

ABSTRACT

Melander Hagborg, Johan (2018). *Child maltreatment and its association with school factors and mental health in early adolescence*. Department of Psychology, University of Gothenburg, Sweden.

The overall aim of the two studies included in this thesis was to investigate in a general sample of Swedish adolescents the role that self-reported child maltreatment played in their mental health (i.e., externalizing and internalizing symptoms), mental well-being, and academic functioning (i.e., school absenteeism and relationships with teachers). Data was collected via self-report questionnaires administered in classroom settings from 1134 (**Study I**) respectively 1316 (**Study II**) students. **Study I** aimed to explore the relationship between self-reported emotional maltreatment (i.e., emotional neglect and emotional abuse) and mental health and mental well-being among 1134 12- to 13-year-old girls and boys (mean age = 12.7, $SD = 0.6$). Emotional maltreatment had significant effects on mental health and mental well-being for both girls and boys. There were also significant interaction effects between gender and levels of emotional maltreatment on mental health. Girls reported decreased mental health and mental well-being at lower degrees of emotional maltreatment than boys. Furthermore, girls reported a higher degree of mental health problems in response to emotional maltreatment than boys. For internalizing symptoms, mental well-being, and psychosomatic symptoms, greater exposures to emotional maltreatment seemed to

magnify gender differences. The aim of **Study II** was to examine the relationship between child maltreatment and school absenteeism among 14- to 15-year-old girls and boys (mean age = 14.3, $SD = 0.6$) focusing on differences in the prevalence of self-reported child maltreatment between non-absentees and absentees. We also analyzed differences between maltreated and non-maltreated absentees in mental health, perceived school environment, and peer victimization in school. Roughly 25% of absentees reported one subtype of maltreatment (16% of the total sample) and a mean of 22% of absentees reported two or more subtypes of maltreatment (11% of the total sample). Maltreated absentees reported more mental health problems, personal harassment, and negative relationships with their teachers compared to not-maltreated absentees. Results from the two studies included in this licentiate thesis indicate that child maltreatment is associated with a wide array of negative outcomes in adolescence. Results also support the need to stratify analyses by gender and maltreatment severity.

Keywords: academic functioning, child maltreatment, early adolescence, emotional maltreatment, gender, mental health, mental well-being, school absenteeism

SAMMANFATTNING (Swedish Summary)

De tidiga tonåren, perioden 11-14 års ålder, är en tid av omvälvande biologiska, psykologiska och social omställningar som alla innebär stora möjligheter och utmaningar. Den unge ska på ett tryggt sätt börja separera från sina föräldrar för att hitta sin egen identitet och den jämnåriga umgängeskretsen blir allt mera viktig. Samtidigt ställs allt högre krav på att själv kunna ta ansvar för exempelvis sin skolgång och de flesta har sina första romantiska relationer. Det är därför inte konstigt att det är under denna tid som många unga människor för första gången kan känna av psykisk ohälsa och beteendeproblem. Tidigare forskning har visat att de tonåringar som upplevt fysisk eller psykisk misshandel eller sexuella övergrepp som barn, har svårare att klara av alla de utmaningar som de tidiga tonåren kräver jämfört med jämnåriga utan sådana erfarenheter. Detta medför att de löper större risk än sina jämnåriga kamrater att besväras av psykisk ohälsa och att uppleva lägre grad av psykiskt välbefinnande. De ungdomar som har erfarenheter av våld och övergrepp har också oftare svårt att klara skolan och skapa goda relationer till kompisar och flick/pojkvänner än sina jämnåriga kamrater. Det finns dock lite forskning som gjorts på hur denna grupp av särskilt utsatta ungdomar har det i de tidiga tonåren eftersom den mesta forskningen är gjord på äldre ungdomar. Vidare finns det lite forskning där olika *sorter* samt *allvarlighetsgraden* av barnmisshandel (psykisk, fysisk och sexuell) undersöks i relation till *flera olika* typer av konsekvenser. I de flesta fall undersöks endast psykisk ohälsa som konsekvens för de som utsatts för försummelse,

övergrepp eller misshandel. Därför, för att öka förståelsen för hur ungdomar med erfarenheter av försummelse, misshandel och övergrepp har det i de tidiga tonåren gällande psykisk hälsa och skolgång genomfördes de två studierna i denna licentiatuppsats.

Uppgifter från ungdomarna samlades in via frågeformulär som ungdomarna själva besvarade i sina klassrum. I **Studie I** deltog 1134 ungdomar och i Studie II deltog 1316 ungdomar. I **Studie I** var syftet att undersöka förhållandet mellan självrapporterad känslomässig misshandel och psykisk hälsa och psykiskt välbefinnande bland 12-13 åriga tjejer och killar (medelålder = 12,7). Det visade sig att det fanns ett samband mellan känslomässig misshandel och psykisk hälsa och psykiskt välbefinnande för både tjejer och pojkar. Dessutom fanns det skillnader i hur tjejer och killar svarade. Tjejer rapporterade minskad psykisk hälsa och psykiskt välbefinnande vid lägre grader av känslomässig misshandel jämfört med pojkar.

Syftet med **Studie II** var att undersöka förhållandet mellan erfarenheter av övergrepp och försummelse och skolfrånvaro bland 14-15 år gamla tjejer och killar (medelålder = 14,3). Mera specifikt så undersöktes skillnader i förekomst av misshandel och övergrepp mellan tre olika grupper: ingen ogiltig frånvaro, lite ogiltig frånvaro samt omfattande ogiltig frånvaro. Det visade sig att ju mer ogiltig frånvaro ungdomen rapporterade desto fler typer av övergrepp hade ungdomen blivit utsatt för. Ungefär 25 % av de ungdomar som rapporterade ogiltig frånvaro rapporterade också *en* typ av misshandel (jfr 16 % av samtliga deltagande ungdomar) och 22 % av ungdomar med ogiltig frånvaro rapporterade *två eller flera* typer av

misshandel/övergrepp (jfr 11 % av samtliga deltagande ungdomar). Nästa steg i Studie II var att undersöka om det fanns några skillnader mellan de ungdomar som rapporterade både utsatthet för misshandel/övergrepp och ogiltig frånvaro jämfört med de ungdomar som endast rapporterat ogiltig frånvaro men inte någon erfarenhet av misshandel/övergrepp. Gruppen ungdomar som rapporterade både misshandel/övergrepp och ogiltig frånvaro svarade att de upplevde en sämre psykisk hälsa, mer negativa relationer till sina lärare samt mer trakasserier från jämnåriga än vad gruppen som endast rapporterade ogiltig frånvaro.

Sammanfattningsvis visar resultaten från de två studierna att ungdomar med erfarenheter av misshandel och övergrepp löper ökad risk för flera olika typer av negativa konsekvenser i de tidiga tonåren jämfört med jämnåriga utan dessa erfarenheter. Dessa konsekvenser innefattar såväl psykisk ohälsa som att bli trakasserad av jämnåriga, ha mer ogiltig frånvaro samt uppleva en sämre relation med sina lärare. Personal inom vård, socialtjänst och skola bör få utbildning kring konsekvenser av misshandel och övergrepp för att kunna identifiera dessa ungdomar och mobilisera den hjälp och stöd som de har rätt till.

LIST OF PUBLICATIONS

This licentiate thesis is based on a summary of the following two papers, referred to in the text by their roman numerals.

- I. Hagborg, J., Tidefors, I., & Fahlke, C. (2017). Gender differences in the association between emotional maltreatment with mental, emotional, and behavioral problems in Swedish adolescents. *Child Abuse and Neglect*, 67, 249-259.
- II. Hagborg, J., Berglund, K., & Fahlke, C. (2017). Evidence for a relationship between child maltreatment and absenteeism among high-school students in Sweden. *Child Abuse and Neglect*. (In press).

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INTRODUCTION

The period of early adolescence, ranging from age 11 to 14, is one of extraordinary possibilities and challenges. Physical, cognitive, social, and emotional domains develop dramatically, while the surrounding environment, on both micro and macro levels, presents new norms, demands, and cultural values that the young person needs to adapt to (Berndt, 1982; Galambos, Barker, & Almeida, 2003; Schwartz, 2008). Adolescents living in a harsh environment, or with past or ongoing experiences of maltreatment, run an increased risk of failing one or many of the crucial developmental tasks of this period (Trickett, Negriff, Ji, & Peckins, 2011). Child maltreatment includes being subjected to physical and or emotional abuse and/or neglect, being sexually abused, and/or witnessing domestic violence.

Sweden has extensive knowledge of the prevalence of physical and sexual abuse of children (Jernbro & Jansson, 2016), studies on the other forms of maltreatment are scarce (Jernbro & Jansson, 2016; Jernbro, Tindberg, Lucas, & Janson, 2012). It is also common that most studies of child maltreatment focus exclusively on mental health as an outcome and few include broad measures of negative outcomes, such as academic achievement and peer relations.

Therefore, the two studies included in this thesis were intended to study the prevalence of six different forms of maltreatment and their associations with a broad range of negative psychological outcomes.

Study I examined the relationships between self-reported emotional neglect and/or emotional abuse, gender, and psychosomatic symptoms,

mental health, and mental well-being in a sample of early adolescents.

Study II investigated the relationship between the six subtypes of maltreatment and school absenteeism.

The first section of this thesis outlines the developmental period of early adolescence and the impact of maltreatment on children's mental health. A thorough review of definitions, prevalence, and methodological issues related to child maltreatment follows. Next, ecological transactional models influenced by developmental psychopathology are presented to contextualize the results of the two studies, which are discussed in relation to previous research findings.

Early adolescence

During early adolescence the brain undergoes explosive development. Neural networks are radically re-organized and the number of brain-cells can double within a year (WHO, 2017). The sex organs develop and gender norms are more accentuated, leading young adolescents to be more keenly aware of their gender than in late childhood.

Simultaneously, self-concept and identity are reorganized, friendships become more intimate, long-lasting, and intense, while the school environment requires higher autonomy and adolescents balance and negotiate their dependence on and their yearning for independence from their caregivers (Berndt, 1982; Galambos et al., 2003; Schwartz, 2008). With these tremendous stressors in mind, it is not surprising that early adolescents become vulnerable to the potential negative influences of peers and typically show an increase in externalizing and internalizing problems (Galambos & Ehrenberg, 1997; Maggs, Almeida, & Galambos, 1995). Early adolescence is also a sensitive

period for the children's parents who must learn to facilitate appropriate levels of autonomy in their children, reduce their control, and remain supportive during a demanding transition (Galambos & Ehrenberg, 1997).

General mental health trends among adolescents in Sweden

In the last decade, many concerns have been raised in Sweden about adolescents' mental health and school functioning (Berlin, Modin, Gustafsson, Hjern, & Bergström, 2012; Robertsson, Begler, & Sandahl, 2016). Public surveys have reported a consistent increase in self-reported internalizing (emotional) and psychosomatic symptoms since the 1980s, especially among adolescent girls (Salmi, Berlin, Björkenstam, & Ringbäck Weitoft, 2013). Most studies report no gender differences in overall mental health, but both in Sweden and internationally, girls report more internalizing and psychosomatic symptoms and boys report more externalizing symptoms (Berlin et al., 2012; Bor, Dean, Najman, & Hayatbakhsh, 2014). Most studies have shown that these differences are small or non-existent in early adolescence, but usually increase in middle and late adolescence. It is also important to note the mixed results concerning the increase of externalizing symptoms among adolescents (Bor et al., 2014). The reported gender differences in mental health are often ascribed to different *expressions* of mental health problems than to actual differences in quality of life and global mental health. In Sweden, for example, twice as many adolescent girls as boys report high internalizing and psychosomatic symptoms, while twice as many adolescent boys as girls commit suicide every year (Jiang, Hadlaczky,

& Wasserman, 2013). Interestingly, perceived impact of mental health on school functioning seems mainly related to gender-atypical symptoms (i.e., girls with high externalizing symptoms and boys with high internalizing symptoms; Berlin, 2012; Robertsson et al., 2016).

