keep up with a younger, digitally savvy generation. Cyberbullying and traditional bullying may not be two separate phenomena, but rather two sides of the same coin. The results show that some adolescents are more likely to experience higher levels of psychosomatic health problems. They also show that some that some adolescents are more likely to be involved in bullying than others, either as victims, bullies or bully-victims. One particular group that was recognized in the current thesis is the bully-victims. Cyberbullying challenges schools in new ways, and hopefully the current thesis may
encourage schools to discuss this issue and how school health staff can optimize their resources in alliance. In order to combat bullying, both contextual and individual approaches are necessary, meaning that we need to take into account the structure surrounding the students as well as the single individual in this matter. Providing school children and adolescents with a safe and caring school experience can strengthen the mental health capital and lay the foundation for students’ development and perspective of the world. Hence, reducing bullying is an important issue to deal with, whether it happens online or offline.
SAMMANFATTNING


Syfte: Det övergripande syftet med föreliggande avhandling är att studera mobbning med avseende på skillnader och likheter mellan traditionell mobbning och nätmobbning bland ungdomar, med fokus på kön, psykosomatiska besvär och funktionshinder och vidare få kunskap om skolkuratorers och skolsköterskors erfarenheter av mobbning bland skolelever.


Resultat: Studie I visade att det fanns könsskillnader med avseende på traditionell mobbning och nätmobbning. Medan det nästan inte fanns några könsskillnader alls bland traditionella offer, var sannolikheten att flickor nätmobbas större än för pojkar när ett lägre gränsvärde

**Slutsatser:** Mobbning är ett komplext fenomen som ändrar form i takt med förändringar i samhället. I vägen av internets snabba utveckling utmanas vi alla – föräldrar, skolan såväl som forskare – i att hålla sig uppdaterade med den yngre, teknikkunniga generationen. Nätmobbning och traditionell mobbning är kanske inte att betraktas som separata fenomen utan istället, i flera avseenden, två sidor av samma mynt. Resultaten visar att risken är högre för
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III. Beckman, L., Hagquist, C. Perspectives on Bullying: A Study among School nurses and School social workers in Sweden (Submitted to Advances in School Mental Health Promotion).

IV. Beckman, L., Stenbeck, M., Hagquist, C. Disability in Relation to Bullying and Psychosomatic Problems (Submitted to International Journal of Public Health).

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ABBREVIATIONS AND DEFINITIONS

Adolescent: According to The World Health Organization, adolescents range from 10-19 years of age.

Bully-victim: By bully-victim I here mean someone that has reported being both a victim and a bully. There is no established term for bully-victim in Swedish.

BUF: Children and Youth Administration [Barn- och utbildningsförvaltningen].

CFBUPH: Centre for Research on Child and Adolescent Mental Health

ICT: Information and communication technology

SN: School nurse

PS project: Preventive School project

SSW: School social worker

SHS: School Health Service. In Swedish “Skolhälsovård”.

TSH: Team for Students’ Health. In Swedish “Elevhälsa”.
1 INTRODUCTION

The background to this thesis is the school based project “Preventive school” (PS), a community based project aiming at promoting good mental health among school children. In cooperation with the municipal of Karlstad, our research group “Centre for Research on Child and Adolescent Mental Health” (Centrum för Forskning om Barns och Ungdomars Psykiska Hälsa [CFBUPH]) was commissioned to evaluate the PS project by studying school students’ mental health and lifestyle habits, as well as their experiences with bullying and school environment. In addition, school staff were asked to give their perspectives, through interviews and questionnaires. A particular focus of the project was bullying, which also became the focus of this thesis.

In recent decades, the Swedish school system has been widely criticized for its overemphasis on the individual, the decline in academic achievement among students and increased segregation due to the mushrooming of independent schools. At the same time, the media has given us alarming reports of deteriorating mental health among today’s youth. Although the link between these phenomena is not clear, one important factor which has been shown to be a strong determinant for mental health and school achievement is social relations among the young.

A recent systematic review concluded that poor social relations with peers and teachers have a negative impact on students’ mental health, while positive relations with peers and teachers can guard against mental health problems (Gustafsson et al., 2010). In addition, the conditions for social interactions have changed along with the development of Information and communication technologies (ICT). In this new, extensive arena, negative social interactions such as bullying are far from excluded. The Internet has been increasingly integrated into people’s everyday lives, and children and adolescents interact and maintain their social relations using ICT through blogging, micro-blogging, chatting and social networking sites (Livingstone, Haddon, & Ólafsson, 2011).

Bullying has been described as a sub group of aggression carried out during longer time intervals. The definition of bullying usually includes three criteria: bullying is repeated acts over time; bullying includes an imbalance in power between bullies and victims which
can be psychological, physical or social; and the actions are intended to cause physical or psychological harm (Olweus, 1993; Olweus, 1996a). Although other definitions of bullying exist in the literature, Olweus’ criteria are generally accepted, although different formulations in the literature exist (e.g., Pepler, Jiang, Craig, & Connolly, 2008; Rigby, 2002). Peer victimisation, as well as bullying, can include all kinds of physical and psychological aggression and social exclusion. A distinction is often made between direct and indirect forms of peer victimisation, where direct aggression include acts of for example kicking and hitting, and verbal aggression such as name-calling and insulting, and indirect aggression is the covert manipulation of social relations, and includes behaviours such as rumour spreading and exclusion. It is also named social or relational aggression, which is the manipulation or disrupting of relations (Smith, 2004).

Devastating media reports of suicides linked to bullying via new media technology has shaken local communities, both at home and abroad. Meanwhile, presenting oneself over the Internet in order to seek personal confirmation has become a societal norm. A recent series of articles in the local news (Wallmander, 2-3 July, 2013) gave a sad picture of 10- to 12-year-old children participating in beauty contests managed by 13-year-old boys via Instagram (a social network site for sharing photos. The girls interviewed, who had also won the contest, said that they believed that those who had not won were either unaffected, not sad or did not care. A recent well-publicized Swedish court case furthermore serves as an example of the possible consequences a lack of empathy can have when combined with immaturity and new forms of social media. In December 2012, two teenage girls, aged 15 and 16, were charged with spreading libel in text and images via an account on Instagram. They were sentenced in Gothenburg District Court on charges of gross defamation in 3 July 2013. The photos had resulted in a riot in Gothenburg in December 2012 which gathered nearly 500 young people. The photos contained images of young girls labelled with offensive comments. The 15-year-old girl pleaded guilty, although she claimed that she had not been aware of the consequences of her actions. The other girl pleaded not guilty (Linné, 2013, 28 June).

Given that bullying is a problem for many school-aged children and adolescents in Sweden (Molcho et al., 2009; Sentenac, Gavin et al., 2012) and the harmful consequences
(Farrington, Losel, Ttofi, & Theodorakis, 2012), and cost for society that bullying may entail (Farrington et al., 2012), bullying should be labelled a public health issue (Feder, 2007).

The resources allocated to help children and adolescents with mental health problems has in Sweden recently come under scrutiny, OECD (2013) concluded that school health services are only limping along and are not able to keep up with the growing numbers of children and adolescents in need. Along with the new Swedish Education act of 2012 (SFS, 2010:800), school health services were reorganized into comprehensive teams where, among other things, the role of school social workers was acknowledged. The effects of this legislative amendment are worth following, insofar as the amendments impact the lives of students with mental health problems.

Bullying, both online and offline, form a central part of this thesis and the current articles attempt to shed light on this issue from various perspectives as well as through a comparison of new arenas for social relations in cyberspace with traditional arenas. Elucidating possible differences between the two forms of bullying becomes important for schools when planning intervention strategies. A useful question to pose in this regard is, for example, can we use old knowledge to combat cyberbullying, or do we need to tackle cyberbullying differently?

In the current thesis, Study I, II and IV take a quantitative approach where comparisons between traditional bullying and cyberbullying are made with regard to gender differences (I), psychosomatic problems (II), and disabilities (IV). Study III takes a qualitative approach using focus groups, in order to gain insight into schools’ experience with bullying. This introduction provides a contextual framework for these studies and will discuss the importance of social relations, mental health, the school arena, and different aspects of bullying.
1.1 Central concepts

Traditional bullying is in this thesis defined by the three criteria: repetition, power imbalance and intention (Olweus, 1993).

Cyberbullying is in the current thesis defined as traditional bullying “but involves bullying through, for example, mobile phones (calls or text messages), photo/video clips, E-mail, Chat-rooms, Web-pages, Instant Messaging (i.e. MSN)”. (Smith et al., 2008).

Peer aggression: Definitions of human aggression often imply that the aggressor is a “perpetrator” and that the aggression recipient is a “victim” (Ferguson & Beaver, 2009). In the current thesis, aggression is put in the context of victims and perpetrators (bullies), implying a malicious relation between the involved and the definition of Berkowitz (1993) may be close to what is meant with aggression in this thesis: “Aggression is all behaviours intended to hurt or harm others either physically or psychologically”. Brown (1996) adds that aggression can be reactive, i.e. a defensive response to a perceived threat, or proactive, i.e. unprovoked, aversive behaviour intended to harm, dominate, or coerce another person.

Peer victimisation: The bullying literature often acknowledges a confusion regarding the concepts of “peer victimisation” and “bullying” and the terms are often used interchangeably. The concept of peer victimisation can be seen as an umbrella term that includes both bullying and peer aggression and can thus include all kinds of physical and psychological aggression and social exclusion. Peer victimisation has been defined as experiences among children of being a target of the aggressive behaviour of other children, who are not siblings and not necessarily age-mates (Hawker & Boulton, 2000).

Mental health is considered an integral part of the definition of health and has been defined by WHO as: “A state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2001).
Psychosomatic problems refer to physical conditions that are psychologically induced and may occur as for example stomach ache, head ache, feeling giddy (Petersen, Brulin, & Bergström, 2006).

Disability is in the current thesis defined as: “… for example, impaired movement, dyslexia, impaired vision or hearing, or any other similar condition which might make things hard for you, either in or outside of school. It may also mean that you have ADHD, epilepsy or diabetes.” There are many definitions of disability/chronic health condition/functional limitations in the literature, and there is no clear consensus on how the terms should be defined (van der Lee, Mokkink, Grootenhuis, Heymans, & Offringa, 2007). Commonly, definitions may include notions of duration, such as three months, and that the disability has interfered with daily functioning during the last year (Groholt, Stigum, Nordhagen, & Köhler, 2003). In the current thesis, the term disability also includes chronic health conditions or chronic illness, which are terms commonly seen in the literature.

1.2 Bullying in a changing society
The word mobbing was first introduced into Swedish language by the Swedish physician Peter-Paul Heinemann (Heinemann & Entell, 1972). He used the term mobbing\(^1\) to refer to group violence against a deviant individual that occurs suddenly and subsides just as suddenly, i.e., it is connected to the sudden formation of a “mob”. Heinemann turned against society’s acceptance of such behaviour and demanded that it be treated as unacceptable and be counteracted on all fronts. His argument was the springboard for the national and international discussion in school, public debate and research concerning bullying (Larsson, 2008). At the same time as Heinemann, the Swedish psychologist Dan Olweus (1978) also started studying the phenomenon from a psychological perspective and became a pioneer within the research field of bullying. This raised awareness among the public and in schools, and became an emotional and important topic.

\(^1\) Mobbing was later re-written as mobbning, which was considered to be more in line with Swedish spelling.
In 1985, the term “bullying” became interconnected with the Swedish legal term “insulting treatment” [Sw. *kränkande behandling*] in the Swedish Education act, which requires those working within the school system to counteract all forms of insulting treatment such as bullying. In 2006, the Act Prohibiting Discriminatory and Other Degrading Treatment of Children and Pupils (SFS, 2006:67) was introduced. School staff became legally responsible for reporting bullying in Swedish schools (SNAE, 2009). In 2009, the act was replaced by the Discrimination Act (SFS, 2008:567). Today, the new Swedish Education act (SFS, 2010:800) demands that each school establish a stepwise plan for the prevention of, and strategies against, insulting treatment and bullying in schools. Schools are obliged, under 10 §, chapter 6, to take action when students consider themselves being exposed to insulting treatment in connection with the organization. This includes cyberbullying or cyber harassments, since situations that arise outside school involving students at the same school are equally the school’s responsibility.

**Bullying occurrence**

Society’s view of bullying has also changed. Peer victimisation has probably always been part of school life in one form or another. There are documents from the 1700s describing how older students harassed younger students in order to maintain the pecking order. This was called penalising, a form of socialization that was more or less accepted. It was not until the 1960s that such oppression of students was paid attention to via Heinemann (Frånberg & Wrethander, 2011).

Trying to compare understandings and prevalence rates of “bullying” across countries is not an easy task. Bullying may have a different meaning to people in different countries, and some languages do not have the term or may assign the word a different meaning (Frånberg & Wrethander, 2011). There is also a diversity of methodologies being used to operationalize, define and measure bullying. Prevalence rates of traditional bullying and cyberbullying varies greatly between and within countries and studies (Craig et al., 2009; Due et al., 2005; Molcho et al., 2009) and also between schools (Smith & Ananiadou, 2003). For example, Patchin and Hinduja (2011) illustrated through international comparisons how cybervic-
timisation rates vary from 5% to above 72%, and cyberbullying rates from 3% to 44%. Molcho et al. (2009) reported country differences in traditional victimisation and bullying and found rates of occasional bullying varying from 10% to 50%. Swedish children and adolescents report relatively low prevalence rates of traditional bullying compared to other countries, about 3% to 15% (Craig et al., 2009; FHI, 2011b). Similar prevalence rates are reported for cyberbullying, although they are usually somewhat lower compared to traditional bullying (Beckman, Hagquist, & Hellström, 2012; Slonje & Smith, 2008).

In addition, measurement methods for bullying may fail to capture the total mental health burden of peer-victimisation. In a study by Hellström, Beckman and Hagquist (in process) health outcomes of bullying victims and victims of peer aggression were compared, showing that bullying victims as well as peer-aggression victims reported significantly more psychosomatic problems compared to non-involved adolescents, and that there was no significant difference between the two groups. This means that when taking into account both bullying and peer aggression, a wider range of students at risk of poor mental health will be identified. Hence there are arguments that peer-aggression victimisation, in addition to bullying victimisation, should be taken into consideration when assessing peer-victimisation among adolescents. Same authors (Hellström, Beckman, & Hagquist, 2013) also examined the empirical overlapping of peer-aggression victimisation and bullying victimisation which showed quite a number of students reported being repeatedly exposed to peer-aggression behaviour, but not bullying. This indicate that when measuring peer victimisation, questions about peer-aggression and bullying should be used simultaneously in order to capture the magnitude of a multifaceted phenomenon like peer victimisation.

**New platforms for bullying**

In the wake of societal and technological changes, the forms and platforms for bullying have changed. Today, Internet access and Internet use have been increasingly integrated with adolescents’ everyday life and only a minor percentage of young people today lack access to computers and mobile phones. Children and adolescents interact and maintain social relations via ICTs including blogging, micro-blogging, chatting and social networking sites. A
society’s norms are reflected in its media; and beauty and youth have become highly prized in the mainstream media (Egbert & Belcher, 2012). The popularity that comes with increased personal exposure online may bring about an even greater emphasis on appearance and increase consciousness of one’s looks, especially among girls (Vandenbosch & Eggermont, 2012). For example, it has been shown that adolescent girls who spend more time using social networking sites (SNS) report higher levels of self-objectification, i.e., the internalization of an observer’s view of one’s own body (Vandenbosch & Eggermont, 2012). There is nevertheless an association between high Internet consumption and peer victimisation (Livingstone et al., 2011; The Swedish Media Council, 2010), and the constant accessibility, for example via today’s smartphones eradicating the differences in functionality between the Internet and mobile phones, may further increase the risk of harm (Livingstone et al., 2011).

Since Sweden is a country with very high Internet usage among all ages, it would be easy to assume that the risk of being exposed or involved in cyberbullying behaviour is relatively high. However, Livingstone et al. (2011) reported that cyberbullying appears to be influenced by the pervasiveness of traditional bullying, rather than by the pervasiveness of Internet usage. This suggests that cyberbullying may not primarily be a consequence of new technologies but rather a new form of a long-established child and adolescent problem (Livingstone et al., 2011). However, this assumption may apply when studying bullying, but when looking at other similar aggressive phenomenon, such as commenting nasty and threatening things on others’ blogs or personal profiles, it may not account for the same phenomenon. Thus, impulsive behaviour may be acted out to a greater extent and the digital device thus becomes a potential weapon with the possibility to easily hurt someone.