Child maltreatment and adolescent development

Many of the competencies and factors in a successful resolution of stage-salient developmental tasks in early adolescence have been found to be negatively affected by child maltreatment (Cicchetti and Rogosch, 2002; Tricket et al. 2011). For example, early maltreatment has been shown to have a negative impact on affect-regulation, forming attachment relationships, and development of a self-system. This may lead to impaired abilities to become more self-directed and independent and to manage close relationships outside the family. Maltreated adolescents therefore tend to have more problems in peer relationships, romantic relationships, and academic achievements than their non-maltreated peers. Delinquency and substance use are also more common among maltreated adolescents (Tricket, 2011).

CHILD MALTREATMENT

Definitional considerations

Decades ago, the USA's National Research Council (1993) stressed the need for improved definitions of child maltreatment, but the scientific community has yet to reach consensus. Although advances have been made in operationalizing child maltreatment in the last decade, debate continues. There are several reasons for the lingering disagreements. In Sweden and internationally, several interested systems such as health care, social services, and justice have different missions and different legal and organizational conditions leading to different needs concerning the operationalization of child maltreatment. For example, a medical model focused on overt signs of maltreatment might be suitable in a healthcare setting but risks missing more subtle forms of maltreatment such as emotional neglect. Other issues under debate include whether child maltreatment should be defined by the actions of the perpetrator, the effects on the child, or on a combination of the two, and what constitutes appropriate or inappropriate parenting practices. (Barnett, Manly, & Cicchetti, 1993; Ferrari, 1999; McGee & Wolfe, 1991). Definitions of child maltreatment are also influenced by the political climates and value systems in which they are formulated. Representatives of patriarchal, socially conservative belief systems that emphasize caregivers' absolute authority and rights over all family decisions typically advocate a strict and narrow definition of child maltreatment. Liberal

or left-wing representatives, however, who advocate a stronger state with a more powerful mandate to influence family life, are typically more supportive of broader definitions of child maltreatment (Goldstein, Freud, & Solnit, 1973). These two approaches strongly affect how many children are counted as affected by child maltreatment and therefore how many resources should be allocated to interventions.

Despite the controversy and inherent problems with operationalizing child maltreatment, progress has been made and some definitions and classifications have been somewhat agreed upon (Cicchetti & Toth, 2005). First, child maltreatment is usually divided into two large subcategories: actions of omission (emotional and physical neglect) and acts of commission (physical, emotional, and sexual abuse; Barnett et al., 1993). In the *Child Abuse and Prevention Treatment Act* (a public law in the USA providing funding for research and treatment) child maltreatment is defined as:

Any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse or exploitation, or an act or failure to act which presents an imminent risk of serious harm.

The World Health Organization (WHO) defines child maltreatment as follows:

All forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or

commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of relationship of responsibility, trust or power (WHO, 2016).

WHO further distinguishes four types of child maltreatment, *physical abuse*, *sexual abuse*, *emotional* or *psychological abuse*, and *neglect* (Butchart, Harvey, Mian, & Fürniss, 2006). This is by far the most common taxonomy of child maltreatment (Barnett et al., 1993; Dante Cicchetti & Toth, 2005). For the purposes of this thesis however, *emotional maltreatment* will be divided into *emotional abuse* and *emotional neglect* and *experiencing domestic violence* will be treated as a separate construct instead of being included in *emotional abuse*. Hence, six subtypes of child maltreatment will be used: physical abuse, sexual abuse, emotional abuse, physical neglect, emotional neglect, and experiencing domestic violence.

Definitions and prevalence of the main types of child maltreatment

Child Emotional Maltreatment (abuse and neglect)

Child emotional maltreatment (CEM) consists of acts of commission like constant name-calling (*emotional abuse*) and acts of omission like withholding affection (*emotional neglect*).

Interchangeable use of these terms has complicated an already complicated phenomenon. According to the American Professional Society on the Abuse of Children (APSAC, 1995, p. 2), emotional maltreatment is “a repeated pattern of caregiver behavior or extreme incident(s) that convey to children that they are worthless, flawed,

unloved, unwanted, endangered, or only of value in meeting another's needs.” Six types of emotional maltreatment are recognized: (1) rejection (e.g., constant criticism, belittling); (2) isolating (e.g., keeping family and friends from the child); (3) ignoring (e.g., non-response to the child’s bids for attention, achievements, etc.); (4) terrorizing (e.g., threats of abandonment or harm); (5) corruption (e.g., involving the child in criminal or perverse activities); and (6) exploitation (e.g., assigning the child as a caregiver for a parent or other children, expecting the child to attend to family finances). Others have conceptualized CEM through the continuum of emotional distress experienced by the child, ranging from despair to fear to humiliation to dehumanization (Kent & Waller, 1998; O’Hagan, 1993). Other forms of maltreatment—sexual and physical abuse, and physical neglect—are considered to have emotional maltreatment components. Thus, emotional maltreatment may be either a stand-alone form of abuse or neglect or a frequent co-occurrence (Hart & Glaser, 2011; Wekerle et al., 2009).

Prevalence of CEM. Studies on the prevalence of emotional maltreatment lag far behind those of sexual and physical abuse, both internationally and in Sweden. A meta-analysis by Stoltenborgh, Bakermans-Kranenburg, Alink, and van Ijzendoorn (2012) found only 13 studies reporting the prevalence of emotional neglect versus over 200 studies reporting child sexual abuse in another review (Stoltenborgh, van Ijzendoorn, Euser, & Bakermans-Kranenburg, 2011). Prevalence rates vary widely, and results are often tainted by definitional and methodological problems due to the elusive nature of emotional maltreatment. For example, Glaser (2011) includes

experiencing domestic violence as a subcategory of emotional abuse, while APSAC (1995) omits this category and treats it as a separate construct.

The prevalence of emotional abuse varies between countries. In the USA, Finkelhor, Ormrod, Turner, and Hamby (2005) found prevalence rates of 10–11% while Gilbert et al. (2009) found rates of 4–9% in Western European countries, and up to 33% in Eastern European countries (Gilbert et al., 2009). Stoltenborgh, Bakermans-Kranenburg, and van Ijzendoorn (2012) estimated the global prevalence of self-reported child emotional neglect as 18% and physical neglect as 16%. In a recent Swedish study including 5000 16- to 18-year-olds, 5% reported emotional neglect and 16% reported emotional abuse (Jernbro & Jansson, 2016). Aho, Gren-Landell, and Svedin (2016) found similar prevalence rates in a representative sample of nearly 6000 students. In that study, 6% of girls and 3% of boys reported emotional neglect while 22% of girls and 9% of boys reported emotional abuse. In another Swedish study in a sample of young adults (20–24 years), Cater, Andershed, and Andershed (2014) found a lifetime prevalence of neglect of 8% for boys and 13% for girls. Furthermore, 39% of boys and 51% of girls reported emotional abuse (defined as verbal abuse).

Child Sexual Abuse (CSA)

As with the other forms of abuse, the definition of CSA has long been a point of debate. One of the most cited definition is that of Schechter and Roberge (1976):

Sexual abuse is defined as the involvement of dependent, developmentally immature children and adolescents in sexual activities they do not truly comprehend to which they are unable to give informed consent, or that violate the social taboos of family roles.

Butchart et al. (2006, p. 10) define CSA as

“the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared, or else that violates the laws or social taboos of society. Children can be sexually abused by both adults and other children who are—by virtue of their age or stage of development—in a position of responsibility, trust, or power over the victim”

Prevalence of CSA. Meta-analyses based on self-reported data have shown a worldwide prevalence of some form of CSA in the range of 15–25% for girls and 5–17% for boys (Barth, Bermetz, Heim, Trelle, & Tonia, 2013; Stoltenborgh et al., 2011). CSA is not as linked to socioeconomic status or educational level as physical abuse (Collin-Vézina, Daigneault, & Hébert, 2013). This might explain why prevalence rates for CSA are more similar between the Nordic countries and the rest of the world than physical abuse and experiencing domestic violence. CSA has been found to be more

common among females (18%) than males (7.6%; Stoltenborgh, van IJzendoorn, Euser, & Bakermans-Kranenburg, 2011). These numbers have been found to be similar among females in different countries but vary more widely for males (Mossige, Ainsaar, & Svedin, 2007). In Sweden, Priebe and Svedin (2009) found prevalence rates of penetrative sexual abuse of 13.5% for girls and 5.5% for boys. In a more recent study, Jernbro and Jansson (2016) found prevalence rates of 14.2% for girls and 2% for boys. Although the rates are quite similar in these studies, prevalence rates of 5–50% have also been found (Paolucci, Genuis, & Violato, 2001). The vast differences in study results can be attributed to different methods of data gathering, definitions of CSA, inclusion of peer-abuse, ages and genders of the children and perpetrators, the severity and duration of the abuse, and the type of relationship between child and perpetrator, as well as real differences between cultures and countries (Putnam, 2003; Wyatt & Peters, 1986). Differences in definitions can depend upon how clearly the researcher has operationalized CSA. For example, “Have you ever been sexually abused?” will yield fewer “Yes” answers than questions about actual acts of abuse, clearly described (Stoltenborgh et al., 2011).

Child Physical Maltreatment (abuse and neglect)

The Swedish Ministry of Health and Social Affairs states that “Physical abuse means that an adult causes injury, sickness, pain, or puts the child in a position of powerlessness” (Socialdepartementet, 2001). This is a broader definition concerning the consequences for the child compared with the more commonly cited “Physical abuse is an

assault from an adult on the child's body that causes or risks to cause injury" (Bernstein & Fink, 1998). In 1979, Sweden was the first country in the world to ban physical abuse. Since then, continual surveys have investigated the prevalence of physical abuse in Sweden (Jernbro & Jansson, 2016). Findings from these surveys indicate a steep decline in child physical abuse after the 1979 legislation. In the 1960s most parents thought it was their duty to physically punish children for unwanted behaviors. In 2000, however, 95% of Swedish parents thought that any physical violence towards children was "awful." (Jernbro & Jansson, 2011). Debates about the definition of physical abuse have mainly concerned the abusers' intentions and whether the physical injury to the child should be an important factor in deciding whether the child has been physically abused.

Prevalence of physical abuse. In Sweden, following the steep decline from 1980 to 2000, prevalence rates seem to have stabilized with about 15% of youth experiencing physical abuse at some point in their life and 3–7% experiencing recurring and severe physical abuse from caregivers (Annerbäck, Wingren, Svedin, & Gustafsson, 2010; Janson, Jernbro, & Långberg, 2011; Jernbro & Jansson, 2016). Compared with other countries, these prevalence rates are low. Studies from the USA (Hussey, Chang, & Kotch, 2006), United Kingdom (May-Chahal & Cawson, 2005), and Eastern European countries (Gilbert et al., 2009) have found prevalence rates of 25–30%.

Child Physical Neglect. Physical neglect is defined as the failure to provide appropriate food, clothing, shelter, supervision, or a safe environment for the child (Child Welfare Information Gateway, 2012). Worldwide, it is considered to be the most frequent type of

neglect (Sedlak et al., 2010). Meta analyses of worldwide prevalence of physical neglect found a mean of 16,3% (Stoltenborgh, Bakermans-Kranenburg, & van Ijzendoorn, 2013). In this meta-analyses on the global prevalence of emotional and physical neglect Stoltenborgh et al. (2013) found only 16 studies where physical neglect had been measured. Furthermore, no studies from low-resource countries were identified.

Children Experiencing Domestic Violence

According to the National Centre for Knowledge on Men's Violence Against Women (NCK), the definition of children as witnesses to domestic violence has shifted from *witnessing* to *experiencing* the violence (NCK, 2015). The purpose of this shift in definition is to focus more on the child's perspective and to include non-visual experiences such as *hearing* the violence (Øverlien, 2010).

Prevalence of children experiencing domestic violence. In Sweden, prevalence rates of 10–15% have been reported for experiencing domestic violence (Annerbäck et al., 2010; Jernbro & Jansson, 2016; Nilsson, Gustafsson, Larsson, & Svedin, 2010). For repeated exposure to domestic violence, lower rates of 5% have been found (Janson et al., 2011; Socialdepartementet, 2001). Internationally, rates from 8% to 25% have been found (Gilbert et al., 2009; Miller, Cater, Howell, & Graham-Bermann, 2014).

Methodological considerations

For the study on the prevalence of child maltreatment, the issue of definition was of paramount importance. Another important methodological issue was that of the different methods used to gather data about child maltreatment experiences. These methods typically involve self-reports from caregivers or children, observations of caregiver behavior, and/or analysis of records from social services and/or medical journals. Naturally, these different approaches yield very different prevalence rates (Shaffer, Huston, & Egeland, 2008). Analyses of official records tend only to capture the most severe cases of child maltreatment and risk, missing more elusive and hidden types of abuse (Briere, 1992). Self-reports, however, can be influenced by subjective interpretations of questionnaire items and/or willingness to report acts of child maltreatment (Weeks & Widom, 1998; Widom, Raphael, & DuMont, 2004). Finally, observational strategies can miss behaviors outside the space and time of the observation (Cicchetti & Toth, 2005). All these different methods probably also result in different levels of outcome severity. For example, studies using the strictest form of measurement (official records) will likely identify only the most severe cases of child maltreatment, while studies using a questionnaire with broadly defined items on experiences of child maltreatment may capture more types and instances of abuse. For an uninformed reader, the differences in outcomes will be remarkable. Ideally, researchers use a mixture of all these methods and apply different levels of maltreatment severity to get as valid an evaluation of child maltreatment as possible.

THE DEVELOPMENTAL PSYCHOPATHOLOGY PERSPECTIVE

The developmental psychopathology perspective will be used as an organizing principle for synthesizing earlier research into a proposed model of how experiences of maltreatment lead to later maladaptive outcomes. Developmental psychopathology is a unifying framework for integrating knowledge from multiple disciplines and perspectives. It has been defined as “the study of the origins and course of individual patterns of behavioral maladaptation, whatever the age of onset, whatever the causes, whatever the transformations in behavioral manifestations, and however complex the course of the developmental pattern may be” (Sroufe & Rutter, 1984, p. 18). Developmental psychopathology is a macro paradigm and is not characterized by any unitary theoretical approach. Instead, a developmental psychopathology perspective posits several important principles:

- (1) One can learn more about the normal functioning of an organism by studying its pathology and vice versa;
- (2) An organizational, hierarchal perspective of development is useful to view the resolution of a number of stage-salient tasks that enable adaptation in subsequent developmental stages. Even though certain tasks become less salient over time, failure to resolve a particular task will be integrated and may continue to influence development;

- (3) Risk and protective factors are present at all levels of the ecology within and outside the child. These risk factors have a temporal quality;
- (4) Multiple and diverse pathways in processes and development may lead to the same outcome (equifinality) and similar risk factors may result in different outcomes (multifinality);
- (5) The cumulative, cascading consequences of the many interactions and bidirectional transactions in developmental systems result in spreading effects across multiple levels, among domains at the same level, and across different systems or generations; and
- (6) Child development is best understood as an interactive process where factors in all levels of the ecology surrounding the child mutually influence each other.

These interactive processes are manifested in the ecological transactional models described below. These models will also be presented in relation to actual aspects of child maltreatment such as its etiology and consequences.

Ecological transactional models of development and child maltreatment

Until the late 1970s, studies in developmental psychology mainly focused on individual differences in experimental settings (Ceci, 2006). However, in 1979, Bronfenbrenner published *The Ecology of Human Development* (Bronfenbrenner, 1979). In this groundbreaking book, Bronfenbrenner presented his widely cited bio-ecological model

of human development. In this model, Bronfenbrenner defined complex “layers” of environment, each of which the developing child interacts with and had effect on the child’s development. The interactions between the child’s biological maturation, immediate family/community environment, and societal landscape fuel and steer the child’s development. Changes or conflict in any one layer will also ripple throughout other layers (Bronfenbrenner, 1979).

Bronfenbrenner identifies five layers of ecological systems. Closest to the person is the *microsystem* that comprises the child’s immediate interpersonal relationships that the child directly interacts with (e.g., caregivers and family members). The *mesosystem* is a structure for the relationships *between* two or more microsystems. For example, the way in which a child learns to read might be equally influenced by the relationship between teachers and caregivers as of method of teaching. The *exosystem* comprises the elements that influence the child indirectly. For example, parents’ work schedules or unemployment. The outermost layer in the child’s environment is the *macrosystem*. The macrosystem represents the cultural values, laws, and customs in the society in which the individual develops. Changes in the macrosystem influence development through their interactions with other layers. One example could be the Swedish ban on corporal punishment in 1979 that caused a dramatic drop in the prevalence of physical abuse against children. A change in the macrosystem directly influenced children’s closest interpersonal environments. Bronfenbrenner later developed the model by adding the *chronosystem*. The chronosystem refers to how the person and

environments change over time. An example could be how a parental divorce might strongly influence a child's behavior during the first year. Following this year, family relations might stabilize and go back to normal and hence not exert such a strong influence on the child.

The Ecology of Human Development and the bio-ecological model had an enormous impact on the study of human development over the lifespan (Ceci, 2006). The study of child abuse and neglect, its etiology and sequelae, was no exception. In 1980, the first ecological models for explicitly investigating the *etiology* of child abuse and neglect were formulated (Belsky, 1980; Cicchetti & Rizzley, 1981). A decade later, Cicchetti and Lynch (1993) elaborated these models and adapted them into a model focusing on the *outcomes* of child maltreatment. For this thesis, these three ecological transactional models will be briefly presented.

Etiology of child maltreatment

Several known factors that increase the risk of child maltreatment include temperamentally challenging children, parental psychopathology, parental childhood victimization, single parenthood, and poverty. However, drawing on ecological models, we now know that one single variable cannot account for the complex processes that result in maltreatment. Instead, Cicchetti & Rizzley (1981) and Belsky (1980) propose interactive etiological models where a combination of familial, individual, and societal factors contributes to child maltreatment. In Cicchetti and Rizzley's model, risk factors are divided into *potentiating factors*, which increase the risk of child

maltreatment, and *compensatory factors*, which decrease the likelihood of child maltreatment. They also propose a temporal distinction between both potentiating and compensatory factors by dividing them into *transient* (fluctuating or temporary) and *enduring* (more permanent or characteristic) factors. For example, an *enduring protective factor* could be a parent's history of a high-quality attachment to their own caregivers that buffers other risk factors and decreases the risk of maltreatment. In contrast, a *transient buffer* could be a more short-term condition such as a sudden improvement in finances that relieves stress in the family-system. The same principle is also applied to risk factors. An *enduring vulnerability* includes long-lasting factors that increase risk of maltreatment, such as a child's mental disability. A *transient challenger* is a short-term condition that increases risk of maltreatment, such as a parental loss of a job or a child's progress to a more challenging developmental period.

Another *ecological model* of the etiology of child maltreatment was proposed by Belsky (1980). This model is similar to Cicchetti and Rizzley's, but stresses more clearly the broader environment and treats child maltreatment more as a social psychology phenomenon. Belsky's model draws heavily on Bronfenbrenner's (1979) ecological model of human development. Belsky formulated four levels of analysis to understand the etiology of child maltreatment: (1) Ontogenic development (risk factors within the individual associated with being a perpetrator of child maltreatment); (2) the microsystem (contributing factors within the family increasing the likelihood of child maltreatment); (3) the exosystem (risk factors associated with the community in which the family lives that contribute to child

maltreatment), and (4) the macrosystem (cultural and societal beliefs and value systems facilitating child maltreatment).

Ecological transactional models of maltreatment outcomes

To understand and organize the diverse findings about child maltreatment and its subsequent outcomes, I employ a developmental psychopathology perspective together with the ecological models described earlier. From the late 1970s, several ecological transactional models have been proposed (Bronfenbrenner, 1979, Belsky, 1980 & Cicchetti & Rizley, 1981), all of which examined the transactional and bidirectional processes where biological and environmental factors interact to shape an individual's development over the lifespan.

However, in 1993, Cicchetti and Lynch proposed a new ecological transactional model that addressed not only the *etiology*, but also the outcomes, of child maltreatment. In this model, Cicchetti and Lynch used the terms *potentiating factors* (higher risk) and *compensatory factors* (buffering effects) from Cicchetti and Rizzley's earlier model. These two factors are seen as determining both the probability of child maltreatment and its influence on the child's subsequent developmental path to adaption or maladaptation. These compensatory or potentiating factors are present at all levels of the ecology and mutually influence each other. Hence, an increased level of the risk factors together with child maltreatment suggests a deviation from a "good-enough" or expected nurturing environment for the developing child. In the organizational model of development, the failure of a specific developmental task will be integrated into the next level of

development. In this way, earlier achievements and failures carry through every stage of development.

Developmental outcomes of child maltreatment in adolescence

In a review of research on developmentally salient outcomes of child maltreatment during adolescence Trickett, Negriff & Peckins (2011) found extensive evidence for the impact of child maltreatment on adolescent development. However, they also stated that knowledge of this impact is generic because the effects of timing of abuse and differentiated impacts of different subtypes of abuse largely remain unknown. This is important since a developmental psychopathology perspective stresses the importance of analyzing both timing and subtypes of abuse in relation to outcomes of maltreatment (Cicchetti and Rogosch, 2002; Trickett et al, 2011). Many developmental outcomes have been found to be negatively affected by child maltreatment, such as peer relationships, romantic relationships, academic achievement, sexual behavior, delinquency, and substance use (Cicchetti and Rogosch, 2002; Trickett et al, 2011). For this thesis and the aims of the included studies, research was concentrated on studies of adaptation to school and mental health (internalizing and externalizing problems) and will be more thoroughly reviewed.

Mental health

The elevated risk for a maltreated child to develop internalizing and externalizing problems is well documented (Jaffee, 2017). For externalizing problems, attention deficit/hyperactivity disorder, oppositional defiant disorder, conduct disorder, delinquency, and

antisocial behavior have been found to be overrepresented in maltreated adolescents than their non-maltreated peers (Cohen, Brown, & Smailes, 2001; Famularo, Kinscherff, & Fenton, 1992; Jonson-Reid et al., 2010; Lansford et al., 2007), and for internalizing problems, depression, anxiety, post-traumatic stress disorder, and somatization have been found to be more prevalent in maltreated adolescents than their non-maltreated peers (Cohen et al., 2001; Crusto et al., 2010; Jernbro, Svensson, Tindberg, & Janson, 2012; Toth & Cicchetti, 1996). Childhood maltreatment has also been linked to personality disorders, substance abuse, and suicidal and self-injurious behavior (Jaffe, 2017).