1.3 Bullying as a public health concern

From a public health perspective, bullying is a serious issue as it concerns a large proportion of children and adolescents. The association between bullying and mental ill health is well established. While victims usually report higher levels of internalizing problems such as loneliness, depression, social anxiety (Juvonen, Graham, & Schuster, 2003) compared to bullies, bullies more often engage in other forms of externalizing behaviour such as drinking and smoking, compared to victims (Nansel, Craig, Overpeck, Saluja, & Ruan, 2004; Sourander et
The most vulnerable group, which has gained attention in recent years, is the bully-victims, which are the ones usually reporting the highest levels of both internalizing and externalizing problems (Kaltiala-Heino, Rimpelä, Rantanen, & Rimpelä, 2000; Kumpulainen, Räsänen, & Henttonen, 1999; Nansel et al., 2004; Schwartz, 2000). In addition, bullying occurs frequently among already vulnerable individuals, such as among those reporting disabilities or chronic health conditions (e.g., Hamiwka et al., 2009; Nordhagen, Nielsen, Stigum, & Köhler, 2005; Pittet, Berchtold, Akré, Michaud, & Suris, 2010; Sentenac et al., 2012; Taylor, Saylor, Twyman, & Macias, 2010).

Child and adolescent health has taken on a higher profile in Sweden in recent decades, as can be seen in the political agenda. Sweden was one of the first countries to ratify the Convention on the Rights of the Child (U.N. General Assembly, 1989). The overarching aim of national public health policy is to create societal conditions that will ensure good health, on equal terms, for the entire population. Public authorities at all levels are guided by 11 health objectives. Objective No. 3 covers conditions during childhood and adolescence. Since conditions in early years are crucial to an individual’s life-long health, the Swedish Parliament’s proposed a revised public health policy (Prop. 2007/08:110) that recognizes children and adolescents as a priority group within public health care. Since children cannot choose their environment and yet are sensitive to external influence, investments in health promotion among the young pay off in terms of healthy life styles habits among the adult population (Prop. 2007/08:110).

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2 Public Health objectives: 1) Participation and influence in society; 2) Economic and social prerequisites; 3) Conditions during childhood and adolescence; 4) Health in working life; 5) Environments and products; 6) Health-promoting health services; 7) Protection against communicable diseases; 8) Sexuality and reproductive health; 9) Physical activity; 10) Eating habits and food; and finally 11) Tobacco, alcohol, illicit drugs, doping and gambling.
2 SOCIAL RELATIONS

One of the major determinants for people’s health is their social relations. Social relations is included in the WHO’s strategy for improved public health (Dahlgren & Whitehead, 1991). Children and adolescents’ social relations are mostly taking part in their school environment, where they spend most days of the week. It is therefore specifically important that they have a healthy school environment.

The importance of social relations for people’s health is well known and has been discussed by theorists such as Émile Durkheim in terms of, for example, the importance of solidarity and suicide rates in Europe (Berkman, Glass, Brissette, & Seeman, 2000). Over the past few decades, there have been profound changes in social relations in Western society, particularly in the structure of family. Family structure and household composition have changed dramatically. Major trends include a decrease in the numbers of couples marrying and nuclear-family households; and an increase in the numbers of adults living alone, lone parents with children, cohabiting heterosexual couples and homosexual couples and families. Altogether, these trends constitute a divergence from the nuclear family. The decrease in the number of nuclear family households is especially striking in more developed countries; Sweden, together with Denmark, has the greatest number of single-adult households. These trends reflect ongoing economic and social changes in the wake of globalization. Increased employer demands, the spread of individualism and shifting social norms have stimulated an increase in divorce (Martin & Kats, 2003).

Another cause of change in our social relations is the Internet. Today, we use the Internet to communicate and to schedule our daily lives, and according to Livingstone (2009), these “altered time-space conditions” for everyday life reshape our social relations. The preconditions for relational activities have changed, and games and meetings do not necessary need to be physical, and we can create our own personalized home pages or promote ourselves online in endless ways. Thus, the trend is towards individualisation, privatisation and personalisation.

Social relations include both positive and negative dimensions. The positive aspects include the process through which social relations promote health, i.e., social support, which
is the individual’s perception of social resources that are available or that are actually provided (Cohen, 2004). The negative aspects are the relative absence of social relations (social isolation or exclusion), such as bullying or peer victimisation, which affects the individual’s mental health (House, Landis, & Umberson, 1988; Umberson & Montez, 2010). Social isolation or exclusion has been argued to be a particular damaging form of peer victimisation for children’s and adolescents’ wellbeing (see 3.3). Hence, being socially excluded from different groups on Internet may function the same way. Gross (2009) found that socially excluded adolescents reported e.g., lower self-esteem, anger and shame, compared to those who were included in the peer group.

Studies on adults in the 1980 showed that people with close social ties and relations (marriage, contacts with close friends and relatives, church membership, informal and formal group associations) lived longer compared to people lacking such ties (Berkman & Syme, 1979). For children, relations with peers and parents are crucial and represent critical links for understanding mental and physical health across the life span. Families characterized by conflict, aggression and by cold, unsupportive and neglectful relationships are considered a risk for children’s psychosocial, mental, and physical functioning, and health behaviours (Repetti, Taylor, & Seeman, 2002). When children enter school age, peers and teachers become important for adolescents’ mental health and school achievement (Wentzel, 1998; Wentzel, Baker, & Russell, 2012).

The perception of social support from peers and adults has also shown to protect against bullying involvement. Holt and Espelage (2007) found that those not involved in bullying perpetration and victimisation reported greater perceived social support compared to those who were bullies or victims. It may however be difficult to determine the direction of these associations since poor social ties can be a result of being victimised or being a bully. However, there has been longitudinal studies indicating the protective effect of peer relations: Malcolm, Jensen-Campbell, Rex-Lear and Waldrip (2006) found that quality friendship protected against being victimized, and Kendrick, Jutenberg and Stattin (2012) found that adolescents experiencing higher level of support from friends reported lower levels of both bullying and victimisation.
Although social relations are necessary for all human beings and people cannot live in total isolation (Taylor, Grimen, Lindén, & Molander, 1995), the associations are complex and increases in social interactions are not always health protective. Those with less friends and family members may be exposed to fewer opportunities to get into interpersonal conflicts, compared to their more social counterparts (Cohen, 2004). For example, in a study by Bergh, Hagquist and Starrin (2011), higher levels of peer activity among adolescents corresponded to higher frequency of alcohol consumption.

**Stigmatisation and labelling**

Connected with negative relations, and closely related to bullying, are the sociological phenomena of stigmatisation (Goffman, 1963) and labelling (Becker, 1963). A person is labelled as different if he or she is considered to deviate from the normative standards of a social group, culture or society. Stigmatisation is the result of being labelled different. It relies on, according to Link and Pehlan (2001), the use of stereotypes. It leads to “us and them” thinking and discrimination, and leaves the labelled person to experience a loss of status. According to Thornberg (2011), research on bullying shows that stigma theory and labelling theory help us to understand the social processes of bullying. The concept of stigma lies at the core of understanding the consequences of labelling. Negative labelling can spell social isolation for an individual, as relations with that individual are either avoided or terminated due to fear of stigma through association (Goffman, 1963). Hence, even students who do not bully do not want to be around the victim because of social pressure (Hamarus & Kaikkonen, 2008).

Corrigan and Watson (2002) discuss two types of stigma: public stigma and self-stigma. Public stigma comprises reactions of the general public towards a group based on the stigma associated with that group. Self-stigma is the prejudice which people with mental illness turn against themselves. It can result in for example failing to pursue work and housing opportunities (Corrigan & Watson, 2002). Public stigma can have a severe impact on many people’s everyday lives, including one’s social life and self-esteem, especially if it leads to self-stigma (Rüsch, Angermeyer, & Corrigan, 2005).
3 MENTAL HEALTH

3.1 Health and mental health

"Mental health" has come to be a common term in the public health debate, and the opposite of mental health, i.e., mental disorder and mental illness, have been highlighted as a public health problem by the WHO (2013). It is hard to find reliable data on prevalence, but according to Gustavsson et al. (2011), in any one year, over a third of the total EU population suffers from mental disorder. Historically, mental disorders and mental health problems have been a taboo subject in society, connected with stigmatisation and shame. However, in line with the increased proportion of self-reported mental illness in the wake of societal changes such as the economic crisis of the 1990’s (Hagquist, 1997) and the increased prescribing of antidepressant treatment (SSRI, “selective serotonin re-uptake inhibitors”), it seems to have become more socially acceptable in the past two decades to seek help for anxiety and depression. As Svenaeus (2009) argue, these conditions have undergone a process of “de-stigmatisation”, and there is now less shame in talking about mental health problems.

Mental health is considered an integral part of The World Health Organization’s (WHO, 1948) definition of health from 1948: “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. Although it has been subject to critique (see Larson, 1999), it is still the most commonly used definition. In 1986, WHO made additionally allowances within the context of health promotion and it was furthered emphasized that health is not just a state, but also “a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities”. Mental health is more than the absence of mental illness, and closely connected with physical health and behaviour. WHO’s definition of mental health follows: “A state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2001). However, the concept of health is broad and linked with individuals’ cultural and social situations, meaning that health can have different meanings for different people (Ewles & Simnett, 1985; Naidoo & Wills, 2000).

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Mental health, mental illness and mental disorder differ per definition. WHO’s definition of mental disorder (neuropsychiatric conditions) in ICD-10\(^3\) includes e.g. unipolar depressions, bipolar diagnoses, schizophrenia, epilepsy, alcohol- and drug misuse, Alzheimer’s and other dementia related diseases, post-traumatic stress, compulsory behaviour, panic attacks, neurotic, stress-related and somatoform disorders, and insomnia. These disorders are a great suffering for the individual and the related family, and beyond this there is also a high and indirect cost for the society (Gustavsson et al., 2011).

“Mental illness” is sometimes used interchangeably with “mental disorder” in the literature, but I shall use “mental illness” here to refer to when an individual’s state of mind is harder to define than “mental disorder”. Mental illness can be explained as the experience of, or the lack of sufficient ability to meet the challenges in everyday life and it is based on the individual’s own experience of mental wellbeing. The delineation between normal and abnormal condition is not obvious and has varied between different time epochs and cultures (SOU, 2006a). Here, more diffuse problems such as headache, worrying, anxiety, tiredness, stress, sleeping problems, impaired mental wellbeing, suicidal thoughts and suicidal attempts can be included.

Milder forms of mental illness symptoms can include psychosomatic symptoms or problems, which refer to physical conditions that are psychologically induced. Psychosomatic problems from two or more parts of the body, such as the stomach, head, leg, chest and back, often co-exist (Petersen et al., 2006). Psychosomatic problems may lead to school absenteeism and can be an early indicator of later mental health problems (Alfvén, 1997). Stress is a generally accepted cause of psychosomatic problems. Long-standing acute stress can be transformed into chronic negative stress, which can lead to mental health problems such as psychosomatic problems (Alfven, Östberg, & Hjern, 2008). Acute stress and chronic stress do in many ways use the same neurological mechanisms, but the body adapts to chronic negative stress with negative outcomes such as sleep difficulties, pain and other psychosomatic and somatic symptoms (Alfvén, 2003). Children and adolescents with disabilities and chronic health conditions have been shown to suffer an elevated risk of poor mental

\(^3\) International Statistical Classification of Diseases and Related Health Problems, 10\(^{th}\) Revision
health including anxiety, low emotional well-being, lower quality of life, and lower self-esteem (Bosk, 2011; Edwards, Patrick, & Topolski, 2003; Pinquart & Teubert, 2012; Pinquart, 2012).

In the current thesis, no distinction is made between mental illness and mental health problems.

### 3.2 Children’s and adolescents’ mental health

Since the 1980s, there has been alarming reports in media concerning the mental health among children and adolescents hence their life and well-being has taken a more pronounced role on the political agenda (SOU, 2006a). However, despite the rapid stream proposing a deteriorating mental health, there is still a lack of studies supporting such arguments fully (Beckman & Hagquist, 2010). The question regarding trends in children and adolescents mental health was raised by the Health Committee at The Royal Swedish Academy of Sciences and in 2010, at a State of the Science Conference, an extended literature review conducted by an expert group were presented (Petersen et al., 2010). The authors (Petersen et al., 2010) concluded that considering indications of declining trends in mental health among children and adolescents, the few existing studies suffer quality deficiencies.

Looking at studies conducted in Sweden there are indications of an increase in self-reported mental health problems, especially among adolescent girls (Hagquist, 2009b; Petersen et al., 2010), and young women (SCB, 2008; Socialstyrelsen, 2009). International studies are, in accordance to the Swedish and Nordic, also scarce and show discrepant results. Based upon the whole picture of trend studies, the authors to the literature review (Petersen et al., 2010) concluded that the results were not consistent and that difference in time perspectives, informants, age groups, and measurements make it hard to compare studies and draw any conclusions. A more recent study from the UK (Collishaw, Maughan, Natarajan, & Pickles, 2010) based on youth and parent-reports showed that twice as many young people reported frequent feelings of depression or anxiety in 2006 as in 1986.

The consequences of increased mental illness among children and adolescents can aggravate among youths entering the labour market. The presence of mental disorders and
mental illness during childhood can be devastating for school achievement and does weaken the chance of labour market participation. Hence, if the mental illness is left untreated, these factors will be, as described by OECD, a constraint to the welfare of society more generally and future supply and economic growth in particular (OECD, 2013; NBHW, 2013).

### 3.3 Stress, mental health and social relations

Stress has become a common term in today’s society. Long lasting stress is believed to be the onset of illness such as heart disease, musculoskeletal disorders and mental illness. The psychological interpretation of stress focuses on the individual’s response to stress, that is; the individual feels overwhelmed regarding the capacity to manage the situation (Lazarus & Folkman, 1984). Pearlin et al. (Pearlin, Menaghan, Lieberman, & Mullan, 1981; Pearlin, 1989) discuss the stress process from a social structural context, meaning that the sources of stress arise from peoples’ various structural surroundings, such as different stratifications including e.g. social economic class or ethnicity, statuses and roles such as family- or occupational roles. Hence, the societies and cultures are fundamental for the stress process.

Hundreds of studies have shown that social relations and social support benefits mental and physical health. The effect of social support may indirectly benefit mental health by reducing the impact of stress (Cohen, 2004; Thoits, 1995). Cohen, Gottlieb and Underwood (Cohen & Wills, 1985; Cohen, 2004) describe two models that identify the conditions under which social support influence mental health. According to the models, support is related to well-being either directly (e.g., social influence or information affect the individual’s health behaviour and thus health outcome) or function stress-buffering (e.g., a stressful event can be experienced as less severe dependent on perceived availability of social resources). Despite the positive effects that social relations may bring (Mirowsky & Ross, 2003), social relations can also be extremely stressful (Walen & Lachman, 2000) and contribute to poor health habits in childhood, adolescence, and adulthood (Kassel, Stroud, & Paronis, 2003).

The effect of computer and Internet usage on social relations among youth has been debated since the 90s, and in the early reports the use of Internet was considered damaging.
for adolescents’ health and well-being. An early often-cited longitudinal study by Kraut and his colleagues (1998) studied the direction of the relationship between Internet use and social involvement and psychological well-being during a 12–18 months period. Opposite to the authors’ hypothesis that use of Internet would increase users’ social networks and the amount of social support, they found that heavy Internet users, including use of communication, became less socially involved and lonelier than light users and reported an increase in depressive symptoms. However, a 3-year follow-up of 208 of these respondents found that the negative effects had diminished (Kraut et al., 2002). One major problem with the early studies on Internet is that many researchers have treated the independent variable of Internet use as one-dimensional, while the individual in reality use it for a range of different motives (Valkenburg, Peter, & Schouten, 2006). Valkenburg, Peter and Schouten (2006) assume that well-being is more likely to be affected when Internet is used for communication than information seeking. Today, studies on the associations with well-being show both positive, deliberative aspects and negative, as regards to the possibilities of abusing the new kinds of communication (Valkenburg & Peter, 2009). For example, Valkenburg and colleagues (2006) found that positive feedback given on adolescents’ friend network profiles enhanced their social self-esteem and well-being, whereas negative feedback decreased their self-esteem and well-being.

Being victimised may be seen as a form of stressful relationship and hence be experienced as a stressful event. It has been argued that different forms of bullying is more harmful to mental health than others. Socially excluding someone is suggested to affect mental health more negatively than more direct acts (Baldry, 2004; Hawker & Boulton, 2001; Rigby, 1999). According to Hawker and Boulton (2001) this could be explained by humans historically inherited basic needs when social exclusion from a group were associated with a serious threat to survival. There is however a risk that overlapping of subtypes diminishes the effect from specific subtypes of bullying (Hawker & Boulton, 2001).

There are some aspects of differences between traditional bullying and cyberbullying implying that cyberbullying may have a more severe impact on mental health compared to traditional bullying (Campbell, 2005; Kiriakidis & Kavoura, 2010; Kowalski & Limber, 2007;
Perren, Dooley, Shaw, & Cross, 2010; Slonje & Smith, 2008; Wang, Nansel, & Iannotti, 2010). It has also been discussed that the different types of media have different impact on mental health. Smith and colleagues (Slonje & Smith, 2008; Smith et al., 2008) found that bullying through picture/video clip was considered worse than face-to-face bullying among adolescents, while the impact of mobile phone calls and MSN bullying (Smith et al., 2008) or of text messages and e-mail bullying were not considered as severe (Slonje & Smith, 2008).

Turner, Finkelhor and Ormrod (2006) discuss how other forms of life adversity are likely to co-exist with victimisation experiences and often occur against a background of chronic family adversity, often together with other events such as parental mental illness, poverty, unemployment, parental alcohol or drug problems, and marital problems. Consequently, the researchers (Turner et al., 2006) advocate the importance of the removal of such stressful context from the specific effects of child victimisation. Most researchers share the idea of a cumulative effect of victimisation and frequent exposure and that several types of victimisation may contribute to increased mental illness (Klomek et al., 2009). Multiple stress events may be regulated by structural factors and children living as racial and ethnic minorities, in a low socio economic status with low parental education and with single parents often experience more types of victimisation and more of other form of adversity compared to higher status children (Turner et al., 2006). Adolescents’ different preconditions and earlier experiences and how they respond to victimisation vary depending on their interpretation of the situation and their coping skills. Hence, even occasional harassment incidents can function as a trigger and lead to adjustment problems (Ladd, Ladd, & Juvonen, 2001).

### 3.4 School, learning and mental health

When children enter school age, peer and teacher relations become important for adolescents’ mental health and school achievement (Wentzel, 1998; Wentzel et al., 2012). The relationship between mental health and academic achievement was discussed in 2010 at the State of the Science Conference initiated by The Health Committee at The Royal Swedish Academy of Sciences. A panel statement (Gustafsson et al., 2010) concluded that the association between academic achievement and mental health is reciprocally related, which may lead to a bad spiral of poor mental health and poor academic achievement. Social relations with peers
and teachers are involved in establishing the negative effects of school failure on mental health, while positive relations with peers and teachers can work as protection against development of mental health problems. A poor or bad schooling may follow the child through transmission to adulthood. Thus, school has a great significance for children’s mental health (Gustafsson et al., 2010).

The perception of social support from peers and adults has also shown to protect against bullying involvement. Holt and Espelage (2007) found that those not involved in bullying perpetration and victimisation reported greater perceived social support. It may however be difficult to determine the causality of these associations since poor social ties can be a result of being victimised or being a bully. However, there has been longitudinal studies indicating the protective effect of peer relations: Malcolm, Jensen-Campbell, Rex-Lear and Waldrip (2006) found that quality friendship protected against being victimized, and Kendrick, Jutenberg and Stattin (2012) found that adolescents experiencing higher level of support from friends reported lower levels of both bullying and victimisation.

“A School climate” is a frequently used term in order to describe different contexts in schools that include peers, teachers and school, and are known as an important influence on student adjustment (Bergh, 2011). There is no established definition of school climate but is usually related to the schools’ quality and character of social interactions, sometimes called the schools’ ethos (Svanström, 2002). The National School Climate Council defines school climate: “School climate is based on patterns of people’s experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (Cohen & Geier, 2010, p.1). A positive and supportive school climate has been shown to correspond to more success in bullying prevention (Eliot, Cornell, Gregory, & Fan, 2010), and less violence in school (Steffgen, Recchia, & Viechtbauer, 2012). A recent review of school climate by Thapa, Cohen, Guffey and Ann Higgins-D’Alessandro (2013) showed that school climate has a profound impact on students’ mental and physical health, and that it may have a positive effect on externalized behaviour.
4 THE SCHOOL ARENA

4.1 The dynamic school

The Swedish school system has undergone big changes since the 1980s regarding governance and responsibility. Until the 1980s, there were independent and the responsibility for schools’ organization was not linked to the municipality and local politicians. Schools were financed by government subsidies and local politics had no impact on schools’ organization. During late 70s through to the 1990s, schools underwent a process of decentralization intended to increase community influence and effectiveness in schools, as school organization had become too complex to be managed by the State. In 1992, governance was handed over to the municipalities and the overall system for Swedish schools was changed. The State was no longer to determine the organization of schools, but only to specify the outcomes to be achieved. In the mid-nineties, a new curriculum was introduced to serve the new outcome-oriented organization. A parallel development included increased freedom in choice of school, meaning that parents could place their children in any school they wished, which resulted in a mushrooming of independent schools funded by the government. Today, schools’ organizations vary between, as well as within, municipalities (SOU, 2007). In order to reflect these developments, the Education act was revised in 2010. Amendments to the act simplified and clarified the new school system and the responsibilities of the state and municipality. In addition, each school’s health-care team was reorganized into a uniform structure, which is described later in this thesis (SFS, 2010:800).

Current debate in Sweden has highlighted free choice of school and the proliferation of independent schools. Free choice of school is widely seen as contributing to increased segregation, due to the fact that parents from a higher socio-economic background, or with more drive, use free choice of school to deselect schools with a higher number of students with less scholastic ability or from lower socio-economic backgrounds (Schneider, Elacqua, & Buckley, 2006). Likewise, independent schools may attract a more motivated group. According to the “peer-effect” theory, a student’s achievement in school is affected by the achievement level of his or her peers (e.g., Hoxby, 2000; Sund, 2009). It has been argued that increased segregation leads to more bullying, with the argument running along the lines of
“majority-minority status”: segregation creates an imbalance in power among students; and minority students are left more vulnerable. Greater diversity in a school or in a classroom may reduce such a power imbalance and hence reduce victimization (Graham & Juvonen, 2001; Graham, Taylor, & Ho, 2009). However, those who argued against increased freedom to choose school say that the former state-run school system actually led to greater diversity within a given individual school.

### 4.2 The school health service

The school arena has for long been acknowledged as important in terms of enhancing and laying a foundation for good health because it reaches a large population gathered at the same place during many years. Schools include many aspects that can affect health, such as policies and practices, the school ethos, the curriculum and specific programs to promote healthy lifestyles and mental health (Svanström, 2002). In addition to the WHO’s strategy including supportive environments at the Ottawa Charter Conference in 1986 (WHO, 1986), schools were identified to be one important setting for population based health promotion, i.e., “Health Promoting School”.

The development of the School Health Service (SHS) is one example of a key setting conducive to preventive work and good health (Naidoo & Wills, 2000). The SHS is established as one of six components in schools’ health promoting strategies. In Sweden, the objectives of the SHS are “to follow, maintain and recover the pupils’ physical, mental and social health”. Their primary work includes prevention and promoting health among school children, and to support the students fulfilling the goals stated in the school law. All school chil-

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4 In Sweden, however, the Health Promoting School concept is now called “health promoting school development” (HPSD) [Sw: hälsofrämjande skolutveckling], a concept that implies a process and change (Nilsson & Norgren, 2003). In 1991, the WHO initiated an international network, “Schools for Health in Europe network” (SHE) aiming at encouraging members to develop and implement national policies regarding school health promotion based on country specific, European and global experiences. Sweden is one of 43 country national members (Buijs, 2009). A health promotion school takes on a whole school approach and thus include all organizational levels, not only the pedagogical (Weare & Markham, 2005), it is integrated in more than only the curriculum, school environment or the community (Stewart-Brown, 2006; Wells, Barlow, & Stewart-Brown, 2003) and takes a holistic salutogenic perspective (Antonovsky, 1996).

5 Together with “healthy school policies”; “schools’ physical environment”; “schools’ social environment”; “individual health skills and action competencies”; and “community links”.
Children are entitled to SHS and their health dialogues and immunizations during their entire time in school (SFS, 2010:800).

Before the new Swedish Education act (SFS, 2010:800) came into force in year 2011, the schools’ health care organization consisted of two parallel tracks; on the one hand the SHS (school nurses and school physicians) and on the other hand remedial teachers, school social workers and school psychologists. In 2000, a Swedish Government Official Report (SOU, 2000:29) concerning students’ health services’ organizational structure suggested an integrated organization including these two tracks, i.e. “Team for Students’ Health” (TSH). It was advocated that this new organization primarily should work preventive and health promoting aiming at supporting students’ fulfilment of the educational goals (SOU, 2000:19). This promoting perspective came to permeate the proposition (Prop., 2009/10:165) leading to the new Education act; i.e., the TSH should not focus strictly on health or medical interventions but work preventive and promoting health interventions in a broader perspective, including create environments promoting students’ learning, development and health (SFS, 2010:800). The new organization was constituted in 2011 and the SHS became part of an obligatory comprehensive team including the requirement of access to a school physician, school nurse, school psychologist, school social worker, and personnel with remedial competence (SFS, 2010:800). In addition, in the period covering 2012-2015, the Swedish government will invest 650 million Swedish kronor (about 69 million Euros) in student health services, which would allow expansion of the TSHs and more professional development training, as well as provide funds for information campaigns on nutritious school food (press release from the Ministry of Education, Nov 1st 2011).

The TSH is an important agency in the detecting of mental illness among students. However, in a recent report by OECD (2013) it was concluded that Swedish school health service did not have enough resources to meet the challenging increase of mental illness among adolescents. They stated that it was imperative to increase resources at school to ensure rapid access to psychologists, and to provide systematic guidelines to school social workers and school nurses regarding identification of mental health problems and how to respond to students’ needs.
4.3 Bullying prevention in school

In the 1980s, Sweden and Norway were pioneers regarding bullying prevention in schools. The first wide-spread bullying prevention program (Olweus’s Bullying Prevention Program [OBPP]), developed by Dan Olweus, came to highlight bullying as an important problem both national and internationally. Several OBPPs were evaluated and showed good effects regarding reducing bullying and victimisation in schools (Olweus, 1993). During the 1990s, a range of bullying prevention programs were introduced in Sweden and the issue of bullying began to be encompassed in official reports, curricula and legal acts in terms of “insulting treatment”.

However, the effectiveness of school based bullying prevention programs have been questioned over time, and single studies show contradictious results. Ttofi and Farrington (2011) conducted a meta-analysis including 44 school based programs in order to study program components in these programs. Experimental studies evaluating the effects were included in the meta-analysis. The results showed that overall, school-based bullying prevention programs were effective with a decrease of bullying by 20–23% and victimisation by 17–20%. Successful program elements and intervention components being associated with a decrease in bullying were programs including parent meetings, firm disciplinary methods, and improved playground supervision. In contrast to an earlier study by Ttofi and Farrington (2009) work with peers was associated with an increase in reported victimisation. The intensity of the program was also shown to improve the results.

A Swedish evaluation of anti-bullying programs was conducted in 2009 (SNAE). The main findings comprised how effectively work against bullying should be conducted – and not about the programs against bullying works best. Some crucial components of a successful work were highlighted: systematic work, whole-school approach with both preventive and remedial action is at the core of successful work. Interventions against bullying should be clearly connected to each other and there need to be a clear role and responsibility among the school staff.

Regarding cyberbullying prevention programs, research is still in its infancy, but as with early development in intervention programs for traditional bullying, programs have
A relatively recent study (Mishna, Cook, Saini, Wu, & MacFadden, 2011) reviewed the effectiveness of cyber-abuse interventions in increasing knowledge about Internet safety and decreasing risky online behaviour. The types of interventions included in the review targeted both children and adolescents and parents:

(a) technological and software initiatives used with children and adolescents to block or filter access to inappropriate online content; (b) online and off-line cyber abuse preventive interventions for children and youth delivered through any medium (including face-to-face presentations, video games, interactive software, etc.); (c) online and off-line cyber abuse preventive interventions for parents to protect children from cyber abuse; and (d) therapeutic interventions for children and youth who have experienced cyber abuse. (Mishna et al. 2011, p.6)

Altogether, three programs were found that meet the researchers’ criteria. The results indicated that participation in cyber abuse prevention and intervention strategies were associated with an increase in knowledge about Internet safety. However, the authors highlight that such participation in cyber abuse prevention interventions is not necessarily related to risky Internet attitudes and behaviour. As with other public-health problems, awareness of cyber abuse may not always lead to behaviour change. Although the authors identified a tendency towards positive change reported in the treatment group regarding Internet behaviour, the results were not significant. Two of the studies (US and Canada) focused on Internet-safety knowledge and online risky behaviour, and the third program (US) had employed an anti-bullying strategy in schools to address traditional face-to-face bullying, as well as cyberbullying. Interestingly, participation in a school-based anti-bullying strategy was not significantly related to change in the number of incidents of cyberbullying experienced by students. Only one of the programs targeted the parents by providing them with a guidebook (Mishna et al., 2011).

In Sweden, although most schools seem to have included the use of mobile phones, Internet, etc., in their description of bullying forms, there are no particular disciplinary measures against cyberbullying per se. Instead, the same kinds of interventions are usually used as for traditional bullying. For example, a report from Gothenburg showed that schools that have used the Olweus prevention program also reduced the number of cyberbullying incidents by half over two years (Englund, 2011).
In order to address problems like bullying in Swedish schools today, common approaches include forms of social and emotional learning (SEL). Compared to selective prevention programs, programs like SEL are argued to address underlying causes of problem behaviour while supporting academic achievement. According to Elias et al. (1997) SEL is a process which enables people to manage emotions, set up and achieve goals, develop and maintain positive relationships, make good decisions, behave ethically and responsibly, and avoid negative behaviours. Positive effects from SEL on pro-social behaviours, conduct- and internalizing problems, and academic performance on achievement tests and grades among children and adolescents has been shown in a meta-analysis by Durlak and colleagues (2011).

On a general level, school based health education models and health interventions take different approaches and operate at different levels. Interventions concerning students’ health are usually divided into three levels distinguishing the characteristics of the intervention; (1) universal prevention i.e., interventions that do not distinguish between high- and low risk groups. No individual or group is singled out; (2) selective prevention includes preventive work aiming at groups being exposed to one or more risk factors (3) and the indicated intervention, i.e., rectification or treatment when students are in acute need, individuals with already identified problem or risk factors (Horowitz & Garber, 2006).

5 BULLYING

5.1 Scrutinizing the bullying criteria
The bullying definition has during the years been rather criticized. Although the purpose with establishing the three criteria of bullying (repetition, intent and power imbalance) probably was supposed to show that all acts of peer aggression are not of equal severity, it is still a problem of how to capture the criteria in measurements, especially power imbalance and intentionality of the three criteria. The criterion of repeated behaviour finds most evidence in literature (e.g., Brunstein Klomek, Marrocco, Kleinman, Schonfeld, & Gould, 2007; Turner et al., 2006). Hunter, Boyle and Warden (2007) argue that if the repeated acts are included, power imbalance and intent to harm may obviously follow, and then bullying is just
simply a different name for peer victimisation. The evidence of the effect of intention and power imbalance is scarce. Hunter et al. (2007) conducted one study where they examined whether bullied pupils and those experiencing peer aggression (peer aggression does not necessarily include power imbalance) differed in their levels of depressive symptomatology. The result supported the hypothesis that aggression combined with power imbalance was more damaging to the mental health.

As regards power imbalance, Finkelhor, Turner and Hamby (2012) question the problem of defining what it really is. The common description includes someone bigger, stronger or more popular, but such features are not always in alignment. According to the authors; “it is a hypothesis that peer aggression episodes characterized by repetition and power imbalance have special seriousness and commonality that deem them worthy of special attention” (Finkelhor, Turner & Hamby, 2012, p. 272). Tam and Taki (2007) argue that power imbalance do not sufficiently separate bullying from violence because in any violent situation, the perpetrators attack when they think the victims is weaker than they are, meaning that power imbalance usually exists in any violent situation and not only in bullying.

Further, Finkelhor, Turner and Hamby (2012) argue that Olweus’ definition excludes trivial conflicts\(^6\) but at the same time excludes more serious peer aggression attacks. In conclusion, the authors (Finkelhor et al., 2012) propose to abandon the bullying concept and instead call the domain of interest peer victimisation or peer aggression.