The quality of early relationships with caregivers has been found to play a major role in the development of psychopathology among maltreated adolescents (Obsuth, Hennighausen, Brumariu, & Lyons-Ruth, 2014). This is in line with the hierarchical view on development posited by the organizational model (Cicchetti & Rogosch, 2002). Forming a secure attachment relationship with a caregiver is the first stage-salient task of infancy. According to attachment theory, a good-enough caregiver modulates the child's emotions by calming and helping the child to restore a tolerable emotional state following emotional turmoil and frustration. From the child's perspective, a secure attachment means that the child can use the caregiver's responsiveness to organize their emotional experience and regulate back to "felt- safety" (Bowlby, 1969, 1973; Sroufe & Waters, 1977).

The environment surrounding a child in a maltreating family is often frightening, disruptive, confusing, and unpredictable. Such an environment represents a deviation from the good-enough environment

that a successful resolution of the developmental task of forming a secure attachment requires. A fearful and chaotic relational environment in the family might instigate a disorganized attachment pattern characterized by fearful, conflicted, and disoriented behaviors that have been linked to a many subsequent psychopathologies and maladaptations (Wilkins, 2012; Rosenstein & Horowitz, 1996). For a child growing up in an inconsistent and unpredictable caregiving environment, negative emotions tend to disrupt rather than restore relationships (Sroufe & Waters, 1977). This might deprive a maltreated adolescent of much needed emotional support, since people with this disruptive emotional pattern tend to withdraw from stable and close relationships. This could in part explain the higher proportions of maltreated adolescents who report poor peer relations.

Another key developmental task involved in emotion regulation, which has also been linked to both externalizing and internalizing psychopathology, is emotion recognition (Eisenberg et al., 2001; Hill, Degnan, Calkins, & Keane, 2006; Suveg & Zeman, 2004). The capacity to correctly recognize one's own and others' emotions facilitates social interactions and emotion regulation. Accordingly, adolescents with impaired emotion recognition experience more peer rejection and lower peer support than their peers with adequate capacity for emotion recognition (Miller et al., 2005). Results from earlier studies indicate that parts of these abilities are learned through supportive and emotionally responsive interactions with caregivers (Brownell, Svetlova, Anderson, Nichols, & Drummond, 2013). There are several ways in which a maltreating caregiver risks can deprive a child of an emotionally responsive relational environment. Maltreating

caregivers have been shown to use less validation and more invalidation of their children's emotions than non-maltreating caregivers (Shipman et al., 2007), and neglectful caregivers have been found to be less emotionally expressive and less engaged with their children (Bousha & Twentyman, 1984). Neglectful parents have also been found to provide relatively little exchange of affective information with their children (Pollak, Cicchetti, Hornung, & Reed, 2000). Physically abusive caregivers have been found to produce less prototypical facial and vocal expressions of emotion compared with non-abusive caregivers and maltreating caregivers have been found to be less likely to use reasoning and other educative types of discipline (Trickett, 1998). This might deprive the child of the necessary emotionally safe place for practicing and acquiring optimal language and cognitive skills, and lead to a lower ability to self-regulate and recognize emotions. Abusive caregivers have also been found to be less accurate in emotion recognition tests than non-abusive caregivers (Wagner et al., 2015). Accordingly, maltreated children and adolescents have been found to be less accurate in discriminating between emotional expressions (Pollak et al., 2000).

Another proposed mechanism by which maltreatment increases risk for psychopathology has been attention bias towards threat. Results from several studies indicate that hypervigilance to threat might stem from early experiences of physical abuse (Cicchetti & Curtis, 2005; Gibb, Schofield, & Coles, 2009; Pollak, 2003; Pollak, Messner, Kistler, & Cohn, 2009). For example, studies have shown that maltreated children are selectively attentive to angry faces but not to sad or happy faces (Gibb et al., 2009; Pollak & Tolley-Schell,

2003). Maltreated children also need less perceptual information than their non-maltreated peers to detect angry facial expressions and they have more difficulty disengaging from anger cues (Curtis & Cicchetti, 2011; Pollak et al., 2009). Attention bias to threat has been proposed to partly explain the heightened levels of anxiety in maltreated children (Shackman, Shackman, & Pollak, 2007) and has been linked to anxiety and internalizing psychopathology in adults (Bar-Haim, Lamy, Pergamin, Bakermans-Kranenburg, & van Ijzendoorn, 2007).

Adaption to school

Academic achievement has been shown to be a potent protective factor against the development of mental health problems in children exposed to maltreatment and trauma (Zingraff, Leiter, Johnsen, & Myers, 1994). However, many investigations show the relationship between child maltreatment and subsequent academic failure (Romano, Babchishin, Marquis, & Fréchette, 2015; Shonk & Cicchetti, 2001; Trickett & McBride-Chang, 1995; Veltman & Browne, 2001). The effects of maltreated children's academic failure on their adult functioning, such as unemployment and economic hardships, have also been found (Mersky & Topitzes, 2010). Markers for maltreated children's academic failure that have been investigated are involvement in special education interventions, poor performance on standardized achievement measures, frequent school absences, higher grade-retention, and lower grade-point average. However, several reviews point out that most studies focus on univariate associations rather than underlying processes and mediators that could explain these associations (Shonk & Cicchetti, 2001). Furthermore, poor academic

functioning and child maltreatment share many contextual risk factors. For example, poverty, low levels of parent education, larger family size, residential mobility, and neighborhood poverty levels have all been found to increase risks for both child maltreatment and academic failure (Mörk, Sjögren, & Svaleryd, 2014; Trickett, 1998). Hence, a key question for researchers is whether child maltreatment has a unique effect on academic achievement or whether this relationship is fully or partially explained by sociodemographic risk factors (Veltman & Browne, 2001; Romano et al, 2015). The few studies to examine this question have shown mixed results. Boden, Horwood, and Fergusson (2007) found that the impact of child maltreatment on academic achievement became non-significant when sociodemographic risk factors were controlled for. Conversely, Fantuzzo, Perlman, and Dobbins (2011) and Maclean, Taylor, and O'Donnell (2016) found that child maltreatment remained a significant predictor of academic failure even after controlling for sociodemographic risk factors.

To enhance knowledge about underlying processes that could explain the relationship between child maltreatment and academic failure, Shonk and Cicchetti (2001) used a hierarchical, organizational perspective on development. They suggested that the negative impact of child maltreatment, especially in earlier stages of development, would be exacerbated in school due to the heightened requirement of certain skills such as social competencies, academic engagement, ego-resiliency, and ego control. Shonk & Cicchetti (2001) found empirical support for this model since they found that maltreated children had significantly lower academic engagement, social competence, and ego-resiliency than their non-maltreated peers. Furthermore, academic

engagement mediated the link between maltreatment and academic adjustment (Shonk & Cicchetti, 2001). Slade and Wissow (2007) elaborated this model and developed a heuristic model that links child maltreatment with later academic achievement more directly. In this model, Slade and Wissow acknowledge that (1) child maltreatment affects both mental health and academic achievement, (2) there is a bidirectional relationship between mental health and academic achievement, and (3) mental health might mediate the relationship between child maltreatment and academic achievement.

Even though very few studies analyze moderating/mediating variables that could explain the link between child maltreatment and academic achievement, several possible mediators have been proposed. Kurtz, Gaudin, Howing, and Wodarski (1993) found that parental substance abuse and parental depression mediated the relationship between child maltreatment and poor academic functioning. Eckenrode, Rowe, Laird, and Brathwaite (1995) found that maltreated children were much more likely than others to have moved and switched schools. This, in turn, mediated the relationship between child maltreatment and academic performance. However, why maltreated children moved more often and how that impacted their academic achievement was not clear (Eckenrode, Rowe, Laird, & Brathwaite, 1995). Zingraff et al. (1994) investigated the relationships between child maltreatment, academic achievement, and externalizing problems in a sample of 546 maltreated children and found that academic achievement buffered externalizing problems. This result strengthens the notion of Slade and Wissow (2007) concerning the bidirectional effect of mental health and academic achievement in

maltreated children. Tricket et al. (1994) found in a study on adolescent girls who had been sexually abused that cognitive ability and perceived competence mediated the relationship between sexual abuse and overall academic achievement.

Type, onset, and duration of maltreatment have also been shown to influence the extent to which maltreated children experience academic difficulties. Early onset and chronic maltreatment have been found to exacerbate the negative influence of maltreatment on academic performance (Keiley, Howe, Dodge, Bates, & Petti, 2001; Leiter & Johnsen, 1994). Neglect seem to be the most pervasive type of maltreatment in cases of cognitive delay, an impairment undoubtedly linked with academic achievement (Petrenko, Friend, Garrido, Taussig, & Culhane, 2012). Since neglect often begins early in life and is often chronic, the findings of Petrenko et al. (2012) concerning the deleterious role of early onset of maltreatment and chronicity are in line with the findings of Keily, Howe, Dodge, Bates & Petitt (2011) and Leiter and Jonsen (1994).

Child maltreatment and school absenteeism

School absenteeism, or truancy, is one of the most potent predictors of academic failure (Attwood & Croll, 2015). The reasons for unexcused absence from school are several. Researchers suggest both individual and contextual factors such as mental health problems, high-risk life situations, being bullied in school, learning disabilities, living in a single-parent household, negative relationships with teachers, and a school environment that does not meet the students' needs (Havik, Bru, & Ertesvåg, 2015; Karlberg & Sundel, 2004; Strand, 2014;

Witkow & Fuligni, 2011). Indeed, an overrepresentation of these factors is often found in populations of maltreated children. It is therefore not surprising that several studies have found that maltreated children are more often absent than their peers (Eckenroad, 1993; Fantuzzo et al 2011; Maclean, Taylor & O'Donnell, 2016). However, as in the case of the links between child maltreatment and total academic achievement described above, no study to my knowledge has investigated mediating variables that could explain the trajectories from child maltreatment to school absenteeism.

MAIN AIM

The main aim of the two studies in this thesis was to investigate the role that self-reported child maltreatment plays in the mental health (externalizing and internalizing symptoms), mental well-being, and academic functioning (school absenteeism and relationships with teachers) in a general sample of Swedish adolescents. Data were collected from 1134 (**Study I**) and 1316 (**Study II**) students via self-report questionnaires in classroom settings. **Study I** aimed to explore the relationship between self-reported emotional maltreatment (neglect and abuse) and mental health and mental well-being among 1134 12- to 13-year-old girls and boys (mean age = 12.7, SD = 0.6). The aim of **Study II** was to examine the relationship between child maltreatment and school absenteeism among 14- to 15-year-old girls and boys (mean age = 14.3, SD = 0.6) focusing on differences in self-reported child maltreatment prevalence rates between school absentees and non-absentees. Differences between maltreated and not-maltreated students who reported absenteeism were also analyzed in relation to mental health, perceived school environment, and peer victimization.

SUMMARY OF THE STUDIES

Brief description of the research program

Data for the two studies were obtained from the 1520 children and adolescents enrolled in the Longitudinal Research on Development in Adolescence (LoRDIA) program. LoRDIA is an ongoing multidisciplinary prospective and longitudinal research program studying developmental pathways leading to alcohol and drug use and mental health problems in a non-clinical population of Swedish adolescents aged 12 to 18. The research program is a collaboration between the School of Health and Welfare at Jönköping University and the University of Gothenburg (GU), and covers the fields of social work, psychology, and disability studies. Two cohorts are followed, starting in the 6th and 7th grades. Data are collected from four municipalities with populations of 9000 to 36,000 in southwest and south-central Sweden. A total of 15 schools are enrolled in the program. The research program and data collection protocols were approved by the Regional Research Review Board in Gothenburg (No. 362-13; 2013-09-25) with further approval confirmed for Wave 2 (2014-05-20) and Wave 3 (2015-09-02).

Methods

Participants

At the first wave of data collection, an attrition rate of 25% resulted in a total of 1520 adolescents completing the questionnaire. External omission at baseline was due to absence from school (9%) or declined consent from a caregiver (10%) or the child (6%). In the second and third waves of measurements, 1460 and 1316 students completed the questionnaire. The study population does not differ from total high school population in terms of gender, age, ethnic background, school achievement, or absence from school. In **Study I**, we used data from the first (mean age 12.7) and second (mean age 13.4) waves of data collection. Of the 1520 adolescents enrolled in the research program, a total of 1371 completed the Strengths and Difficulties Questionnaire (SDQ) psychosomatic problems and mental well-being questions at the first wave; 1134 of these also completed the Childhood Trauma Questionnaire (CTQ) at the second wave, yielding an attrition rate of 16.3% between the first two waves of measurements. Chi-square tests showed that the attrition group contained a significantly higher proportion of boys ($p = 0.036$) and of adolescents with divorced parents ($p = 0.021$). Independent samples t -tests showed significantly higher levels of externalizing symptoms ($p = 0.032$) in the attrition group. For all other study variables, there were no significant differences between the attrition group and those who completed questionnaires at both the first and second waves of data collection. **Study II** used data from the third wave of collection (mean age 14.3). Of the 1316 students enrolled at the third wave, 1285 completed all of the items included.

Procedure

Annual data collection began in 2013 and a total of 2021 adolescents from 15 schools were invited to participate in the program. Two cohorts continue to be followed, and students were in the 6th and 7th grade at the time of the first wave of measurements. So far, data has been collected via four annual surveys. The surveys have been conducted in classroom settings using a pen and paper questionnaire administered by trained research assistants. At least one member of the research team monitored the students and was available to answer questions throughout the procedure. It was emphasized that participation was voluntary, that collected information would remain confidential, and that participants were free to withdraw from the study at any time. To ensure confidentiality, questionnaires were assigned codes instead of students' names. Students told the research assistant their name when they submitted their questionnaire. The research assistant then wrote the code assigned to each student on their questionnaire and enfolded it in a closed box. The lists of codes were never stored together with the questionnaires, which were scanned by staff at the School of Health and Welfare in Jonkoping. Before the researchers accessed the data, students were assigned new ID numbers, so it was impossible for a researcher to identify any respondent in the computer files. Before each survey, the social worker or school nurse at each school was contacted and informed about the content of the questionnaire. Students were informed about possibly triggering questions in the questionnaire and were encouraged to contact the social worker or school nurse if they had a negative reaction.

Measures included in Study I and Study II

Childhood maltreatment. The Swedish version of the Childhood Trauma Questionnaire-Short Form (CTQ-SF; Bernstein et al., 1994; Gerdner & Allgulander, 2009) was used to measure experiences of childhood maltreatment. The CTQ is a retrospective self-rating scale aimed to identify childhood abuse and neglect before the age of 12 in teenagers and adults (Bernstein et al., 1994). Items on the CTQ are rated on a 5-point, Likert-type scale with response options ranging from (1) never true to (5) very often true. The CTQ has five subscales: physical abuse ($\alpha = 0.79$), sexual abuse ($\alpha = 0.79$), emotional abuse ($\alpha = 0.69$), physical neglect ($\alpha = 0.79$), and emotional neglect ($\alpha = 0.85$), which have been empirically verified (Bernstein, Ahluvalia, Pogge, & Handelsman, 1997; Bernstein et al., 1994). For this article, an extra item was added to measure experiencing domestic violence. This item was formulated as: “When I was growing up I witnessed violence between adults in my home.” In study I, emotional maltreatment was measured with the emotional neglect and emotional abuse scales.

Mental health symptoms (Internalizing and externalizing symptoms). Mental health was measured using the Swedish version of the Strengths and Difficulties Questionnaire (SDQ-S; Goodman, 1999, 2001; Smedje, Broman, Hetta, & von Knorring, 1999). The SDQ-S is a self-rating scale containing 25 items that screens for behavioral and emotional problems, experienced during the last six months, in children and adolescents. The SDQ provides five problem scales (Emotional Symptoms, Conduct Problems, Hyperactivity-Inattention, Peer Problems, and Total Difficulties) and one prosocial scale (Goodman, 1999, 2001) From the five scales we created a three-factor

model consisting of Internalizing (Emotional + Peer problems), Externalizing (Conduct + Hyperactivity-Inattention), and Total Difficulties (Internalizing + Externalizing) scales. This procedure has been recommended when using the SDQ in a low-risk, general population sample (Goodman, Lamping, & Ploubidis, 2010).

Psychosomatic symptoms. The Psychosomatic Problems scale (PsP; Hagquist, 2008) used asks questions about difficulties in concentrating, difficulties falling asleep, headaches, stomach aches, feeling tense, lack of appetite, feelings of sadness, and dizziness during the last six months. Response options are: “never,” “rarely,” “sometimes,” “often,” and “always” ($\alpha = 0.91$).

Study I. Mental well-being. Mental well-being was measured using an index created by Boson, Berglund, Wennberg, and Fahlke (2016) showing a satisfactory alpha value (0.77). The index consists of two items: (1) In general, how happy are you with life at the moment? (scored 1–4: “very happy,” “quite happy,” “quite unhappy,” and “very unhappy.”) and (2) I think that my life has purpose and meaning (scored 1–4: “completely agree,” “partly agree,” “partly disagree,” and “completely disagree”). Scores from these items were merged into a reversed index ranging from 2 to 8, with 2 indicating the lowest degree of mental well-being and 8 indicating the highest possible mental well-being.

Study II. School absenteeism. Students reported absenteeism via self-report. The question was formulated as: Have you been truant from school this term (at least one whole day of unexcused absenteeism)? Responses were: 0 (no, this has not happened), 1 (1–3 times), 2 (4–10 times), and 3 (more than 10 times). Since data were

gathered one month into the term, and a school-day in high school in Sweden is a mean of five hours, one full day of “unexcused absence this term” equals five hours and about 5% of school-time. Hence, response option 1 means a range of 5–15% of unexcused absence, 2 = 20–50%, and 3 = 50% or more. In the current study, response-option 1 was defined as moderate absenteeism ($n = 132$) and response options 2 and 3 were defined as excessive absenteeism ($n = 39$).

Relationship to teachers. Students’ perceptions of their relationships with their teachers were measured by three questions, using 4-point scales. The questions were: Do your teachers like their students? Do your teachers care about the students? and Do you think that your teachers are fair with the students ($\alpha = 0.87$)? Response options ranged from 1 (almost all teachers like/care/are fair to the students) to 3 (many teachers do not like/do not care/are fair to the students).

School problems. Children used 4-point Likert scales to answer four questions: Do you enjoy school? (range: “a lot” to “not at all”); Do you try to do your best in school (range: “mostly” to “almost never”); How would you describe the relationship between you and school? (range: “like best friends” to “like enemies”); and Are you satisfied with your schoolwork? (range: “mostly” to “almost never”); $\alpha = 0.71$ (Kerr & Stattin, 2000).

Peer climate in classroom. Four questions were formulated as: In our class (1) we help each other, (2) we are kind to each other, (3) we enjoy doing things together, and (4) nobody feels excluded. Answers ranged from 1 (totally disagree) to 4 (totally agree); $\alpha = 0.82$.

Sexual harassment. A modified version of the sexual harassment scale was used (Marshall, Faaborg-Andersen, Tilton-Weaver, & Stattin, 2013). The original 10-item scale was reduced to three items: Has anyone showed you offensive images, photos, drawings, or text-messages? Has anyone made remarks about your body in a sexual way that you didn't like? Has anyone touched your body against your will in a sexual way? Responses ranged from 1 (never) to 3 (often) and covered the last semester ($\alpha = 0.55$).

Personal harassment. A three-item scale assessed verbal harassment aimed at the adolescents. This scale is a modified version of the five-item personal harassment scale from Trifan and Stattin (2015). An example was: "Has anyone told you that you need to change to be accepted—for example, lose weight, or change your style or the way you are?" Responses ranked on a three-point scale and covering the last semester ranged from 1 (never), to 3 (often; $\alpha = 0.72$).

Ethnic harassment. A shortened version of the ethnic harassment scale (Bayran Özdemir & Stattin, 2014) was used. The three items were: Have you ever been teased in a mean way because of where you or your parents come from? Have you ever felt badly treated in school because of where you come from? Has anyone said nasty things to you because of where you come from? Responses, which were scored on a 3-point scale and covered the last semester, ranged from 1 (never) to 3 (often; $\alpha = 0.85$).

Sociodemographic data. The following demographic variables were used: "living in a single household," "perceived family economy," and "being born in Sweden." "Perceived family economy" was measured on an index consisting of three questions: (1) "How

does your household economy compare to others were you live” (2) “If you were to compare yourself with the others in your class, do you have more or less money to buy things with”? And (3) “If you want things that cost a lot of money, can your parents afford them if they think that you need them”? For question 1 and 2 response options ranged from 1 to 5 and for question 3 from 1 to 3 with a lower number indicating a lower perceived family economy.

Statistical analyses

In **Study I**, only the emotional abuse and emotional neglect scales of the CTQ was administered. Since there are no population-based norm data for the CTQ-SF on early adolescents, the participants were grouped into three emotional neglect and emotional abuse severity groups (none, moderate and severe,) by percentile as advised by Bernstein and Fink (1998). In order to analyze main and interaction effects of emotional maltreatment (i.e. emotional abuse and neglect) and gender on the outcome variables (internalizing, externalizing and psychosomatic symptoms, and mental well-being) a 3 (none vs. moderate vs. severe maltreatment) \times 2 (boys vs. girls) ANOVA was used. One-way ANOVAs were also conducted for emotional abuse/emotional neglect in girls and boys separately to explore differences in mean scores on the outcome variables between the three emotional maltreatment severity groups. Effect sizes were calculated using eta square and interpreted as advised by Cohen (1988, pp. 284-7).

In **Study II**, we conducted one-way between-group ANOVAs and chi-square tests for independence to compare mean scores or frequencies between students reporting *no*, *moderate*, and *excessive*

absenteeism for age, maltreatment, gender, perceived family economy, single household, and being born in Sweden. The six child maltreatment categories were dichotomized. Any respondent reporting scores above the cut-off as described in Bernstein and Fink (1998) for any level of physical abuse, sexual abuse, or witnessing domestic violence was coded as having been exposed. For emotional abuse and emotional/physical neglect, only those adolescents reporting severe levels of maltreatment were coded as exposed. One-way between-group ANOVAs were then conducted to analyze differences in externalizing, internalizing and psychosomatic symptoms, relationship to teachers, peer climate in the classroom, school problems and sexual, physical and personal harassment between students reporting no absenteeism, absenteeism without child maltreatment, and absenteeism with child maltreatment. We conducted post-hoc comparisons using the Bonferroni test to compare differences in mean scores between the three groups, and Eta square to estimate effect size. The software package used in the statistical analyses in both studies was SPSS version 21.0.