### 5.2 Cyberbullying – definition and features

The concept of bullying was initially synonymous to traditional “face- to face” bullying, usually occurring in the school setting. However, following the variety of new easily available technologies another form of bullying, here called cyberbullying, has emerged among adolescents. Cyberbullying is characterized by bullying using different types of media such as e-

6 Olweus’ whole definition is stated as follows: “We say a student is being bullied when another student or several other students say mean and hurtful things or make fun of him or her or call him or her mean and hurtful names; completely ignore or exclude him or her from their group of friends or leave him or her out of things on purpose; hit, kick, push, shove around, or threaten him or her; tell lies or spread false rumors about him or her or send mean notes and try to make other students dislike him or her and do other hurtful things like that. These things may take place frequently, and it is difficult for the student being bullied to defend him or herself. It is also bullying when a student is teased repeatedly in a mean and hurtful way. But we don’t call it bullying when the teasing is done in a friendly and playful way. Also, it is not bullying when two students of about the same strength or power argue or fight.”
mail, Instant Messaging (IM, MSN), chat-room, web pages, picture/video clip, phone call and text message (SMS). A study from the UK (Smith et al., 2008) reported bullying via mobile phones (calls and text message) as most prevalent, followed by MSN. In line with the increasing use of so called “smart phones”, the border between mobile phones and Internet are today more or less erased.

It has been debated whether traditional bullying and cyberbullying are two different phenomena or if they are part of the same expression (Menesini, 2012). This is an important aspect when planning interventions and understanding the consequences of the problem.

In comparison to traditional bullying, there is yet no concurrent definition of cyberbullying and there is still an ongoing debate if cyberbullying should be defined differently from traditional bullying (Kiriakidis & Kavoura, 2010; Menesini et al., 2012; Tokunaga, 2010). Most cyberbullying definitions are based on the traditional definition. Smith et al. (2008), for example, defines cyberbullying as follows: “Cyberbullying is reported as an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself”. Arguments that cyberbullying should be defined using other criteria than traditional bullying is based on the assumptions that; 1) power imbalance in cyberbullying is less evident than in traditional bullying, because of the opportunity to stay hidden behind the screen. However, such arguments may apply to indirect types of traditional bullying as well, such as gossiping and rumours. 2) The repetition criterion, which may be the strongest argument for separate definitions (Dooley, Pyżalski, & Cross, 2009). Bullies and victims can perceive the number of incidences differently as it is harder to separate single and repeated incidents in cyberbullying. It may be an easy task to count the number of sent text messages, but it is almost impossible to count every view on a webpage containing a humiliating photo (Slonje & Smith, 2008). This perspective may however be applicable to traditional bullying as well, for instance writing something mean about another person on a wall. 3) Intent is difficult to determine, and hidden behind a computer screen, it may be even more difficult. A message can be misinterpreted as being hostile when it was meant as an attempt at a joke (Bauman, Underwood, & Card, 2013).
In addition, research has shown two new possible criteria: anonymity and publicity, which are more specific to virtual domains. These criteria were not considered prerequisites necessary to labelling an action as cyberbullying, but they can connote the context (the severity and nature of the attacks, the relationship between actor and victim and the victim’s reactions) (Nocentini et al., 2010). These findings were confirmed in a study including adolescents in six European countries (Menesini et al., 2012).

It has been suggested that because of these claimed anomalies between traditional bullying and cyberbullying, and the fact that cyberbullying is often labeled as a variant of “bullying”, the concept of “cyberaggression” would be a more suitable topic of study, in which case power imbalance, intent and repetition would not be necessary attributes and room would be left for further exploration of the cyber phenomenon (Bauman et al., 2013).

5.3 Socio demographic factors
Some socio-demographic factors have been arguably associated with bullying behaviour, including age, socio-economics, ethnicity, and family structure. Such factors should thus be, on a theoretical basis, adjusted for. Bullying behaviour tends to increase during childhood, peak during early adolescence, and decline slightly during the late adolescent years (Nansel et al., 2001). Physical bullying usually decreases with rising age (Brame, Nagin, & Tremblay, 2001), while other types of bullying, such as more covert forms, generally increases between the ages of 11 and 15 (Eslea & Rees, 2001; Pellegrini & Long, 2002).

As regards cyberbullying research, the effect of age seems to vary between studies. Ortega, Calamaestra and Mora-Merchán (2008) found that the effect of age was dependent on which kind of device was being used. While younger students were more likely to be Internet-victimized, older students were more likely to cyber-bully others; yet, when looking at mobile-phone bullying, no age difference appeared. This could be due to the fact that older students, as compared to their younger counterparts, have greater access to computers and mobile phones, and also that cyberbullying may require verbal and technical skills, i.e., there is a maturation effect at play.

Varying results regarding socio-economic status (SES) and bullying behaviour have been reported. Some report no significant association between victimisation and SES of the
family (Baldry & Farrington, 2005), or weak associations (Wolke, Woods, Stanford, & Schulz, 2001). However, a large body of research reports significant associations between low SES and victimisation and bullying behaviour (Due et al., 2009; Due, Damsgaard, Lund, & Holstein, 2009; Jansen, Veenstra, Ormel, Verhulst, & Reijneveld, 2011). It has been discussed that these differences is due to differences in social resources, such as more adolescents from low socio-economic backgrounds growing up in single-parent homes, which may lead to other difficulties such as economic or social problems (Due et al., 2009).

A Swedish study by Carlerby, Viitasara, Knutsson and Gådin (2012) found evidence to suggest that Swedish adolescents with a foreign background are more likely to be involved or exposed to bullying. Compared to boys of mixed or Swedish background, foreign background was associated with being a bully. Among girls of foreign background, significantly higher frequencies of bullying involvement as victims, bullies, and bully-victims were reported compared to girls of mixed or Swedish background. Theoretically, ethnicity may imply a lower SES, hence less access to technical devices, and thus lower cyberbullying rates among immigrants. However, today almost all adolescents have their own mobile phone regardless of SES. In addition, Gådin et al., (2012) found that foreign girls were more likely to be victims, bullies and bully-victims; this can also indicate that foreign girls may be more exposed or involved in cyberbullying behaviour as well.

Although varying results, most studies finds associations between bullying behaviour and family structure, i.e., children and adolescent living in single parent family are in increased risk of being victims, bullies and bully-victims (Jablonska & Lindberg, 2007; Jansen et al., 2011; Nordhagen et al., 2005; Spriggs, Iannotti, Nansel, & Haynie, 2007). It is important to highlight that it may not be the family disruption per se that is the cause of the bullying behaviour or other maladjustment, but rather factors including household finances, parenting style, parents’ psychological well-being, marital conflict, and lack of involvement in the child’s schooling. Single parents may be forced to work more to compensate for lost income and may not have enough time to spend with their child (Ram & Hou, 2003). From a cyberbullying perspective, children and adolescents spending lots of time home alone, with
no adult present, may be at particular risk of using the Internet for non-appropriate activities, or be exposed to cyber incidents.

5.4 Gender differences in aggressive and bullying behaviour

Gender patterns in traditional bullying have been evident over time. Boys are more likely than girls to engage in bullying, particularly direct physical bullying (Björkqvist, Lagerspetz, & Kaukiainen, 1992; Crick et al., 2001; Wang, Iannotti, & Nansel, 2009), either as bullies or as bully-victims (Perren et al., 2010; Solberg, Olweus, & Endresen, 2007). Some studies report that boys are more likely than girls to be traditional victims (Olweus, 1993; Solberg & Olweus, 2003), whereas many do not report any gender differences at all (Kaltiala-Heino et al., 2000; Perren et al., 2010; Ranta, Kaltiala-Heino, Pelkonen, & Marttunen, 2009; Solberg et al., 2007). Verbal bullying, on the other hand, seems to be just as common among girls as boys, and girls have been reported to more frequently engage in indirect/relational/social bullying than boys (Björkqvist et al., 1992; Crick et al., 2001; Wang et al., 2009). However, the idea that girls would be more indirectly aggressive than boys has been criticized and studies have shown contradictory results (Olweus, 2009). In the late 1990s, Galen and Underwood (1997) reported that adolescent girls in elementary and middle school were not more socially aggressive. It was only the older girls (Grade 10) who reported significant, higher levels of social aggression than boys. Salmivalli and Kaukainen (2004) used a similar approach and found that boys were, in general, both directly and indirectly more aggressive than girls, but that there was a group of highly aggressive girls who predominantly used indirect aggression. The gender differences were largest in the physical aggression group and smallest in the indirect and non-aggressive groups.

In contrast to traditional bullying, cyberbullying research has shown inconsistent results regarding gender differences. Some studies report boys as overrepresented as cyberbullies (Calvete, Orue, Estrévez, Villardón, & Padilla, 2010; Smith et al., 2008), while some report girls as more often exposed to cybervictimisation (Slonje & Smith, 2008; Smith et al., 2008) and being bully-victims (Kowalski & Limber, 2007). However, many studies do not report any gender differences at all (Mishna, Cook, Gadalla, Daciuk, & Solomon, 2010; Patchin & Hinduja, 2006).
Biological aspects
The early theories of gender differences in deviant or aggressive behaviour suggest a biological perspective. Maccoby and Jacklin (1980) argued that gender differences in aggression have a biological origin because aggression is related to sex hormones, as seen in other primates, and appears early in life and is found across cultures. Although these arguments have been criticized on several bases (Tieger, 1980) there may be links to some psychiatric disorders. If we consider bullying as a type of antisocial or aggressive behaviour, we may take a look at criminology research where studies on youths with antisocial behaviour predate research into bullying. However, as with the early bullying research (Olweus, 1978) boys have been more in focus in criminological studies. Female criminality was not studied until the 1970s (Junger-Tas, Ribcaud, & Cruyff, 2004).

While the biological sex hormone perspective does not prevail today, the neuropsychological perspective has become of more interest, as it has been shown that hyperactivity in particular is an early predictor for behaviour problems and involvement in crime (Herrenkohl et al., 2000; Murray, Irving, Farrington, Colman, & Bloxsom, 2010). Males have been shown to be overrepresented in at least three psychiatric categories where antisocial behaviour may be an aspect (Rutter, Giller, & Hagell, 1998; Wittchen et al., 2011). ADHD, which is characterized by either significant inattention or hyperactivity and impulsiveness, or a combination of the two (American Psychiatric Association, 2000) is today a controversial topic in schools. The fact that boys are included to a greater degree in such diagnoses is used in part to explain boys’ greater involvement in bullying behaviour, both among victims, bullies and in particular as bully-victims. ADHD makes it problematic for individuals to read social cues which may contribute to high rates of peer rejection and problems with social relations (Wolraich et al., 2005). Several studies indicate associations between bullying behaviour and ADHD (Holmberg & Hjern, 2008; Montes & Halterman, 2007; Nordhagen et al., 2005). However, studies have indicated that the gender difference plays itself out differently. For example, one study found that males with ADHD were more likely to engage in bullying behaviour, whereas females with ADHD were more exposed to victimisation (Bacchini, Affuso, & Trotta, 2008). Kowalski and Fedina (2011) discuss that cyberbullying may be an important aspect for children and adolescents with social-skills deficits. They argue that alt-
hough, initially, the Internet might provide disabled children with “easier” means of relating to peers, their social-skills deficits, lack of empathy, and emotional volatility will likely lead to relational problems on the Internet as well as in the real world.

**Socialization, cognitive influences and Internet habits**

Social and cultural expectations have been widely viewed as impacting on boys’ and girls’ behaviour. Socialization processes and norms embedded in the school context have been put forward for the creation and perpetuation of different normative and socially accepted behaviour for boys and girls in general, and aggressive behaviour in particular (Bussey & Bandura, 1999; Chesney-Lind, 1989; Mouttapa, Valente, Gallaher, Rohrbach, & Unger, 2004). Looking at normative behaviour on the Internet, Swedish adolescents’ Internet habits and usage still show some obvious differences when seen from a gender perspective. While boys aged 9-16 play more games and watch more video clips on the Internet, girls are more active on social network sites (apart from Facebook), and in chatting and blogging, and they use more sites where they can upload pictures for public display (Findahl, 2010; The Swedish Media Council, 2010). International research has shown similar gender differences (Lucas & Sherry, 2004; Muscanell & Guadagno, 2011; Pujazon-Zazik & Park, 2010). As girls are more active on social network sites, and in chatting and blogging (Findahl, 2010; Pujazon-Zazik & Park, 2010), they may also be more exposed to peer victimisation on the Internet compared to boys.

Peer group pressure for “gender normative” forms of aggression may increase with age. The transition from childhood to adolescence might encourage them with more “preferred” forms of aggression, but the increased verbal cognition which comes with age might also explain the changed behaviour (Card, Stucky, Sawalani, & Little, 2008). While boys are more socialized to use aggression (in particular direct aggression), girls have learned to use less aggression, or use at least indirect aggression (Björkqvist, 1994; Lagerspetz, Björkqvist, & Peltonen, 1988). In addition, research has shown that girls’ and boys’ lifestyles and social relations show different characteristics. Girls seem to engage in fewer and closer friendships, while boys report friendships that are more casual and greater in number (Lagerspetz et al., 1988; Maccoby, 2003). As a result of this structure, girls may experience indirect aggression.
as particularly hurtful because it targets these relations (Galen & Underwood, 1997; Underwood, Galen, & Paquette, 2001).

Bussey and Bandura (1999) address the psychosocial determinants and mechanisms through which males and females are socialized using a model of social cognitive theory. They argue that while some gender differences are grounded in biology, most of the stereotypical attributes and roles associated with gender are more of cultural origin (Bandura, 1986; Bussey & Bandura, 1999). Bandura’s Social Cognitive Theory, briefly described, is based on the idea that people observe others in order to learn. As children grow up and develop their cognitive ability they can learn gender stereotypes from observing differential acts of male and female models. However, it is not only the knowledge about gender differences that lead people to personify a stereotype; there is also the social value of adopting it (Bandura, 1986; Bussey & Bandura, 1999). Girls’ suggested tighter friendship structure (Galen & Underwood, 1997) may partly explain their extended use of blogs and other communication sites, but may also be part in gaining popularity among peers. One recent study reported that Icelandic adolescents who write blogs are more involved in various activities associated with higher status among peers (Bjarnason, Gudmundsson, & Olafsson, 2011). This may indicate that girls are more interested in a social dimension where communication is the main objective whilst boys are more goal oriented, i.e. they use the Internet to do other things than just communicate (Muscanell & Guadagno, 2011; The Swedish Media Council, 2010). As both beauty and youth are highly emphasized in mainstream media (Egbert & Belcher, 2012) there is a risk that increased popularity of exposing oneself online may create a greater emphasis on appearance and consciousness of looks, especially among girls (Vandenbosch & Eggermont, 2012).

Gender differences in aggression may vary depending on the anticipated consequences of aggression, i.e., if boys display non-normative behaviour, they may suffer social consequences because of it (Card et al., 2008). However, although these gender differences are still rather distinct, the latest result from The Swedish Media Council (2010) shows an approximation between boys’ and girls’ habits since 2008 in almost all areas. Similar tendencies of
equalization in Internet usage across gender had been reported in 2004 from the US (Gross, 2004) and in the EU kids online report (Livingstone et al., 2011).

5.5 Reasons for bullying

Why does bullying exist? From a psychological and sociological perspective, it has been put forward that the social hierarchy or social ranking to which we are subordinate plays an important role (Gilbert, 2000). Social status is a common feature in human life, and both adults and children experience that an informal structure of social relations is formalized in everyday settings, such as in school, where peers rank peers according to popularity and status. A school class tends to maintain its character over several years and its composition rarely changes in terms of students being excluded or included (Östberg, 2003). Some individuals may use aggression and bullying tactics as strategies to accomplish goals and gain social dominance in new groups (Pellegrini et al., 2010). While a bully is often considered as wanting to be “cool” and as striving for power, status and popularity, and as possibly having psycho-social problems, the victim is often seen to be odd or as deviating from the norm in some respect (Thornberg, 2013). Students that are victimised are usually at the bottom of the peer status order and the latter have been named rejected children (Cook, Williams, Guerra, Kim, & Sadek, 2010). However, a child can be rejected and yet perceived as popular (Salminlalli, 2010). In a recent study (Veenstra, Lindenberg, Munniksma, & Dijkstra, 2010) bullies were actually rejected only by children to whom they represented a potential threat. Juvonen, Graham and Shuster (2003) found that bullies were ranked as having the highest social status and victims the lowest. However, the authors also found that classmates avoided both bullies and victims and in particular bully-victims more than other classmates.

One’s position in the peer status hierarchy may partly be explained by mental health and symptoms such as deviant behaviour and aggression and social withdrawal (Östberg, 2003). Another influence may be group norms. Ojala and Nesdale (2004) studying a preadolescent group found that bullying were considered to be much more acceptable when it was consistent with group norms.

The application of social status on cyberbullying has been questioned since the hierarchy in cyberspace is not a clear cut due to the possibility for individuals to decide how they
present themselves in front of others they meet in cyberspace and there is also a possibility to alter their identities (Sherry, 1995). There is an opportunity for those with a low status in the real world to alter the social hierarchies established within cyberspace, and it has been hypothesized that victimised youths may take the opportunity to take revenge on bullies, or even take the role of bullies and victimize others (Espelage, Rao, & Craven, 2012).