MAIN FINDINGS AND CONCLUSIONS

Study I

Results of this study indicate that emotional maltreatment has a significant, negative impact on the mental health and mental well-being of young adolescents. This was found to be true for both genders, for both emotional abuse and emotional neglect, and for all outcome variables except that boys reporting emotional abuse did not report higher degrees of psychosomatic symptoms. It should be noted, however, that the relationships between emotional neglect and outcome variables yielded larger effect sizes than those of emotional abuse. There was also a “dose-response” relationship between both emotional abuse and emotional neglect on outcome variables that might indicate a causal effect of maltreatment. An interaction-effect on outcomes was also found between emotional maltreatment and gender. However, different variables showed different directions of these interaction effects. For internalizing symptoms, psychosomatic symptoms, and mental well-being, differences between boys and girls were larger in the severely abused/neglected groups than in the not-abused/neglected groups, with girls reporting more problems than boys. For externalizing symptoms, differences between girls and boys were smaller in the abused and neglected groups than in the not-abused or neglected groups, where boys reported more problems than girls.

There were associations between emotional maltreatment and negative effects on outcome variables for both girls and boys.

However, except for externalizing symptoms, girls reported a larger negative impact of emotional maltreatment on outcome variables than boys. Emotional maltreatment severity seems to magnify gender differences in internalizing symptoms, psychosomatic symptoms, and mental well-being while emotional maltreatment severity seems to even out the differences in externalizing symptoms between girls and boys. See Figures 1 and 2.

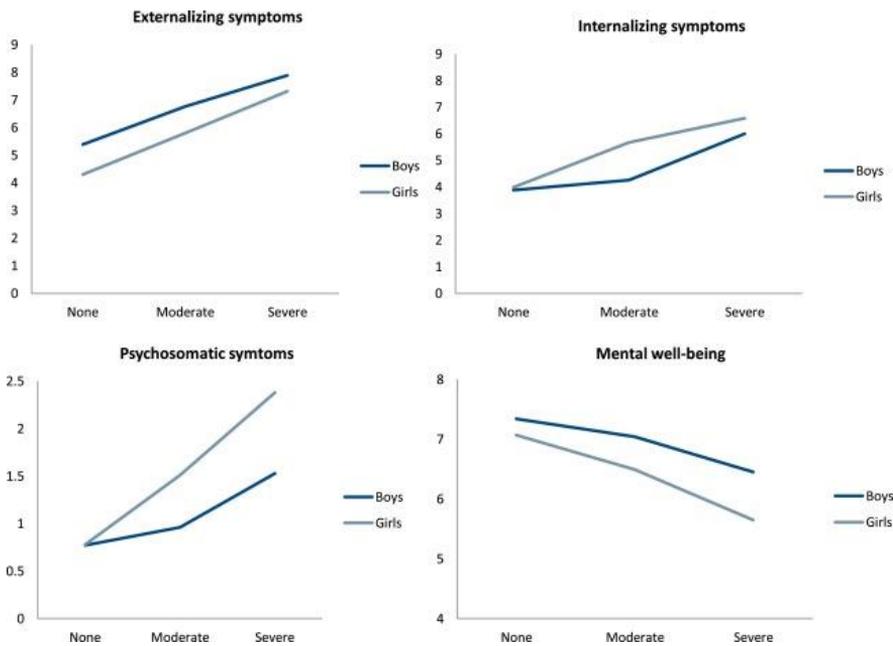


Fig.1. Illustration of interaction effects between level of emotional neglect and gender on psychosomatic symptoms, mental health and mental well-being.

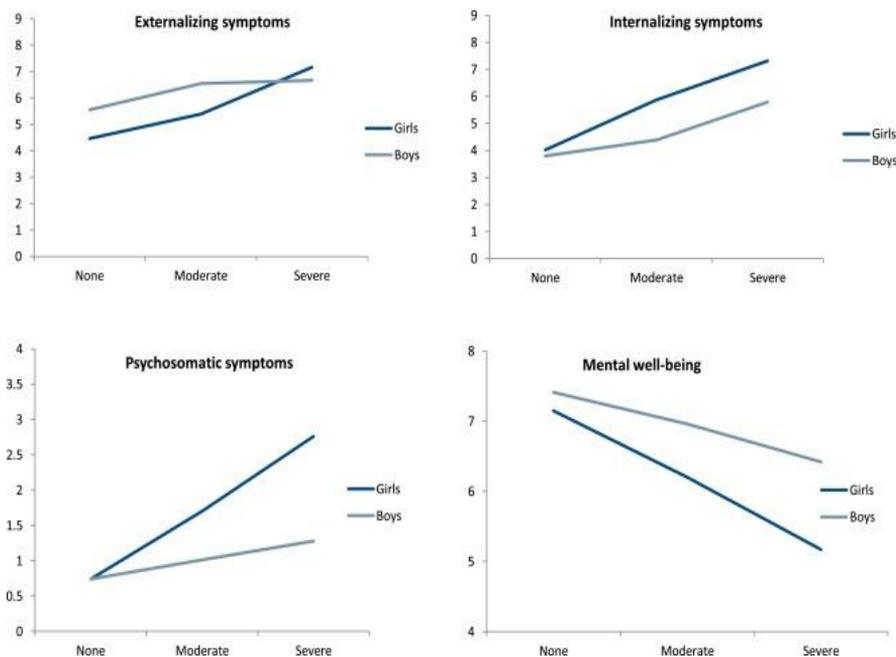


Fig. 2. Illustration of interaction effects between level of emotional abuse and gender on psychosomatic symptoms, mental health and mental well-being

STUDY II

All six types of maltreatment were overrepresented in adolescents reporting school absenteeism. Students reporting moderate and severe absenteeism had significantly higher rates of both single and poly-victimization than other students. See Table 1 for percentages. Maltreated absentees reported higher levels of internalizing, externalizing, and psychosomatic symptoms, more negative relationships with teachers, and higher levels of peer harassment than absentees who reported no maltreatment.

Results from this study indicate a relationship between school absenteeism and child maltreatment. However, the well-known risk factors that child maltreatment and school absenteeism share, such as single parent households and low-income, were not controlled for in this study. Therefore, the results must be interpreted with caution. The reports of maltreated absentees of more mental health symptoms, more personal harassment, and a more negative relationships with their teachers could indicate that absentees who have experienced child maltreatment are an especially vulnerable group who might need tailored interventions.

Table 1						
Child maltreatment in students reporting no, moderate, and excessive school absenteeism						
Child maltreatment (% Yes)	Total sample (%) (n = 1285)	No Absenteeism (%) (n = 1108)	Moderate Absenteeism (%) (n = 132)	Excessive Absenteeism (%) (n = 39)	X^2	<i>p</i> /phi
Experience domestic violence	7.3	6	11.5	27.5*	30.23	.000/.15
Sexual abuse	3.3	2.6	6.8*	10*	12.31	.002/.10
Physical abuse	13.1	11.6	22.9*	25*	18.3	.000/.12
Emotional neglect	11.3	9.5	19.7*	33.3*	31.83	.000/.16
Emotional abuse	7.7	6.8	11.5	20*	12.5	.002/.10
Physical neglect	7.2	6	11.3	19.5*	15.2	.001/.11
Total number of maltreatment experiences (% Yes)						
0	74.9	77.7	58.6*	48.7*	42.25	.000/.18
1	15.6	14.2	25*	23.1		
2-6	9.6	8.1	16.4*	28.2*		

* $R > 1.96$ = major contributor concerning the significant result

GENERAL DISCUSSION

Prevalence of the main subtypes of child maltreatment

In the studies presented in this licentiate thesis, child maltreatment included experiences of physical, sexual, and emotional abuse, physical and emotional neglect, and experiencing domestic violence before the age of 12. In **Study II**, the prevalence of all these sub-types was investigated, while in **Study I** only emotional maltreatment was included. Because Sweden has a significantly lower prevalence of physical abuse than other countries, results of these studies will be discussed primarily in relation to studies in samples of Swedish adolescents. Although the prevalence of physical abuse has been studied regularly in Sweden since 1980, results will be discussed in relation to more recent studies published after the year 2000. Table 2 shows results from studies using self-report measures of child maltreatment on normative adolescent populations in Sweden. Prevalence rates for each of the six sub-categories of child maltreatment in the current thesis will be discussed in relation to earlier studies.

Emotional neglect. I found two Swedish studies including adolescents' self-reported emotional neglect (Aho et al., 2016; Jansson & Jernbro, 2016). As seen in Table 3, similar prevalence rates of about 5% were reported in these studies. This is interesting since the prevalence of emotional neglect varies widely in earlier, international studies. In

Study II, the prevalence of self-reported emotional neglect was higher (11%). This difference could perhaps be explained by procedural factors. Stoltenburg et al. (2013) found that when fewer items assessing emotional maltreatment were used, lower prevalence rates were reported. In both Aho et al. (2016) and Jansson and Jernbro (2016), only one item was used to measure emotional neglect, while the CTQ used in **Study I** and **Study II** contains five items measuring emotional neglect. Furthermore, the adolescents in the studies by Aho et al. (2016) and Jernbro and Jansson (2016) were a mean of three and two years older, respectively, than those in the current thesis. Because emotional neglect has been reported to have an early onset, it is possible that younger participants have more current memories of emotional neglect before the age of 12. Since these younger adolescents are also more dependent and typically have more direct contact with their caregivers than older adolescents, it is possible that they are more attentive and sensitive to lack of emotional warmth and nurturing than older adolescents. This sensitivity could be assumed to lead to younger adolescents reporting a higher level of emotional neglect, but in the study by Jernbro and Jansson (2016), the 15-year-olds reported less emotional neglect than the 17-year-olds.

Emotional abuse. In two earlier studies Swedish adolescents reported experiences of emotional abuse (Aho et al., 2016; Jernbro & Jansson, 2016). Both earlier studies reported higher prevalence rates of emotional abuse than those reported in **Study II**. This might be explained by the fact that only severe emotional abuse was included in the current study. Furthermore, in the CTQ, respondents are asked to report experiences only up until the age of 12. In the other two studies

(Aho et al., 2016; Jernbro & Jansson, 2016) there was no specified age range. Both of these differences between the previous and current studies of emotional abuse are also true for emotional neglect, for which higher prevalence rates were reported in the current study than in the two earlier studies. A major difference between these two aspects of emotional maltreatment is that emotional neglect generally has an early onset and is often chronic. Therefore, the self-reported lifetime prevalence should be the same regardless of whether respondents are 13 or 17 years old. The degree of harsh and aggressive tone and language between parent and teenager, characteristic of emotional abuse, could be expected to increase during adolescence. Hence, a 17-year-old will probably have experienced more incidents of emotional abuse than a 13-year-old. This could perhaps partly explain the differences in prevalence rates found in the **Study II** and the earlier studies.

Physical abuse. As seen in Table 2, seven earlier studies presented prevalence rates of self-reported physical abuse among adolescents that closely match the prevalence found in **Study II** (13.1%). It is important to note that these results concern experiences of *ever* having been physically abused by an adult. Asking only about more serious or chronic physical abuse would most likely yield lower prevalence rates.

Child sexual abuse. As seen in Table 3, in seven earlier Swedish studies adolescents self-reported experiences of CSA with a prevalence range of 1.1–6.8% for boys and 5.7–14 % for girls. In **Study II**, 3.3% of adolescents reported sexual abuse. Analyses were not stratified by gender, which makes it difficult to directly compare with earlier

studies; however, prevalence rates in **Study II** and earlier Swedish studies are all fairly lower. This might be explained in several ways. First, **Study II** was a longitudinal study, so the participants knew they were not anonymous. Although coded numbers were used instead of names on the questionnaires, the sense of not being anonymous might have negatively impacted participants' willingness to report sexual abuse. Furthermore, the specified age in the CTQ of 12 years probably resulted in most reported CSA perpetrated within the home or by someone close to the child. In many earlier studies, peer victimization was included, which of course would have yielded higher prevalence rates.

Physical neglect. I found only one earlier study in a Swedish sample of adolescents reporting physical neglect (Jernbro & Jansson, 2016). In this earlier study, items from the ACE study were used to measure emotional and physical neglect (Anda, Butchart, Felitti, & Brown, 2010) and only one percent of respondents reported physical neglect. The study included in this thesis found a prevalence rate of 7.2% and meta-analyses of physical neglect worldwide found a mean prevalence rate of 16.3% (Hagborg, Berglund, & Fahlke, 2017; Stoltenborgh, Bakermans-Kranenburg, & van Ijzendoorn, 2013). In their meta-analysis of the global prevalence of emotional and physical neglect Stoltenborgh et al. (2013) found a large variety in measurement, sampling procedures, and definitions of physical neglect. All these variables were found to influence prevalence rates. In the current study, physical neglect was measured continuously and five items in the CTQ were used to measure physical neglect compared with the one item used by Jernbro and Jansson (2016). Stoltenborgh et

al. (2013) found that procedural factors (e.g. the number of items used to assess neglect) strongly affected self-reported prevalence of physical neglect but not emotional neglect. This could explain the differences between the current study and the earlier study by Jernbro and Jansson (2016).

Experiencing domestic violence. Six earlier studies were identified in which 5–14% of sampled Swedish adolescents reported experiencing domestic violence. The lowest prevalence rate in Jansson (2007) is probably explained by their measurement of only more pervasive and recurring experiences of domestic violence. In the study included in the current thesis, 7.3% reported experiencing domestic violence. This result on the lower end of reported prevalence rates may be due to the younger age of the participants. In the earlier studies, participants ranged from 15 to 19 years old and could therefore possibly have experienced more domestic violence. Furthermore, as discussed in the section on CSA, even though many measures were taken to ensure the safe and confidential administration of the questionnaire, it is possible that the adolescents might not have been confident of their complete anonymity when the questionnaire was administered. They were, after all, sitting quite close to their classmates and told the research assistant their name when they submitted the questionnaire. However, the reported prevalence of physical abuse was the same in this study as in earlier studies. This should not have been the case if a perceived lack of anonymity among respondents influenced prevalence rates. Furthermore, in the current study, only one item was used to measure experiences of domestic violence while the earlier studies used several items.

Table 2

Studies using self-report measures of child maltreatment on normative, adolescent populations in Sweden

	Measure	Emotional neglect (F/M)	Emotional Abuse (F/M)	Physical Abuse (F/M)	Sexual Abuse (F/M)	Physical neglect	Experiencing domestic violence (F/M)
Study II Hagborg et al. (2017)	CTQ	11.3	7.7	13.1	3.3	7.2	7.3
Jernbro and Jansson (2016)	Conflict Tactics Scales	6.2/5.6	16.7/13.2	14*	14/2	1	14
Aho, Gren-Landell, and Svedin, (2016)	JVQ	6.6/3.0	22.3/8.9	15.4/9.1	5.7/1.1	-	9.3/4.1
Janson et al. (2011)	Conflict Tactics Scale	-	-	13.8	-	-	-
Nilsson, Gustafsson, and Svedin (2010)	LITE	-	-	13	3	-	11.5

Nilsson, Gustafsson, Larsson, and Svedin (2010)	LYLES	-	-	16	1	-	11.2
Annerbäck, Wingren, Svedin, and Gustafsson, (2010)	Instrument specific for that study	-	-	15	-	-	10.8
Holmberg and Hellberg (2010)	Q90	-	-	-	8.3/1.2	-	-
Priebe and Svedin (2009)	Instrument specific for that study	-	-	-	13.5/5.5	-	-
Jansson (2007)	Conflict Tactics Scale	-	-	13	-	-	5
Åslund, Nilsson, Starrin, and Sjöberg (2007)	Instrument specific for that study	-	-	-	12.5/6.8	-	-

Child maltreatment and mental health

Results from **Study I** and **Study II** indicate associations between child maltreatment and a variety of mental health problems and school factors such as unexcused absenteeism and poor relationships with teachers. This is in line with earlier literature examining mental health following child maltreatment (Jaffe, 2017; Taillieu, Brownridge, Sareen, & Afifi, 2016)

In **Study I**, significant associations were found between both dimensions of emotional maltreatment; internalizing, externalizing, and psychosomatic symptoms; and mental well-being. Furthermore, both girls and boys reported significant negative impact of emotional maltreatment on the outcome variables. There was an especially powerful association between self-reported emotional neglect and all outcome measures for both girls and boys. This strengthens the notion that emotional neglect is a serious risk factor for subsequent negative outcomes. However, interaction analyses of emotional maltreatment and gender on outcome variables showed that girls reported a more serious impact of emotional maltreatment than boys.

There have been surprisingly few studies on gender differences in internalizing, externalizing, and psychosomatic problems following child maltreatment and those few have shown mixed results (Crittenden et al., 1994; Spinnazola et al., 2014). However, girls typically report more internalizing symptoms and boys report more externalizing symptoms after child maltreatment. In the current study, these findings were supported in relation to internalizing but not to

externalizing symptoms. The self-reported severity of emotional maltreatment in the current study seemed to be related to girls' reports of gender-atypical symptoms (externalizing problems) in contrast to boys' responses. Few studies include analyses of gender differences that could help explain why girls reported more severe consequences after maltreatment than boys in **Study I**. However, girls in general have been found to report higher levels of emotional symptoms and depression than boys, and this could partly explain these observed differences. In **Study I**, however, there were no differences between girls and boys in internalizing or psychosomatic symptoms in the groups that reported no maltreatment. Hence, baseline differences between girls and boys cannot fully explain the observed differences in severity of maltreatment outcomes.

From the perspective of transactional ecological models of developmental psychopathology, risk and protective factors both within the adolescent and from all levels of the surrounding ecology have the potential to contribute to the findings of gender differences in outcomes found in **Study I**. Below, I discuss how these differences between girls and boys may be explained by variables at the individual (pubertal timing), microsystem (experiences of sexual abuse), and macrosystem (gender norms) levels.

Girls generally enter puberty earlier than boys. Early pubertal timing has been linked to internalizing symptoms, especially among girls (Galvao et al., 2014; Kaltiala-Heino, Marttunen, Rantanen, & Rimpelä., 2003) and earlier studies have linked child maltreatment to early pubertal timing (Negriff, Saxbe, & Trickett., 2015). It is therefore possible that unmeasured differences in numbers of girl and boys who

have just entered puberty could partly explain differences in their symptom levels. Girls' and boys' similar levels of internalizing symptoms at baseline could, however, contradict such an argument. It has been suggested that heightened vulnerability to internalizing symptoms for girls with an early onset of puberty is linked to stress or challenging life situations (Goodyer, Herbert, Tamplin, & Altham., 2000). In this case, such differences should be most evident in the more high-risk (maltreated) group. Early pubertal timing is an excellent example of how risk factors from different levels of the ecology interact to increase the risk of psychopathology. For example, Hamlat et al. (2015) found that early pubertal timing both increased the risk of and sensitized adolescent girls to peer victimization. Both these factors together with body image predicted subsequent internalizing symptomatology. Since findings from **Study II** indicate a higher level of peer victimization among maltreated adolescents than their non-maltreated peers, there might be a link between child maltreatment, pubertal timing, peer victimization, and internalizing symptoms.

Sexual abuse was not measured in **Study I**. It has been proposed that the higher levels of reported internalizing symptoms among girls could be explained by the fact that girls are more likely to be victims of sexual abuse and that could be linked to internalizing symptomatology. It is therefore possible that girls in **Study I** who reported emotional maltreatment were also more often victims of sexual abuse than boys, and this may explain why girls report higher levels of symptoms than boys. Results from many earlier studies indicate that girls suffer more social and cultural stressors than boys

during adolescence and report more internalizing symptoms and lower levels of mental well-being than boys.

Another possible explanation for the gender differences in symptom patterns following maltreatment is that gender role expectations may be more supportive or tolerant of certain symptoms in girls and of other symptoms in boys. Social expectations about gender suggest that men and boys are viewed as active and aggressive, whereas women and girls are viewed as passive and emotional (e.g. Doey, Coplan, & Kingsbury, 2014). This means that externalizing symptoms and behaviors could be more accepted for boys while internalizing and depressive behaviors could be more accepted for girls. This hypothesis would also imply that there might be several behavioral outcomes of maltreatment, not measured in the included studies, that boys might have reported more often had different questions been asked. Earlier studies have also found that boys and men tend more often than girls and women to use drugs and alcohol as coping strategies following maltreatment and other traumatic events (Tolin & Foa, 2006).

Child maltreatment and school factors

All six sub-types of child maltreatment (sexual, physical, and emotional abuse, emotional and physical neglect, and experiencing domestic violence) were overrepresented in the group that reported school absenteeism. Even though there are few studies examining the relationship between child maltreatment and school absenteeism, these results were expected. First, school absentees and maltreated children are both high-risk groups that share many correlates such as

psychosomatic symptoms, drug use, depression, anxiety disorders, low self-esteem, and antisocial problems (Egger, Costello, & Angold, 2003; Ek & Eriksson, 2013; Thornton, Darmody, & McCoy, 2013). It is therefore not surprising that these groups overlap. Child maltreatment and school absenteeism also share many risk factors: poverty, low levels of parent education, larger family size, residential mobility, and neighborhood poverty levels have all been found to increase risk for both child maltreatment and academic failure (Mörk, Sjögren, & Svaleryd, 2014; Trickett & Schellenbach, 1998). In **Study II**, maltreated absentees differed from the not-maltreated absentees in three distinct areas: relationships with teachers, peer victimization, and mental health. From the developmental psychopathology perspective that informs this thesis, these factors can be assumed to have bidirectional relationships with school absenteeism. There are to my knowledge no studies investigating moderating variables that could explain the link between child maltreatment and absenteeism. In **Study II**, some variables were more common among maltreated absentees than not-maltreated absentees. Hence, moderator analyses including these variables could yield important information concerning developmental pathways from child maltreatment to school absenteeism.

For example, maltreated absentees reported significantly more mental health problems than not-maltreated absentees. Given the bidirectional relationship between absenteeism and mental health, it is possible that the maltreated adolescents who are also school absentees is an especially vulnerable group since absenteeism poses a risk to exacerbate pre-existing mental health problems and vice versa. The

findings in **Study II** lend support to Slade and Wissow's (2007) model that links child maltreatment to academic achievement. In this model, child maltreatment affects both mental health and academic achievement, there is a bidirectional relationship between mental health and academic achievement, and mental health might mediate the relationship between child maltreatment and academic achievement. However, it should be noted that we do not know whether the difference in mental health between non-maltreated and maltreated absentees are due to more mental health problems in the total maltreated group or if it is specific to maltreated absentees.