6 METHODOLOGICAL PROBLEMS IN BULLYING RESEARCH

Operationalization and measuring
The understanding and meaning of the word bullying can differ greatly across countries and cultures, and a range of factors can influence the answers that are given on a question of bullying. These conceptual questions concerning bullying and how it should be measured in an appropriate way has been widely debated (Boyce et al., 1995).

There are usually two ways to measure bullying: Either using a pre-defined question or asking about specific situations of bullying, without explicitly using the word bullying. Both ways has its advantages and disadvantages. For example, using a clear definition might be needed to minimize room for subjective interpretations (Chida & Steptoe, 2009). However, children might use their own perspective regarding bullying instead of assimilate a pre-given definition (Sudak & Sudak, 2005). The two different assessment methods often results in different prevalence rates, where the specific measures of bullying behaviour results in higher bullying prevalence compared to pre-defined measure (Sawyer, Bradshaw, & O’Brien-nan, 2008).

Conceptually, traditional bullying and cyberbullying have a lot in common but there are also differences which can affect the operationalization and measurement of the two types of bullying. In traditional bullying, the repeated behaviour stated in the definition is often encompassed by the stricter cut-off point “2-3 times a month” or more often (Solberg & Olweus, 2003). However, we often see the lower cut-off (e.g., “once or twice”) in cyberbullying research (e.g. Beran & Li, 2007; Slonje & Smith, 2008) which also refers to the discussion of repetition in cyberbullying.
**Dichotomous or continuum**

Usually, bullying is measured dichotomously, meaning that the individual is either classified as a bully or not a bully, a victim or not a victim, a bully-victim or not a bully-victim. This way of classification simplifies analysing but may not reflect all levels and dimensions of bullying as research has shown that bullying can be placed on a continuum where other participant roles take part in the bullying process, beside bullies, victims or bully-victims. Such continuum perspective suggests that bullies may harass their peers sometimes in a more subtle and less frequent way, and that the students can be different and have multiple roles in bullying (Espelage & Swearer, 2003). Salmivalli and colleagues (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996; Salmivalli, 2010) have studied other roles including those joining the bully, also called “a bystander”, those who provide positive feedback to bullies, those who withdraw from bullying situations, and those who take the victims side. As regards cyberbullying and the bystander phenomenon, Slonje, Smith and Frisén (2012) studied the distribution of bullying material on the Internet and the motive of the distributors among students in grades 5-9. The students were asked if they had been shown or sent any type of information that was meant to cyberbully someone else and not them, and what they did with the information. The result showed that while almost a fifth of the students said they received such material, 6.0% reported sending or showing it to the victim in order to bully him/her even further. Although these bystanders can be seen as bullies, they may not see themselves as such. Thirteen percent made the victim aware of the situation (so called “defenders”).

**Self-reports**

There are both advantages and disadvantages to self-report. Questionnaires can be administered to a large setting with minimal costs, especially when using web-questionnaires, as no paper or scanning is needed. There is also the possibility of getting a more nuanced picture of the bullying behaviour in terms of different forms of bullying since the answers are not reliant on consent from others. It is also possible to link other individual characteristics to the given answers in order to better understand the issue of interest (Cornell & Bandyopadhyay, 2010). However, there are some limitations with self-reported bullying behaviour.
Firstly, there is the issue of the validity of the questions, as the reports depend on the students’ understanding of the questions, and it may be unpleasant for the student to remember certain situations. While some students may exaggerate their answers, and show “extreme answers bias” (Furlong, Sharkey, Bates, & Smith, 2004), others may minimize or even deny their involvement in bullying (Owens, Slee, & Shute, 2000). The reason for not labelling oneself as a victim or bully can partly be explained by the fact that bullying involvement may raise feelings of stigma and shame (Felix, Sharkey, Green, Furlong, & Tanigawa, 2011). In one study which interviewed girls, the respondents were inclined to deny that their patterns of behaviour were a form of bullying (Owens et al., 2000), which can be viewed as a form of bystander behaviour. From a cyberbullying perspective, it may be possible that the bystander does not perceive him or herself as a bully especially when the victim is not visible and no direct reaction is encountered. So, there is a risk that the bullying prevalence rates are either under-reported or over-reported. Using specific measures where the word bullying is not included may make it easier to report bullying, without having to label it as bullying. The disadvantage is, however, that it can be hard to separate bullying from other forms of peer victimisation or general aggression as not all of the traditional criteria for bullying are stated explicitly. However, there is always a risk of not capturing the forms of bullying behaviours that do not get included explicitly, either in a definition or in a list of behaviours.

Classifications
From a methodological point of view, it is important to clarify whether mutually exclusive types of bullying exposure or involvement are used or not. If groups are mixed (i.e. overlapping of different groups), there might be an interfering bias in the analysis that makes it hard to explore the “true” association for different types of bullying and e.g., mental health problems. The problem is highlighted in studies by Gradinger et al. (2009; 2011) and has been acknowledged in all statistical analyses in this thesis.

Another aspect is the classification of bully-victims. Olweus (2009) argue that the reason to distinguish between these two types of victims is because the “pro-active” victims may be “a winner” in the interaction and do not have much in common with “passive” victims in terms of psychological and social adjustment.
Causality or associations

The theoretical starting point in bullying research is usually that victimised children are characterized by features which invite and reinforce the attacks towards them (Egan & Perry, 1998). Numerous studies have shown that victims of peer victimisation and bullying are characterized as, for example, anxious, insecure, suffering from low self-esteem, lonely at school, internalizing and sometimes externalizing problems (Farrington, 1993; Gini & Pozzoli, 2009; Hawker & Boulton, 2000; Olweus, 1978; Olweus, 1997). However, the association may cover both directions, that is, displaying such behaviour could be a result of being bullied. Depressive symptoms and anxiety may also precede becoming a victim (Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006). The other way is that the experience of being victimised that lead to mental health problem, suggesting that being victimised is directly related to children’s internalizing problems. These associations are complex since they may be a consequence of being victimized, but there is also a possibility that low self-esteem and internalizing problems might predict increases in peer victimisation over time. Peers might view those children as “easy targets”.

7 THE “PREVENTIVE SCHOOL” PROJECT

The current thesis is based on the data from The Preventive School (PS) project. The aim of the PS project was to counteract the proposed negative spiral of mental health illness among youth by strengthen social relations among students and school staff, a corner rock in the process of improving mental health. The original idea of PS was born in light of a Swedish governmental commission considered to strengthen the alcohol and drug prevention activities in schools, cooperation between school and parents, and between the school and leisure organizations. In 2004, the Public Health Institute (FHI) who was responsible for the project invited two counties and their municipal elementary schools to serve as pilot counties (Skåne and Värmland). In Värmland, the municipalities Karlstad, Arvika and Sunne were invited to participate. As the goal with PS in Karlstad was to promote mental health among children and adolescents, the use of alcohol and drugs were considered hindrances for success. The way to reach this goal was considered to offer the schools different kind of programs and
methods including different approaches to help students solving either individual problems, or reach for all students at a universal level (Karlstad municipality, 2007). The programs\(^7\) and methods that were chosen by the school managers in Värmland were Social Emotional Training (SET), SkolKomet, and Motivating Interview (MI). Örebro Prevention Program (ÖPP) were already initiated in the schools, but was still considered part of PS.

In the summer of 2008 the Government gave FHI a renewed commission including 50 million Swedish crowns to distribute to six municipalities. The purpose of the new commission was to actively spread knowledge regarding the different ventures being used, and to be a continuation of the already completed part of the PS project conducted during 2005-2007. The announcement was made via the Public Health Institute's website and via different networks to reach out to the country’s municipalities. About forty municipalities of interest submitted an application. Karlstad was one of the six municipalities which were selected. Approximately half of the funds would be by agreement between the municipality and the university transferred to the extended university. Hence, the work with Karlstad municipality and PS was intensified in close collaboration with Karlstad University. Three more additional programs\(^8\) were included in this second round and made available for the school districts, i.e., RePulse and Active Parenting, and Classroom Management (FHI, 2011a). The specific aim with PS 2009-2011 was to promote the mental health among students with a particular focus on bullying.

CFBUPH have conducted repeated questionnaire surveys including measures of student health and health-related habits, as well as bullying and school environment. In addi-

\(^7\) SET is a Swedish manual based programs aiming at develop children and adolescents’ social and emotional ability and is based on emotional intelligence and social behavioural learning theories (Kimber, 2009) and inspired by e.g., Promoting Alternative Thinking Strategies (PATHS) (Anttila et al., 2010). “SkolKomet” is a Swedish manual based program which targets teachers in pre-school to Grade 9. The theoretical idea in SkolKomet is based on behavioral learning principles and that the adult must change their way to communicate and interact with the child. ÖPP (or “Effect”, as it is now called) is a parent oriented method aiming at prevent early onset of alcohol, reduce binge-drinking, an antisocial behavior and crime, among adolescents. Motivating Interviewing is a listening, goal oriented and client centered counseling method (Brown & Miller, 1993).

\(^8\) RePulse aims at individual students having problems controlling their impulsivity and is based a cognitive perspective where a destructive behavior is viewed as something that has been learned. By providing the child with tools to control the impulses it is believed to be enough to make the child change. Active Parenting aims at increasing parents’ awareness and the theoretical idea is developmental theory and perspectives on learning. When the parent changes behavior, the child will also change. Classroom management is based on social behavioral learning theory and on strength protective factors and reduces risk factors (Karlstad municipality, 2007).
tion, CFBUPH studies have included perceived school climate and attitudes to prevention and health-promoting work among teachers and principals, as well as experiences of bullying among school students and school health staff. CFBUPF has studied processes as well as outcomes. The projects members included one project leader and four doctoral students.

The aim of the research has been to provide material for following up and evaluating prevention and health-promoting interventions in PS, as well as to map children and adolescent mental health and study variation vis-à-vis socio demographics and changes over time.
8 PROBLEM SPECIFICATION AND AIMS
The Western societies are facing new challenges in the wake of mental illness. One protective factor against mental health problems is the experience of good social relations, while the opposite, negative social relations can be harmful for mental health and academic achievement among students. Although Swedish children and adolescents report relatively low bullying prevalence rates in comparison to other countries, bullying may nevertheless increase the risk of severe consequences on mental health, both in a short and long term perspective. New arenas for bullying including the Internet have changed the preconditions for bullying and harassments among adolescents. It is imperative to continue to increase our knowledge concerning bullying and in particular cyberbullying since it may take different paths than traditional bullying. Adolescents are seen as an especially vulnerable group due to bodily changes and transition into adulthood whereby this group is important to study. In addition, as todays’ adolescents have grown up with a variety of easily available technology, the phenomenon of cyberbullying may not be that surprising. However, it still increases the challenges for school because of its transcending nature. Schools health care serves as an important agency regarding bullying and mental health but less is known about how these professionals work with bullying in schools. These gaps in research lead to the overall aim with the current thesis.

Overall aim
The overall aim of this thesis is to study differences and similarities between traditional bullying and cyberbullying among adolescents with respect to gender, psychosomatic problems, and disabilities, and further gain knowledge about school health staffs’ experiences of bullying among school students.

The specific aims are:

Study I
To examine gender differences among adolescents involved in traditional bullying and cyberbullying.
**Study II**
To compare the association between mutually exclusive groups of cyberbullying and traditional bullying involvement and psychosomatic problems

**Study III**
To explore school health staff’s experience of bullying and their anti-bullying work among school students

**Study IV**
To study the associations between disability, bullying and psychosomatic health among adolescents, addressing two specific research questions: a) How is disability associated to different kinds of bullying? b) Does disability modify the association between bullying and psychosomatic problems among adolescents?
9 METHOD
Table 1 presents an overview of study aims, subjects and methods.

<table>
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<tr>
<th>Study</th>
<th>Aim</th>
<th>Study design</th>
<th>Study population</th>
<th>Analysis</th>
<th>Years of data collection</th>
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<tr>
<td>I</td>
<td>To examine gender differences among adolescents involved in traditional bullying and cyberbullying.</td>
<td>Cross-sectional population based study with questionnaire</td>
<td>Two surveys. School students Grade 7-9 n=3012</td>
<td>Binary and multinomial logistic regression analyses</td>
<td>Nov-Dec 2009 n=1,760 and n=1,252 =3,012</td>
</tr>
<tr>
<td>II</td>
<td>To compare the association between mutually exclusive groups of cyberbullying and traditional bullying involvement and psychosomatic problems</td>
<td>Cross-sectional population based study with questionnaire</td>
<td>School students Grade 7-9. Collapsed sample (2009-2010) N=3,820</td>
<td>Multinomial logistic regression analysis</td>
<td>Nov-Dec 2010 n=2004</td>
</tr>
<tr>
<td>III</td>
<td>To explore school health staff’s experience of bullying and their anti-bullying work among school students</td>
<td>Qualitative study with focus groups, semi structured questions (n=4)</td>
<td>School nurses and school social workers (n=16)</td>
<td>Qualitative content analysis</td>
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<td>IV</td>
<td>To study the associations between disability, bullying and psychosomatic health among adolescents: a) How is disability associated with different types of bullying? b) Does disability modify the association between bullying and psychosomatic problems?</td>
<td>Cross-sectional populations based study with questionnaire</td>
<td>School students Grade 7-9. Collapsed sample (2009-2010) N=3,820</td>
<td>Multinomial logistic regression analysis and linear regression analysis</td>
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9.1 Participants
**Study I, II and IV**

The first data collection in PS took place in November and December 2009 in Grades 7-9 (aged 13-15), with a participation rate of 82% (N=1,760). Eight of nine schools participated using a web-based questionnaire.

In addition, CFBUPH also worked together with four other municipalities besides Karlstad located in the north of Värmland who also conducted a health promotion project. For that project, a similar questionnaire to the one in the PS, also developed by CFBUPH, was used. The questionnaires included the same core questions on background and bullying which made it possible to merge the data samples. In the north of Värmland, 83% and 1,252 adolescents in Grades 7-9 participated. For the two samples combined, 15 schools and 3,012 students participated (50.1% girls), with a participation rate of 83%.
The second data collection for Grades 7-9 took place in November 2010, with a participation rate of 92% (N=2,004). All nine eligible schools participated. One school used printed questionnaires instead of the web-based questionnaire.

Data set (Study I, II & IV)
For study I, the data sample included the northern municipalities (n=1,252) and the 2009 PS sample (n=1,760), ending up with 3,012 students. In study II and IV, Grade 9 students from 2009, northern municipalities and Grades 7-9 from 2010 (n=3,820) were collapsed. By doing this, no student were included twice.

Study III
All school nurses and school social workers working in elementary school (aged 6-15) were invited to participate in the study. At time for the study, there were 16 eligible school nurses and 12 eligible school social workers employed at 21 schools in the municipality, all females. At every focus group occasion, one participant from each group reported illness which resulted in two focus groups with school social workers (n=4, n=3) and two groups with school nurses (n=6, n=3). All participants were about 30-60 years old. Those who choose not to participate declared lack of time as reason.

9.2 Data collection

Procedure study I, II and IV
The first year of PS included planning and preparation for data collections, i.e., constructing and preparing the web based questionnaire. At first stage, the schools’ preconditions for having access to computers when filling in the questionnaire were systematically mapped. Thereafter principals at the schools were contacted in order to schedule data collection. All preparations and planning were made in collaboration with the Children and Youth Administration (BUF) in Karlstad, operation managers, and initially also a reference group.

In all data collections adolescents in Grades 7 and 8 and their parents received written information such as rights to anonymity and the voluntary nature of participation. If they
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did not wish to participate, they were asked to inform their teacher. Due to the 9th graders higher age, information was only distributed to the students. However, the students were asked to bring home the information letter to their parents as well.

The students used the school computers to complete the questionnaire. In order to enter the questionnaire the students received a link and a randomly selected password generated by the computer program (Esmaker). A co-worker from each project was on site to inform and organize the data collection. The teachers were encouraged to stay in the classroom. The questionnaire took approximately 30-40 minutes to complete.

The procedure for data collection was the same in 2010 as in 2009. The only thing that was different was that one school used a printed questionnaire. The reason for this was that the school thought that this would make things easier for the students. The collection procedure was the same but the questionnaire was sent to be scanned in at Umeå University. The questionnaires were scanned on files and sent back to Karlstad University.

**Study III**

Focus group is a kind of data collection that is basically a way of listening to people and learning from them. A purposive sample is needed to generate productive discussions and the process may contribute to sharing and comparing among the participants. The group benefits from diverse perspectives and can maximize their compatibility and also the ability to make comparisons between groups in the analysis (Morgan, 1997).

**Composition of the focus groups**

The groups were chosen to be homogeneous in terms of which position they had: school nurse or school social worker. Homogeneity is commonly recommended in the literature in order to facilitate interaction and discussion. Participants perceiving each other as fundamentally similar can spend more time discussing the issues at hand, instead of explaining themselves to each other (Carey, 1994; Morgan, 1997). School nurses and school social workers also have different tasks, and the use of different terms or jargon was believed to negatively affect the flow of discussion. The participants were therefore divided into groups depending
on their schedule, resulting in two groups of school social workers and two groups of school nurses. The participants knew each other as colleagues or acquaintances.

**Group size in focus groups**

It is sometimes suggested that the number of participants in a focus group should be at least five, or sometimes even six to eight (Krueger & Casey, 2008). Due to the drop-out rate of school nurses and school social workers, it was not possible to reach that group size. There are different opinions regarding how to define a focus groups and when it should be called “group interviews”. According to Barbour and Kitzinger “*Any group discussion may be called a focus group as long as the researcher is actively encouraging of, and attentive to, the group interaction.*” (Barbour & Kitzinger, 1998).

**Procedure**

All school nurses and school social workers working in elementary school were first informed of the study via project colleagues working at BUF. Then they were contacted by the researcher via e-mail. The participants were divided into groups depending on their schedule and best time available. The sessions took place during daytime at Karlstad University between November 2011 and February 2012. The moderator (first author) led the sessions with help from a research colleague. A set of focus group guidelines was developed for the moderator, including an introduction to the meeting and probes designed to re-focus the discussion if necessary. The participants were *in situ* informed about the aim of the study, voluntariness, the right to terminate their participation, and agreement to the recording of the session. Thereafter they had the opportunity to ask questions and to fill in the informed consent form. After the digital audio recorder had been started, the first question was presented. The themes were followed up by questions without leading the discussion in any particular direction. When approximately 10 minutes remained and the discussion began to fade, the moderator asked the participants whether they felt that anything had been left out, or if they wanted to add something. The meeting lasted approximately 120 minutes, including pre-information (10-15 minutes).
9.3 Items, questions and instruments

Background variables

Study I and II and IV included background data regarding questions of gender (boy/girl) and Grade (7, 8, 9). Study I and II used the additional backgrounds questions about country of birth (“In which country were you born?”; “In which country was your mother born”; “In which country was your father born?”) with five response alternatives (“Sweden”; “Denmark, Norway, Finland or Iceland”; “Other country in Europe”; “Other country in the world”; “Don’t know”) and family structure. The variable “Family structure” was addressed with two questions. First, the participants were asked if they lived with both their parents. If so, they were asked whether they had always done so (“Always together with mother and father”) or lived with one parent at a time (“Mostly with my mother, sometimes with my father”; “Mostly with my father, sometimes with my mother”; or “About the same with mother and father, for example, alternating weeks”). There was no follow-up question if they answered that they lived with only one parent or no parent.

Study I included additional questions of mobile-phone ownership (“Do you own your own mobile phone?”) with response alternatives ”yes” and “no”; access to the Internet (“Do you have Internet in your home that you can use?”) with response alternatives “yes” and “no”; and number of computers at home (“How many computers does your family have at home?”) with four response alternatives (“none”; “1”, “2”,”3 or more”).

Self-reported bullying/victimisation

The questions on traditional bullying were taken from the Olweus Bully/Victim Questionnaire (OBVQ) (Olweus, 1996b). For the purpose of the current study, two global questions were used characterized by a definition, together with a question including the word “bullying” (i.e. “How often have you been bullied at school in the past couple of months?” and; “How often have you taken part in bullying another student(s) at school in the past couple of months?”). Five response alternatives were given (i.e., “I have not been bullied/bullied other students at school in the past couple of months”; “only once or twice”; “2 or 3 times a month”; “about once a week” and; “several times a week”). A definition of bullying used in
the Swedish *Health Behaviour in School-aged Children* (HBSC) questionnaire was included (Marklund, 1997):

We say a student is being bullied when another student, or a group of students, says or does nasty and unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she does not like. But it is not bullying when two students of about the same strength quarrel or fight. It is also not bullying when the teasing is done in a friendly or playful way.

The cyberbullying questions were adapted from Smith et al. (2008), and translated to Swedish by Slonje and Smith (2008). For the purpose of the current study, two global questions were used (i.e. “How often have you been cyberbullied in the past couple of months?”; and “How often have you cyberbullied other student(s) in the past couple of months?”), with the same response alternatives as for traditional bullying. The questions were introduced by stating that:

Cyberbullying is defined in the same way as traditional bullying (i.e. the definition used in Swedish HBSC, Marklund, 1997, author's note) but involves bullying through, for example, mobile phones (calls or text messages), photo/video clips, E-mail, Chat-rooms, Web-pages, Instant Messaging (i.e. MSN).

The recall period for the questions was the past couple of months. Hence, the student’s reference frame was the autumn term.

**PsychoSomatic Problem scale**

To measure mental health as an outcome, psychosomatic problems measured by the PsychoSomatic Problem scale (PSP scale) (Hagquist, 2008) was used in Study II and IV. This scale consists of eight single items: “had difficulty in concentrating”; “had difficulty in sleeping”; “suffered from headaches”; “suffered from stomach aches”; “felt tense”; “had little appetite”; ”felt sad”; and “felt giddy”. The response categories for all of these items were “never”, “seldom”, “sometimes”, “often” and “always”, referring to the last school year. Psychometric analyses based on the Rasch model (Rasch, 1960/1980) justified the summation of raw scores. A high value on the PSP scale indicates more psychosomatic problems. The PSP scale has shown high reliability and invariant properties, making it useful for measuring psychosomatic problems in general populations of adolescents (Hagquist, 2008). Two
items, “felt sad” and “stomach ache”, showed Differential Item Functioning (DIF) across genders; meaning that these two items worked differently for boys and girls. Given the same location on the PSP-scale, girls tended to score higher than boys on these particular items. Since DIF violates measurement requirements of invariance, DIF was resolved by splitting both items into one item for boys (leaving girls a missing value) and one item for girls (leaving boys a missing value). Rasch-analysis of the PSP-scale was conducted using the software RUMM 2030. For a descriptive introduction of Rasch analysis, see Hagquist, Bruce and Gustavsson (2009). Table 2 shows the scale distribution among adolescents in the PS project.

Table 2. The PSP scale distribution among adolescents (N=3,820).

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Valid</strong></td>
<td>3723</td>
<td></td>
</tr>
<tr>
<td><strong>Missing</strong></td>
<td>97</td>
<td></td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>-1.20612</td>
<td></td>
</tr>
<tr>
<td><strong>Std. Error of Mean</strong></td>
<td>.023211</td>
<td></td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>-1.08800</td>
<td></td>
</tr>
<tr>
<td><strong>Std. Deviation</strong></td>
<td>1.416228</td>
<td></td>
</tr>
<tr>
<td><strong>Variance</strong></td>
<td>2.006</td>
<td></td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>-.187</td>
<td></td>
</tr>
<tr>
<td><strong>Std. Error of Skewness</strong></td>
<td>.040</td>
<td></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>9.371</td>
<td></td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>-4.954</td>
<td></td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>4.417</td>
<td></td>
</tr>
</tbody>
</table>

**Disability**

To measure disability in Study IV, a single question asking if the adolescents had a disability (response categories “yes” and “no”) together with a definition was used:

By disability we mean that you have, for example, impaired movement, dyslexia, impaired vision or hearing, or any other similar condition which might make things hard for you, either in or outside of school. It may also mean that you have ADHD, epilepsy or diabetes.

**Interview guide study III**

The interview guide to Study III was based on three main questions, followed up by clarifications and further questions, depending on the discussion.

What have you experienced in terms of bullying among school students?

What are your experiences with those involved in bullying?

What is your experience of bullying prevention in schools?
9.4 Data analysis

Study I, II, IV

Bullying classifications were based on four global bullying questions and the answers to these four questions were classified into unique and mutually exclusive groups. If a student had indicated any type of bullying involvement, he or she was assigned a number ending up with 15 different exclusive bullying groups. Similar classifications are used by Gradinger et al. (2009). Table 3 shows an example of the classification process were 1 indicates no bullying behaviour and 2 indicates, bullying behaviour.

Table 3. Classification process – example of pattern of answers indicating a unique numerical series

<table>
<thead>
<tr>
<th>ID-number</th>
<th>Traditional bully</th>
<th>Traditional victim</th>
<th>Cyber-bully</th>
<th>Cyber-victim</th>
<th>Classification</th>
<th>numerical series</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>Cybervictim</td>
<td>1112</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>Cyberbully</td>
<td>1121</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>Traditional victim</td>
<td>1211</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Traditional bully</td>
<td>2111</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>Traditional bully-victim</td>
<td>2211</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>Traditional bully, traditional victim and cyberbully</td>
<td>2221</td>
</tr>
</tbody>
</table>

In all the current quantitative studies, contingency tables were presented to show frequencies and percentages over the samples’ characteristics and bullying involvement rates. The categories traditional victims, cybervictims, traditional bullies, cyberbullies, traditional bully-victims and cyberbully-victims were the main categories being analysed.

For the data collection of 2010 (n=2,004), any questionnaires considered not to be serious were excluded from our analyses (n=23).

Study I

Associations between gender and the categories traditional victims, cybervictims, traditional bullies, cyberbullies, traditional bully-victims and cyberbully-victims have been analysed with multinomial regression analyses estimated by B (exp.) interpreted as odds ratios (OR) with a 95% confidence interval (95% C.I.). Statistical Package for the Social Sciences (SPSS) for Windows (version 18.0, 19.0 and 20.0) were used for the analyses.
**Study II**

Associations between bullying involvement and psychosomatic problems have been analysed with multinomial regression analyses estimated by relative risk ratios (RRR) with a 95% confidence interval (95% C.I.). In order to take school clustering effects into account, robust standard errors were calculated by multinomial regression analyses performed using STATA 11.2 software.

In order to specifically contrast the extreme groups of the PSP scale distribution, individuals located at/above the 75th percentile was compared with individuals at/below the 25th percentile. Further, in order to examine differences between bullying groups, an ANOVA-test was conducted, comparing the mean PSP-scores for traditional victims and cybervictims. To formally test if there was a significant difference in relative risk ratios between different bullying groups, $Z$-scores was calculated manually ($Z_{\text{diff.}}=\frac{\log\text{odds ratio}_1-\log\text{odds ratio}_2}{\sqrt{\text{SE}_1^2 + \text{SE}_2^2 - 2\times\text{Cov.}}}$).

For tentative purposes, an ordinary linear regression was conducted using the original PSP-scale without any categorization. Variables for traditional- and cybervictims, traditional- and cyberbullies and control variables (gender, grade, family structure, country of birth) were constructed and analysed using dummy-regression coding. The linear regression analysis was conducted using the SPSS 20.0 software.

**Study III**

The data in study III were analysed with content analysis as described by Graneheim and Lundman (2004). It was considered to be a suitable method for analysing the data because it can be applied to data with variable depths. Content analysis aims at describing the phenomenon as it is and does not need pre-existing theoretical or philosophical commitment (Sandellowski, 2000). The analysis approach was inductive since there was not much prior knowledge concerning the research question. In contrast, a deductive approach aims at testing a theory (Elo & Kyngäs, 2008). The analysis method helped in structuring the text and abstracting the data at a manifest level (Graneheim & Lundman, 2004).

Data were transcribed verbatim by the researcher. All texts from the focus groups were at first read through to grasp their content. At stage 1, the author identified the mean-
ing units describing the participants’ experiences within the different topics. This could be sentences, phrases or words. In stage 2, the meaning units were condensed and shortened without losing their message. In stage 3, each condensed text section was labelled with a code representing its content, without changing or adding words. At this step, the material was presented to external researchers in order to discuss the preliminary findings and increase the credibility of the analyses. The codes were then put into preliminary categories and/or subcategories. In step 4, the subcategories were categorized into categories. Quotations were presented in the result sections in order to confirm the categories and subcategories appearing in the analysis. Internal validity was also increased by critically discussing the results with other colleagues.

**Study IV**
Associations between disability and different unique bullying groups were analysed with multinomial regression analyses estimated by B (Exp.) interpreted as Odds Ratios (OR) with a 95% confidence interval (95% C.I.). Further, in order to study if disability modified the association between bullying involvement and psychosomatic problems (dependent variable), linear regression analysis using the original PSP-scale without any categorization were used using dummy-regression coding. In order to reach the most parsimonious model that fit the data various nested models were compared with each other, e.g., models including interaction terms were compared with the model including only main effects, (i.e., gender, grade and disability). If the difference in the likelihood ratio Chi² statistic between the models was not significant ($p<.05$), the simpler model was chosen. All regression analyses were adjusted for gender and grade. All analyses were conducted using the SPSS 20.0 software.

**9.5 Ethical considerations**
Ethics were considered throughout all parts of the project and studies. All information letters stipulated the aim of the study, the voluntary nature of all respondents’ participation, their right to withdraw at any time, as well as assurances of anonymity and confidentiality. An application was sent to the regional committee of ethics, but since the data collections did not include sensitive personal data, the project was not regulated by the Swedish act con-
cerning Ethical Review of Research Involving Humans. Only an advisory statement was provided concerning informed signed consent regarding Grade 4 and 5 (Dnr. 2009/623). A separate ethics application for the focus groups study was sent to the local committee and was reviewed without any objections (Dnr. 2010/707).

**The PS project**

The requirement of confidentiality was followed using anonymous questionnaires for students. Despite that there is always a risk that a participant may recognize her/his own characteristics in a study. Since most of participating students were below the age of 15, regulations required that both students and parents were informed of the study. If the parents did not want their child to participate (or the student did not wish to) they were asked to inform the teacher. Students in Grades 7 and 8 received two information letters, one to themselves and one to the parents. Parents of students in the 9th grade did not receive an information letter because of the students’ age, although the students were asked to take home the information letter to their parents. With this procedure, there is a risk that the information did not reach all parents. This is a general problem, but due to the anonymous character of the questionnaire and the age of the students in Grades 7-9, we judged this not to be a problem. Regarding data collection in schools, we considered throughout how we could make the students feel sure that their answers would remain anonymous. Firstly, we encouraged students to ask us to explain questions in the questionnaire if they did not understand, without answering the questions for them, which teachers were also instructed to do. For that we had a printed questionnaire so that students could point to questions of concern, without showing us their answers on the computer screen. The students were also informed that they could contact the school nurse if they felt like talking to someone after answering the questionnaire.

**The focus group study**

In accordance with the confidentiality requirement, names and schools were deleted in the results section to reduce the risk of recognition. Some quotations were also not used if they could lead back to the respondent.
10 MAIN RESULTS

- Discrepant gender patterns of involvement in traditional bullying and cyberbullying: There were only small, if any, gender differences among traditional victims, but girls were more likely than boys to be cybervictims. Secondly, whereas boys were more likely to be traditional bullies, girls were equally as likely as boys to be cyberbullies. Boys were more likely to be traditional bully-victims, while girls were more likely to be cyberbully-victims.

- No statistically significant differences in psychosomatic problems were found between cyberbullying and traditional bullying, either for victims or for bullies. Although, all bullying groups were associated with more psychosomatic problems, and the strongest association were found for bully-victims.

- Three main categories concerning school social workers and school nurses experience of bullying in school emerged from the qualitative content analysis: 1) “Anti-bullying team”. 2) “Working style”, comprising two sub-categories, “Team member” and “Single worker”; and 3) Perspectives on bullying”, comprising two sub-categories, “Contextual perspective” and “Individual-oriented perspective”.

- Showed a strong association between disability and being a bully-victim, in particular for being a combined bully-victim, i.e., to use and be exposed to bullying both in traditional terms and via the Internet. We found no associations between bullies and disabilities. Girls with disabilities were more likely to be victims, compared to girls without a disability. No associations appeared for disability and bullies. The analyses did not show that disability modifies the association between bullying and psychosomatic health.

Study I

The result showed that bullying is an overlapping and complex phenomenon (see the Venn diagram in Study I). From the original 3,012 subjects, 845 had been involved in bullying in some way. The largest group of adolescents involved in bullying was found among tradition-
al bullies, which comprised almost six times as many adolescents as the group of cyberbullies.

The results from the multinomial regression analyses showed discrepant gender patterns of involvement in traditional bullying and cyberbullying. First, while there were only small, if any, gender differences among traditional victims, girls were more likely than boys to be cybervictims when occasional cyberbullying was used as a cut-off point. Second, whereas boys were more likely to be traditional bullies both at the lower (OR 0.6) and the higher cut-off point (OR 0.3), girls were as likely as boys to be cyberbullies. Further, girls were more likely to be cybervictims at the lower cut-off point (OR 2.0), but not at the higher cut-off point. Regarding bully-victims, we conducted binary logistic regressions due to too few observations. The result showed that girls were more likely than boys to be cyberbully-victims (OR 3.4). The odds ratio for boys, on the other hand, was 0.18 for being traditional bully-victims.

**Study II**

The multinomial regression analyses showed that psychosomatic problems were significantly associated with all types and groups of bullying. All analyses were repeated at the 90th vs the 10th percentile, but since the observations in some cells were too small to estimate adequate risk ratios, only analyses using the 75th - 25th percentile were presented.

In order to formally test for differences between the relative risk ratios (RRR) between different groups, a z-score were calculated. If the z-score is above 1.96, the difference is statistically significant at the 95% level. The main findings showed no significant difference at the 95% level between traditional victimisation and cybervictimisation ($z = 1.36$). This was also confirmed by the ANOVA test. Interestingly, there was no significant difference in psychosomatic problems between cybervictims and cyberbullies ($z = 1.37$). Bully-victims showed - in line with previous literature - significant difference from most other groups.

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9 The ANOVA showed, in accordance to the calculations of differences between risk ratios, no difference between traditional victims and cybervictims (mean difference -.296, std. error .190, p<.720, C.I (-.798-.206).
In addition, tentative analysis using ordinary linear regression was conducted which confirmed the general pattern from the logistic regressions analyses: all groups of bullying involvement showed significantly higher levels of psychosomatic problems compared to non-involved, even after adjustment for gender, grade, family structure and ethnicity.

**Study III**

Three main categories emerged from the analysis: 1) “Anti-bullying team”; 2) “Working style”; and 3) “Perspectives on bullying”. “Anti-bullying team” describes the organizational formalization of anti-bullying work at school. The term “Working style” indicates the different roles played in the school’s anti-bullying team and in general preventive work. This category comprises two sub-categories: “Team member” and “Single worker”. “Team member” is characterized by more interdisciplinary work and more involvement in the school’s general prevention activities, often at a universal level. Team members are often part of the school’s anti-bullying team. The single workers’ contact with students is primarily individual, and their work is characterized as less interdisciplinary, although some wish to work more interdisciplinary but are restricted by their work. Most single workers do not participate in the anti-bullying team. However, they play a supportive role on the sidelines. They aim at being a neutral player and at conveying to students the idea that they take nobody’s side in a bullying situation. Finally, “Perspectives on bullying” encompasses the different views of what gives rise to bullying and how bullying should be handled. This category comprises two sub-categories: the “Contextual perspective”, where roles played and status apportioned are seen as leading causes of bullying; and the “Individual-oriented perspective”, where students’ individual difficulties are viewed as giving rise to their involvement in bullying situations.

**Study IV**

Among boys (n=1,858), 18.0% reported “yes” to the disability question, as compared with 18.5% of the girls (n=1,942).

The multinomial logistic regression analyses including mixed victims, bullies and bully-victim (with no bifurcation into traditional bullying or cyberbullying) showed that having a disability was significantly associated with being a bully-victim (OR 1.7, p=<.000). Further,
disability was significantly associated with being a mixed victim (OR 2.8, \( p < .000 \)). However, having a disability was not significantly associated with being a mixed bully in any of the analyses.

In the second multinomial logistic regression, analyses were conducted separated for boys and girls, with the odds ratios of bullying for disabled students being compared to that of non-disabled students. The result showed that having a disability was significantly associated with being a combined bully-victim, regardless of gender (\( p < .000 \)). Additional, refined analyses based on grade and gender showed that boys with a disability in Grade 8 were more likely to be traditional bullies. When analysing the 9th Grade, girls with disabilities were shown more likely to be traditional bully-victims, combined bullies and combined bully-victims, compared to girls without a disability. However, these significant associations can be due to small group sizes and should be interpreted with caution.

The linear regression analysis including different bullying groups as independent variables and psychosomatic health problems as outcome measure showed that, based on a main effect model and a model including interaction terms, having a disability and being a victim, bully, combined bully-victim and non-combined bully-victims were independently associated with psychosomatic problems. The relationship between bullying and psychosomatic problems was not modified by the presence of disability. None of the interaction terms showed significance (victim \( \times \) disability \( p = .896 \); bully \( \times \) disability \( p = .987 \); combined bully-victim \( \times \) disability \( p = .222 \) and non-combined bully-victims \( p = .491 \)). This pattern was confirmed by the incremental F test (F change = .538, F sig .708) comparing the main effect and models with interaction terms.

11 DISCUSSION

The overall aim of this thesis was to study differences and similarities between traditional bullying and cyberbullying among adolescents with respect to gender, psychosomatic problems, and disability, and to gain further knowledge about school health staff’s experiences of bullying among school students. There were two different points of departure in the present studies; three of the four studies (I, II and IV) are similar in that they are based on adoles-
self-reports and the conclusions drawn are based upon their answers. The question is whether these results can be generalized to a similar population? It is likely that other 13-15 years old adolescents in Sweden would report approximate answers. The results from Study III need to be tested with population-based, quantitative measures in order to confirm the qualitative results.

So, what does the present thesis add to existing knowledge? Firstly, we know from previous research that there are gender differences in bullying. Boys, as compared to girls, are more likely to be involved in physical bullying as bullies and as bully-victims, whereas girls tend to use non-physical means to bully (Wang et al., 2009). However, we know less about the gender patterns of cyberbullying, as previous research has shown inconsistent results. Some studies have found that boys are more likely to be more involved in or exposed to cyberbullying, mostly as bullies (Wang et al., 2009), and still others have found that girls are more likely to be exposed or involved (Kowalski & Limber, 2007), and others have found no gender differences (Smith et al., 2008). In addition, few studies have studied mutually exclusive groups or compared different groups of traditional bullying and cyberbullying. My first study adds to the existing body of knowledge through the application of mutually exclusive groups and by showing that girls are more exposed to, and involved in, cyberbullying compared to boys. Secondly, a large body of literature has established the association between bullying and mental health; cross-sectional as well as causal inference studies have shown that bullying can predict mental health problems (Fekkes et al., 2006). It has been argued that cyberbullying would be more damaging to mental health than traditional bullying (e.g., Campbell, 2005), but the empirical evidence is scant. Study II adds to the existing knowledge by examining different, mutually exclusive forms of bullying behaviour and showing that all forms of bullying are associated with increased psychosomatic problems. There was no difference found between traditional bullying and cyberbullying as regards to psychosomatic problems. Thirdly, surprisingly few studies have been conducted concerning the role of school health staff and their work with, and experiences of, bullying- especially in a Swedish context- although we know that they often deal with students involved in bullying. By using focus groups, Study III lends a contextual picture to the students’ answers, a pic-
ture provided through the experiences of school health staff when dealing with bullying in school and their bullying-prevention work. Fourthly, the association between disability and bullying is well supported in the literature (e.g., Olsson et al., 2013), as are the associations for disability and mental health (e.g., Bosk, 2011), and bullying and mental health (Gini et al., 2009). However, less is known about cyberbullying and disability, or if students with disabilities suffer from more psychosomatic problems compared to adolescents without a disability, i.e., if disability modify the association between bullying and mental health. As far as we know, this is the first study to use a population-based sample in examining both traditional bullying and cyberbullying among students with disabilities. It adds to existing knowledge by showing that disabled adolescents are more likely to be combined bully-victims as compared to their non-disabled counterparts. However, similarly to Sentenac et al. (2012) disability was not found to modify the association between bullying involvement and mental health.

The central research question addressed were whether there were any differences between cyberbullying and traditional bullying; and this was in fact shown in terms of differences in gender, and to a lesser extent in terms of disability, but not as far as mental health outcomes were concerned. Due to recent amendments to the Swedish Education Act, the reorganization of school health-care has becomes a point of particular interest. The student-based studies indicated that the various forms of bullying are associated with different characteristics. From a health-staff perspective, these differences are worthy of attention and may prove useful in detecting vulnerable students.

**The public health consequences of bullying**

Swedish bullying rates are relatively low, which was confirmed by the current studies. However, given that about 10% or more of school students are occasionally involved in, or exposed to, some type of bullying behaviour, either online and offline, and given the severe consequences that bullying may have on an individual’s mental health and on society in general, bullying must be considered a public-health issue (Feder, 2007). Results from Study II showed that all types of bullying behaviour are associated with more psychosomatic problems, and Study IV showed that bullying is a rather common phenomenon among adoles-
cents with a disability. Hence, these adolescents may be at greater risk of future mental health problems. Importantly, a particularly vulnerable category is the bully-victim. The results show that bully-victims are more likely to have a disability that they also report more psychosomatic problems, which has been shown in other studies as well (e.g. Kaltiala-Heino et al., 2000; Sentenac, Gavin et al., 2012). As these students may suffer from several difficulties, they may, from a long-term perspective, experience more severe mental illness, making achievement in school more difficult. In a similar vein, adolescents involved in or exposed to multiple kinds of victimisation, such as both traditional bullying and cyberbullying, may be experiencing greater difficulties (e.g., Gradinger et al., 2009).

It is possible that we are underestimating the total burden of peer victimisation and bullying. As Hellström, Beckman and Hagquist (2013) have shown, using only a measure for bullying may fail to capture many victims of peer victimisation. Many adolescents are exposed to repeated peer aggression without considering themselves to be victims of bullying. Hence, theoretically, the total burden of peer victimisation may be underestimated. This becomes an even more serious problem when looking at the results from another study by Hellström, Beckman and Hagquist (2013) which showed no differences in psychosomatic problems between bullying and peer aggression victimisation. If we underestimate peer victimisation prevalence rates, we underestimate the problem as a whole and thus the time and economic resources that should be devoted to the problem.

It has been argued that possible reasons for an individual not admitting to being a bully or a victim in self-reports may include labelling (Link & Phelan, 2001; Thornberg, 2011) and feelings of stigma and shame (Felix et al., 2011). Being negatively labelled as different can be devastating for the victim’s social identity at school, leading to exclusion from the group, culture or society and to stigmatisation (Link & Phelan, 2001). From a public-health perspective, stigmatisation is a major problem for a large number of people. The stigmatisation process is, however, complex: the bullying behaviour may be one aspect, but the consequences of the bullying, or the reasons for the bullying (such as mental health problems or a disability) may per se become a stigma.
Cyberbullying and traditional bullying

Although the cyberbullying research field has grown in the past few decades it is still in its infancy, as the Internet arena and other cyber-tools are constantly changing and developing, and become more nuanced and integrated into our daily lives. The rapid development of ICT makes this an even more important arena to study. Parents and schools, face new challenges, since situations initiated outside school hours may become manifest in school. One might indeed be forgiven for thinking that cyberbullying has not reached its plateau, despite studies such as the present one showing that traditional bullying is still more common than cyberbullying (see also Slonje & Smith, 2008; Slonje et al., 2012), we might assume that cyberbullying has not reached its plateau. However, since nearly already 90% of adolescents use Internet-based tools, it is likely that the prevalence rate will not rise that much; instead there is a risk that the behaviour online will become more inventive and thus more harmful.

It is too early to say how, or if, we are being affected by the new communication media. There have been theoretical attempts to explain how cyberbullying can affect mental health (e.g., Campbell, 2005; Kiriakidis & Kavoura, 2010), but some of these attempts have been shown to be lacking, as new research provides us with more knowledge. In Study II, no difference in psychosomatic problems appeared between cyberbullying and traditional bullying, which is contrary to what has been suggested. Interestingly, Ortega et al. (2012) actually found the reverse: students exposed to or involved in cyberbullying actually reported less anger, fewer negative emotions, and less defencelessness and embarrassment compared to those exposed to, or involved in, traditional bullying. The authors suggest that students experiencing cybervictimisation have a greater sense of control over what is happening than victims of traditional forms of bullying. It is also possible that bullying and aggression on the Internet has become normalized behaviour. Furthermore, despite the potentially wide audience in the cyber context, cyberbullying can be perceived as a distant phenomenon, given the absence of face-to-face confrontation with the perpetrators. As Smith et al. (2008) found in focus groups, some kinds of cyberbullying do not seem to be considered as serious as traditional bullying among students, “because you are not hurt physically and can take avoiding action so far as messages are concerned.” (Smith et al., 2008, p.383).
There are empirical indications that the experience of cyberbullying are not as straightforward as earlier discussion would have us believe. It is also important to remember that the interpretations of the effects of cyberbullying have been made by adults who may not have a full understanding of the cyber-world, nor of its risks and possibilities; and that, since today’s adolescents live much of their social life in the virtual world, they might well respond no differently to online situations as to offline. However, as mentioned, there seem to be subtle differences between the various kinds of media technologies used to harass others (Smith et al., 2008), which needs to be further studied.

The two cases described in the introduction section (the Instagram case and beauty contest) give an indication as to how the Internet, behind the scenes, can dull us to others’ feelings. There is a possibility that the bully feels less empathy for the victim when not seeing his or her facial expressions (Slonje & Smith, 2008). The cases described also both include girls as main characters. The gender aspect corresponds to the results in Study I, showing that girls were more likely to be exposed and involved in cyberbullying behaviour compared to boys. Although the results show rather modest odds ratios even when using the occasional cut-off, these are still interesting findings, especially when interpreting them in light of Internet habits and usage, and within the framework of socialization and friend networks. Although there are still gender differences in Internet usage (The Swedish Media Council, 2010), an alignment tendency has been reported both nationally (The Swedish Media Council, 2010) and internationally (Gross, 2004; Livingstone et al., 2011). This may not be that surprising. The same tendency in gender alignment has been reported in other externalized behaviour as well, such as alcohol drinking and smoking (Danielsson, Wennberg, Hibell, & Romelsjö, 2012).

Female adolescents have been shown to report higher levels of poor mental health (Hagquist, 2010a). The reasons for this are yet unclear, but given the argument that girls may be more vulnerable to mental-health risk factors (bullying behaviour, alcohol drinking, etc.) than boys, an increased involvement or exposure to such behaviour may possibly increase the risk of additional mental health problems. Furthermore, Study IV showed that girls with a disability were more likely to be a victim, while no association was found for cybervictims.
and disability. One possible explanation for this may be that students, and in particular girls, with a visible disability may be more exposed to “face-to-face” peer victimisation in school. It could be that a visible disability provokes or scares other students, who react with impulsive verbal acts. This might be experienced more among girls due to normative beliefs regarding behaviour and looks, and be less of a problem for boys. From another perspective, it may be that students with a disability are more vulnerable and feel more exposed to the gazes of others than students without a disability. They may feel themselves to be a victim and thereby become one (Sentenac, Gavin et al., 2012).

This part of the discussion leads us to the question: Are cyberbullying and traditional bullying conceptually the same or different phenomena? My results show that traditional bullying and cyberbullying are different in some aspects and similar in others, although, the differences are not that large. The real differences seem instead to be in the type of bullying, and perhaps the amount of exposure or involvement. For example, disabled adolescents were more likely to be combined bully-victims, and bully-victims were shown to experience more psychosomatic problems. Based on my results and previous literature, I would suggest that traditional bullying and cyberbullying are rather two sides of the same coin, albeit that cyberbullying may require different definition criteria, as has been discussed by Menesini et al. (2012).

**Preventing bullying**

The bullying phenomenon is not new. According to theories such as those to do with social hierarchy, social ranking and status, this is an inherited human behaviour (Gilbert, 2000). Some would argue that nothing can be done about bullying and that it will always exist wherever there is human interaction. However, studies have shown that bullying behaviour in schools can be reduced by actively combatting it (Ttofi & Farrington, 2011). It has also been shown that school climate is associated with bullying behaviour in schools, meaning that where there is a possibility of working towards a more positive school climate, bullying rates and other externalized problem behaviour can be reduced (Thapa et al., 2013).
Because bullying is a complex phenomenon and stems from different sources, it may be argued that schools should use different approaches to combat different types of bullying, i.e., traditional bullying and cyberbullying. However, owing to the fact that the two forms of bullying share similarities and the fact that there is a considerable overlap between them, generic interventions aimed at combatting bullying in general have also been shown to be successful in reducing cyberbullying (Cross, Li, Smith, & Monks, 2012). This has received empirical support in Finnish schools (The KiVa program) (Salmivalli & Pöyhönen, 2012) and in Sweden (Englund, 2011).

As found in Study III, both individual and contextual factors influence bullying behaviour. And both dimensions may be equally difficult to do anything about. The individual-oriented perspective can turn bullying into a contextual problem, as well as medical, as the individual’s behaviour may be reinforced by the surrounding environment. Parents, peers and staff may be part of denormalising behaviour; hence, self-stigmatisation may occur on the student’s part and the surrounding environment may be less tolerant. Interestingly, Study IV also indicated that disability played an important role in bullying. However, this was most clearly seen among the bully-victims, supporting the results from Study III indicating disability to be an important aspect of bullying. I believe there is an important distinction to be made between bully-victims and bullies, as there was no association found between bullies and disability. As bully-victims seem to suffer disability more frequently, and report more psychosomatic problems, we need to highlight this group of adolescents.

Although schools have a responsibility to do something about bullying or harassment that has started outside school, if the involved students have a connection with the same school (such as cyberbullying incidents) parents must also play their part. They, as well as teachers, should be educated about cyberbullying (Mishna et al., 2011). According to the EU-kids online survey (Duerager & Livingstone, 2012), restrictive parental mediation reduces online risks, but it also reduces children’s online opportunities and skills. Furthermore, through active parental mediation (i.e., talking to the child, staying nearby, encouraging the child to explore the Internet) children’s Internet usage was found to be associated with a
lower risk of harm. Further, it was found that parental technical mediation, such as using a filter, did not reduce online risk encounters.

School staff are challenged in many ways. The challenges of working together in the same direction and bringing together different perspectives are discussed in Study III. Study III indicated the importance of the role of the family – as both a risk factor as well as a buffering factor for bullying involvement, which is also supported in the literature (e.g., Barboza et al., 2009). Another significant group of adults, who are not studied in the current thesis but who must nevertheless be highlighted, are teachers. In order to achieve effective preventive and health-promoting activities, a variety of adults and a broad collaboration between personnel, including teachers, is needed (Anderson-Butcher & Ashton, 2004). Frey et al (2005) suggest that the role of school health staff in this context should be to support the teacher as the primary interventionist, rather than the sole provider of direct services.

The Preventive School project was shown to represent a valuable input for many schools in their organization. The essential contribution of the PS was to let schools choose which program they considered most suitable for their purposes. Although some principals voiced the opinion that the PS was controlled from the top, a majority of those who received competence training within the different programs were pleased and saw the benefits for their school. In this way a municipality takes charge of its health promoting work. The work of combatting bullying is important in socializing children away from engagement in aggressive behaviour (Barboza et al., 2009; Underwood et al., 2001). It also shows a united front against bullying behaviour. However, while starting up a project may be a good initiative, there are some challenges. Firstly, the word “project” has a negative connotation, as it implies a time limit; instead, such interventions are best integrated into a school’s every-day activities. Secondly, experience from the PS project shows the importance of letting principals and teachers feel that measures are chosen according to a “needs inventory” and that the decision to use certain programs to improve children’s health is not a top-down decision. None of the current schools choose a bullying prevention program; instead most of the programs were aimed at improving social relations, both among students and between teachers and students.
Methodological discussion

Data collection
During the data collection we strived for high standard procedures by letting all project members follow a protocol with instructions on what to say and what to do. According to Cross and Newman-Gochar (2004), lack of standards for classroom administration, or if the administrator feel uninspired when conducting the study, the result may be affected in a negative way: there may, for example, be a larger internal dropout.

Considering the circumstances when we conducted the first data collection in the winter of 2009, i.e., just a few weeks before the Christmas holidays and with limited numbers of computers in most schools, the participation rate must nonetheless be considered relatively high – 82% and 90%. Nevertheless, we revisited the schools many times in order to capture those students who had been absent during the ordinary session. The participation rate and the population-based design of the project increase the external validity, and the results may be generalized to similar groups.

Did the drop-out affect the results? The question can be stated thus: Which students did not participate, and why? Was it those who usually skip school? If so, are they at particular risk of mental-health problems? Are they victims or bullies? If so, we are probably dealing with an underestimation of prevalence rates regarding poor health outcomes and bullying. Based on information from teachers and principals, the major factor in the drop-out rates seemed to be influenza. If that was the case, there is a substantial random component in transmission, and this would suggest that it was not the same students missing in the different surveys.

The questionnaire
The main difference between the sample in 2009 and 2010 was that one school was allowed to use a paper questionnaire instead of the web-based one. The literature does not provide many studies comparing web questionnaires and paper questionnaires, at least not among adolescents in a school setting. One Swedish study conducted among adults found that compliance (willingness to answer questions about lifestyle and health) was higher for the web questionnaires than for printed questionnaires (Bälter, Bälter, Fondell, & Lagerros,
2005). However, we did not find any obvious differences in internal drop-out, hence we do not think that using different types of questionnaires affected the students’ perception nor the results since the procedures were similar in all other aspects.

One limitation is that the questionnaire was not pre-tested among Grade 7-9 students; only among Grade 4-5 students (many of the questions were similar). However, we checked how the students perceived the questions by writing down every query that the students had about the questions, i.e., which question they did not understand and why they did not understand it. Thereafter, we systematically went through responses from students in all classes and identified patterns in questions and tried to elucidate why they were problematic. This may be viewed as a form of checking face validity. We also went through all questionnaires in order to look at answer patterns. Based on this information, we added, improved and removed some questions for the 2010 questionnaire.

In the 2009 questionnaire, as compared to the 2010 one, there were no filtering function for the questions on bullying, meaning that the students had to answer a rather comprehensive battery of questions if they had not been bullied themselves (they then had to tick in the box “I have not been bullied/bullied others” for every question). It was assumed that this would increase the internal drop-out. The internal drop-out analysis showed that there were a larger proportion of boys who had skipped these questions, compared to girls (mean 5%) across the four global bullying questions. The largest dropout had to do with questions regarding the bullying of others, both with regard to traditional bullying and cyberbullying, and across both genders. In the 2010 sample, the mean internal drop-out on bullying questions decreased to 3%. Moreover, both studies were conducted in the autumn term. As a means of capturing school-related bullying, when the students interact with their peers, this approach is fruitful. However, if the study had been conducted during summertime, it is possible that the rates of cyberbullying could have risen, if those students who are frequently victimised continued to be victimized.

**Bullying items**
As bullying is a major topic, we reviewed the literature in order to find the “optimal” bullying questions. The “Olweus bully/victim questionnaire” was considered to be in common
use, internationally accepted and validated (Kyriakides, Kaloyirou, & Lindsay, 2006). In addition, questions regarding cyberbullying were used from the Smith et al. (2008) study, which was translated into Swedish by Slonje and Smith (2008). Some limitations were experienced: Second, as regards the questions about cyberbullying, there were no questions asking about different types of cyberbullying, meaning that the measure became rather “blunt” and unspecific. Cyberbullying can include both text messages and video clips, which have been shown to be perceived as worse among adolescents (Smith et al., 2008).

We used a definition from the Swedish version of Health Behaviour of School Children (HBSC) (Marklund, 1997; WHO, 1997). The reason was that we considered the definition by Olweus to be too wide to fit our questionnaire. However, by using an earlier version of the HBSC definition, we left out the aspect of social exclusion. Further, we applied the same definition to the cyberbullying questions, meaning that the criteria of power imbalance and repetition were introduced in the cyberbullying questions, although we argue that these criteria may not be as applicable to cyberbullying as they are to traditional bullying. How this actually affects the results remains unknown, but if the students read the definition and applied it to cyberbullying, one consequence may be a possible under-reporting of cyberbullying. Likewise, if the students took the definition into careful account, traditional bullying might also be under-reported, as social exclusion was not included.

In the questionnaire, the question about traditional bullying was placed first and the question about cyberbullying last. This means that students may have included cyberbullying when they answered the question about traditional bullying, and the group with involvement in both cyberbullying and traditional bullying may have been overestimated. If so, this could partly explain the overlapping of traditional bullying with cyberbullying behaviour. However, as the definition of traditional bullying did not exclude cyberbullying per se, the answers given by the students were not wrong, but rather indicate that adolescents do not separate cyberbullying from traditional bullying and that they may see the cyber world as integrated into everyday life.
**Disability item**

While the question regarding disability managed to target a large group of students with disabilities, information having to do with specific disabilities or chronic conditions was inevitably lost. It could be argued that the labels for some disabilities are emotionally loaded and if question were put about specific disabilities an underestimation might have occurred. Put the other way around, it could be tempting for some students to fill in specific disabilities (such as ADHD) or maybe even all the disabilities suggested. In addition, there are diagnoses that are often grouped together, and it may well have been impossible to analyse associations between specific disabilities.

**Self-reports**

The majority of data in the current thesis were based on students’ self-reported data, given in web-based questionnaires. One strategy to minimize non serious answering was for researchers to be present on the data-collecting occasions and ask teachers to encourage their students to fill out the questionnaire in a serious manner. In the 2010 survey, every questionnaire was reviewed in order to do a validity screening procedure (Cornell & Bandypadhyay, 2010). The guidelines included carefully considering questionnaires that had too many extreme answers, sustainable internal drop-out or a series of items marked in the same way. 23 questionnaires were excluded. All such questionnaires were documented with the reason for their exclusion and were also reviewed by at least two project members.

**Classification**

Bullying was analysed either dichotomously or trichotomously, meaning that an individual was classified as a victim, bully, or bully-victim with regard to traditional bullying and cyber-bullying. This classification may not capture or reflect all levels and dimensions of bullying, but the classification was considered justified for the purposes of the articles. Further, the groups were mutually exclusive, which reduced the risk of misclassification bias and thus increased the internal validity of the results.
The PSP scale
The linear PSP variable can either be analysed as a continuous variable or categorized using for example percentiles or percentiles. The choice of using percentiles in Study II was based on theoretical aspects. I wanted to capture the most vulnerable students, that is, adolescents with higher levels of psychosomatic problems, and compare them to adolescents with milder, or lower, or no psychosomatic problems. Treating PSP as a continuous variable implies that I utilize more information from each observation.

One limitation by trichotomising the PSP scale is using percentiles based on the distribution. The level of psychosomatic problems is relative, meaning that there are no clinical cut-off points to what is considered a mild or a severe problem. And it is important to underline that a psychosomatic problem is not a psychiatric illness, therefore we do not dichotomize into “diagnosis” or “no diagnosis”. Due to low bullying prevalence rates, the 25th percentile was compared to the 75th percentile in the current thesis/study. However, additional analysis including the higher cut-off point, 90th vs. 10th percentile, was conducted in order to see if the results pointed in the same direction, which they did.

Focus groups
In qualitative research the term trustworthiness comprises credibility, dependability, and transferability (Graneheim & Lundman, 2004). Credibility was enhanced by discussions among the authors which resulted in agreement regarding labelling and sorting of data. By including quotations from the transcribed text, showing similarities within categories and differences between categories, credibility was enhanced further (Graneheim & Lundman, 2004). Dependability refers to the stability of data over time. The focus group discussions were conducted over a four-month period, which may not be that long time interval in the context of bullying experiences in school. Hence, the consistency and dependability of the results were enhanced. In terms of transferability, as we asked the respondents about their own experience, rather than asking them for their beliefs on the topic, we thereby strengthened the transferability of the current results in to other groups and contexts (Graneheim & Lundman, 2004).
One limitation of the focus-group study could be the relatively small groups. Variations in results may have been larger if there had been more participants in the groups. An alternative method considered was to conduct individual interviews with the participants, which could have generated different results. However, for the purpose of the study, the use of focus groups was considered justified and the discussions were considered rich, displaying a good group dynamic. As the population of interest was school nurses and school social workers in the current municipality, recruiting more participants was not possible.

The methodological issues in Study III concern the way participants were divided into groups, i.e., the advantages and disadvantages with choosing homogenous or heterogeneous focus groups. We used homogenous groups. The advantages of this approach may be that the participants can feel comfortable holding discussions within their profession, and are allowed to use the same jargon. On the other hand, one of the disadvantages may be that the participants feel too comfortable and are not sufficiently challenged to engage in deeper reflection, in which case larger variations might have appeared.

**Causality or associations**
The choice of analyses in the current studies are not designed to make any conclusions regarding causality between gender, mental health and disabilities. As discussed by Arseneault et al. (2008), environmental factors may increase the risk of victimisation, which, in turn, may lead to mental illness. This process do not suggest a causal effect between being bullied and mental illness, instead familial factors may explain why bullied children have mental health problems. Children with externalizing problems, especially hyperactivity, can be experienced as irritating or provoking (Card & Hodges, 2008) where the general hypothesis may be that hyperactivity increases the risk of being a victim or bully. As referred to in Study II, Turner et al. (2006) suggest checking for other factors that may affect internalizing problems. This could however be problematic since adverse home conditions may be difficult to assess. When it comes to Study IV and the association between disability and bullying, research has shown that children and adolescents with disabilities are at greater risk of being exposed to victimisation. The general assumption is that individuals who are already experiencing such
difficulties are victimised because of their condition, but, as previously mentioned, some conditions such as hyperactivity may predict involvement in bullying.

12 CONCLUSIONS AND IMPLICATIONS

Child and adolescent well-being has become an important issue on the political agenda and is one of the main focuses of public health in Sweden. To achieve our goals as a society, any necessary intervention in this area needs to occur in the early years of a person’s life. Much attention has already been given to children’s well-being, but there is still much to do. Bullying and peer victimisation is one of several complex issues in this regard that must be taken into serious consideration. Bullying is not only of individual concern, but also of public concern.

The main contribution of this thesis is that it provides a deeper understanding of cyberbullying in comparison to traditional bullying, while giving greater insight into the role played by school health staff and their perspectives on bullying. The studies examine issues that have previously received insufficient attention, if any at all. Many additional questions have been raised during this journey. Bullying is a complex phenomenon and it takes on different forms along with the changes in society. In the wake of the Internet’s rapid development, we are all challenged – parents, schools and researchers alike – to keep up with a younger, digitally savvy generation. Yet technical devices are not weapons, unless used as such. It is important that we help children and adolescents to understand the consequences of their actions on the Internet, just as we must in real life. The absence of adult presence on the Internet only increases the risk of undesirable situations arising.

Cyberbullying and traditional bullying should not be regarded as separate phenomena. Rather, they are, in many respects, two sides of the same coin. Some of the present results may provide a basis for discussion for schools when planning intervention and health promotion strategies. This thesis highlights the role of disability in bullying, showing that adolescents with disabilities are more likely to be exposed to, and be involved in, bullying in some capacity, often as bully-victims. Here it was evident that bully-victims with a disability were also using both traditional means and cyber means to a greater extent. Previous re-
search has constantly shown bully-victims to be a particularly vulnerable group. Hence, this is a group that needs more attention. These findings may be of particular interest to school health staff.

It was also evident that in order to combat bullying, both contextual and individual approaches are necessary, meaning that we need to take into account the structure surrounding the students as well as the individual. We must see the whole problem, not just selected components. However, the individual perspective can be difficult to handle and there is a risk of blaming the victim, bully, or bully-victim, or of not fully facing up to the situation while relieving the individual of responsibility. Striking a balance can be a challenge, but must nevertheless be highlighted and discussed.

Creating a safe and supportive school environment is an investment in mental-health capital and lays the foundation for a child's healthy development and positive outlook on life. Tackling bullying – whether online or offline – is a crucial part of the process. This thesis will hopefully encourage schools to look at this vital issue in greater depth, and offer food for thought to health staff looking to optimize their resources.

**Future directions**
There are still research areas to be explored within the field of Internet-usage in general and cyberbullying in particular. More needs to be known about the influence of various forms of ICT on mental health and well-being among the young. The measurements used in the field of mental health and cyberbullying require further refinement and greater conformity if useful international comparisons are to be made. The gender differences reflected in bullying and in Internet usage ought to be taken into account in the development of psychometric standards.

Within a Swedish context, future research could usefully follow the development of the newly legislated Team for Student Health in the Swedish school system and its role in tackling bullying; initial focus might best be put on the new role assigned to school social workers.

The importance of the link between researcher and school cannot be emphasized enough. Maintaining strong contacts with schools is vital for social-science researchers if
they are to collect reliable and valid data. In return, researchers need to keep schools in the feedback loop.
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To my family…
References


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Traditional Bullying and Cyberbullying among Swedish Adolescents

Bullying is considered an important public health issue, given the harmful consequences that it entails. Bullying among adolescents has changed character in recent times with the advent of the internet and the mobile phone.

This thesis looks at the differences between traditional bullying and cyberbullying among adolescents, focusing on gender, psychosomatic problems and disability, and gives an insight into health staff’s experience of bullying in schools. It consists of four studies, three based on surveys undertaken among 3,800 Swedish adolescents in Grades 7, 8 and 9. A fourth study uses focus groups consisting of school social workers and school nurses.

The results show that some adolescents are more likely than others to be involved in bullying. The studies also indicate that some adolescents involved in bullying are more likely to experience higher levels of psychosomatic health problems. This thesis also discusses contextual and individual approaches adopted by schools in the prevention of bullying.