Another variable on which the maltreated absentees differed from the not-maltreated absentees was their relationship with teachers. Maltreated absentees reported a more negative relationship with their teachers than not-maltreated absentees. This is interesting because earlier studies showed that a positive relationship with teachers buffers against absenteeism (Veenstra, Lindenberg, Tinga, & Ormel, 2010). Using the organizational perspective on development described earlier, it is possible that there is a link between early attachment deficits in maltreated children and their inability to form and use positive relationships with important others outside of the family. Hence, theoretically, an early attachment deficit might instigate a developmental pathway to academic failure via poor relationships with teachers and subsequent absenteeism. Earlier studies have investigated maltreated children's relationships with teachers, but they have shown mixed results (Lynch & Cicchetti, 1992).

Lastly, in **Study II**, maltreated absentees reported significantly more peer victimization than not-maltreated absentees. This

strengthens the notion that maltreated children not only run a heightened risk of multiple maltreatment experiences but also of subsequent victimization by peers (Holt, Kantor, & Finkelhor, 2009; Hosser, Raddatz, & Windzio, 2007; Smith, 2017). Victimization in school has also been found in previous studies to be a major predictor for school absenteeism (e.g., Karlberg & Sundell, 2004). Therefore, theoretically, peer victimization could be a factor that mediates the relationship between child maltreatment and school absenteeism. The relationships between child maltreatment and subsequent outcomes such as mental health, peer victimization, relationships with teachers, and school absenteeism found in **Study II** illustrate both the concepts of cascading effects following maltreatment and multi-finality (one risk factor resulting in many different outcomes).

Implications for practice

In the studies included in the current thesis, adolescents who reported maltreatment also reported more mental health problems, poorer mental well-being, more negative relationships with teachers, higher levels of school absenteeism, and more peer victimization than their not-maltreated peers. Accordingly, these findings hold important implications for staff in schools, health care institutions, and social services. First preventive strategies must be addressed. In line with the transactional ecological models of Cicchetti and Rizzley (1981) and Belsky (1980), who propose that the etiology of maltreatment is rarely explained by a single risk factor, broad supportive interventions for families should be recommended. Such interventions could include home visitation and early support programs for new parents who have

been identified as at risk of maltreating. Some evidence-based parent training programs (e.g., Circle of Security home visiting and SafeCare) specifically address the prevention of parental abuse and neglect. Such programs should be made available to social services and maternity and pediatric healthcare.

Although it is hard to assess the relative impact of emotional maltreatment in **Study I** because of possible unreported co-existing forms of maltreatment, a heightened awareness of emotional maltreatment in mental health and social services should be encouraged. Otherwise, screening and treatment plans risk focusing exclusively on sexual or physical abuse. Furthermore, results from **Study II** indicate that the school system needs to add a trauma-informed perspective to many areas of practice. Since experiences of maltreatment were linked to relations with teachers, peer victimization, and school absenteeism, professionals such as teachers, school psychologists, and social workers all need to assess these difficulties in a way that identifies maltreated adolescents. This is important for several reasons. First, of course, is that ongoing maltreatment must be stopped. For example, in **Study II**, close to a third of adolescents reporting excessive absenteeism also reported experiencing domestic violence, severe emotional neglect, and physical abuse. Furthermore, nearly one third of absentees reported multiple maltreatment experiences (two types of maltreatment or more). These results clearly show the necessity of screening for maltreatment experiences when working with interventions to combat school absenteeism.

Second, there might be specific ways in which maltreatment and trauma interfere with school functioning. In line with the

developmental psychopathology perspective, the outcomes studied in this thesis can have multiple causes. In line with the concept of multifinality problematic relationships with teachers, peer victimization, school absenteeism, and mental health problems can be caused by risk factors from all levels of the ecology surrounding the child as well as biological and psychological risk factors within the child. Naturally, the primary causes and mechanisms underlying a certain problematic behavior will guide the focus of the intervention used. Maltreated adolescents therefore need to be identified in order to tailor interventions to benefit them individually. For example, students with post-traumatic stress disorder, a common diagnosis among maltreated children, have been found to struggle with intrusive images when working on tasks that demand high levels of concentration (Broberg, Dyregrov, & Lilled, 2005). If maltreatment is unknown to professionals, adolescents' behavioral struggles risk being misunderstood as motivational problems or neuropsychiatric conditions. This could result in interventions failing to create a good-enough learning environment for maltreated adolescents. Since academic functioning is a powerful buffer against mental health and peer problems for maltreated adolescents, a trauma-informed work force in schools is vital for their later adaptation.

Implications for future research

The findings from these two studies stimulate research questions that could be empirically tested in future studies. Factors that could help us explain the difference between the severity of negative outcomes between girls and boys following maltreatment, for example, should be

further investigated. There are several possibly moderating variables such as self-confidence, attachment to caregivers, body-image, pubertal timing, adherence to gender norms, and peer relations that could probably help explain why girls report more severe negative consequences following maltreatment than boys.

Furthermore, the role of poly-victimization in the difference in outcome severity between girls and boys need to be examined. The fact that many types of maltreatment tend to co-occur is a robust finding in the literature on child maltreatment. Since only emotional maltreatment was examined in **Study I**, this needs to be further investigated in relation to gender differences in outcomes when data on all types of maltreatment are available.

Since results from some earlier research indicate that boys and men tend to report other types of negative outcomes following maltreatment and trauma, a wider variety of outcome variables should be investigated in relation to gender differences. For example, drug and alcohol use and delinquency have earlier been found to be overrepresented among maltreated boys compared with maltreated girls (Tolin & Foa, 2006). Hence, to get a fuller picture of gender-specific outcomes following maltreatment, delinquency and drug/alcohol use among maltreated adolescent girls and boys should also be examined.

The results of **Study II** raise some important questions in relation to educational outcomes following maltreatment. First, no gender differences were found in levels of absenteeism, but gender was not examined in relation to experiences of maltreatment. This could be important in several ways. First, knowledge about gender differences

in levels or sub-types of maltreatment could be important. Second, results from **Study II** indicate a relationship between experiences of maltreatment and school absenteeism, but we do not know whether this relationship is different in girls and boys. Therefore, analyses of the interaction effects of maltreatment and gender on school absenteeism could yield important knowledge.

Limitations

Some limitations need to be considered when interpreting the results of the two studies included in this thesis. First, data relied on self-reports in both studies. If multiple sources (e.g., parental reports or records from social services) had been used, this might have had an impact on the found prevalence of both child maltreatment and school absenteeism. However, self-reported maltreatment experiences have been found to be more predictive of self-reported mental health problems than observational data (Shaffer, Huston, & Egeland, 2008). Furthermore, self-report seems to be the best way to assess school absenteeism due to inconsistent reporting practices in schools (Henry, 2007).

Second, both **Study I** and **Study II** are cross-sectional studies. This means that we do not know the direction of the relationships found. It is possible, for example, that depressed adolescents are biased towards a more negative interpretation of their upbringing that would result in over-reporting child maltreatment. It is also possible that high levels of school absenteeism affect relationships with teachers in a negative way so that this is an outcome of absenteeism rather than a risk factor.

Third, even though the CTQ is a widely used instrument for measuring child maltreatment, it has not been used frequently in younger populations. Moreover, the continuous scales of the CTQ may not be optimal for measuring prevalence (Aho, Gren-Landell & Svedin, 2016). Thus, it is possible that an instrument with dichotomous response options, more frequently used on early adolescents, might have been more suitable for measuring prevalence of child maltreatment in this sample. However, the continuous scales included in CTQ allowed us to analyze not only the cumulative effect of several sub-types of maltreatment, but also the severity of each maltreatment subtype.

Finally, since the LoRDIA program uses a longitudinal design, respondents are not entirely anonymous. A cross-sectional design would have allowed respondents total anonymity, which might have made it easier for respondents to report more accurately on sensitive issues such as child maltreatment. However, as described in the Procedures section, we took several measures to make students feel safe while completing the questionnaire. Furthermore, the child maltreatment prevalence rates found in **Study II** are fairly similar to those found in earlier cross-sectional studies. Hence, the longitudinal design might not have had a significantly negative impact on reporting sensitive information such as child maltreatment.

Ethical considerations

Three ethical principles have been proposed for longitudinal research involving children and adolescents (Kotch, 2000). The first is *justice*, meaning the respondents have to be treated fairly and with respect.

Some have proposed that all non-therapeutic research involving children in which the participating child cannot be expected to gain any personal benefit is exploitation (Kotch, 2000). However, without such research valuable knowledge that indirectly helps this vulnerable group would be lost and little development and progress would be made in the field. To ensure fair treatment for the participating adolescents in the LoRDIA program, thorough actions were taken to ensure students' confidentiality and integrity when responding to the questionnaire. Teachers were instructed not to answer students' questions about the questionnaire, students were placed as far from each other as possible in the classroom, and the questionnaire was coded so no names were written on the questionnaire. Trained research assistants (all with prior experience of working with children) were available to answer questions throughout the procedure. Furthermore, the school psychologist and social worker in each participating school were notified before data collection about sensitive questions in the questionnaire. Students were given clear instructions on how to contact the school psychologist and social worker and were encouraged to do so if they had any negative reactions to the questionnaire.

The second ethical principle deals with *Autonomy*. Respect for persons requires that participants in research give their informed consent. To address this issue, students who participated in the LoRDIA program were given a detailed introduction to how the data would be used. Information was also given about the coding-procedures described in the Procedures section. Students were also promised full confidentiality. In the introduction, given by a member of the research team, the questionnaire and its content were described

in such a way that students would be aware of the nature of the questions. Following this description, it was clearly stressed that participation was voluntary and that one could cancel participation at any time. If a student chose to withdraw participation, this student's questionnaire would be removed from the study immediately.

The last ethical principle is *Beneficence*. The longitudinal design of LoRDIA and the use of validated measures of child maltreatment may allow us to inform school and mental health services about prevention and treatment strategies. With this design, it is also possible to analyze and describe how negative consequences of maltreatment develop and change over time. For example, there might be no relationship between child maltreatment and school absenteeism in 7th grade but a strong relationship in the 9th grade. Cross-sectional studies conducted only in the 7th grade then risks to suggesting a wrongful conclusion that there is no relationship between maltreatment and school absenteeism. The longitudinal design therefore allows us to detect a wider variety of negative outcomes following maltreatment than a cross-sectional study would. This knowledge is important and could inform decision makers of the magnitude of resources that need to be allocated to ensure maltreated adolescents a fair chance of optimal development. It is, however, not likely that the participating students will benefit personally. Their participation was motivated by altruism (and perhaps the opportunity to not work on ordinary school assignments for one hour). The students were informed of the purpose of the study and the great majority wanted to contribute.

Final conclusion

In conclusion, results from the studies show clear associations between child maltreatment and a wide array of negative outcomes. Mental health problems, psychosomatic symptoms, negative relationship to teachers, and unexcused absence from school were all overrepresented in the groups of adolescents reporting maltreatment. Furthermore, the results were in line with earlier studies showing exacerbating effect on negative outcomes of having experienced multiple compared to single maltreatment. There were also some gender-differences in how the adolescents reported mental health problems following maltreatment. In **Study I**, girls reported more severe problems with internalizing and psychosomatic symptoms following maltreatment experiences compared to boys. Results from **Study II** indicate a relationship between child maltreatment and school absenteeism. Experiences of maltreatment were more common among absentees (50% compared to 23% in the total sample) and maltreated absentees reported more mental health problems, peer victimization, and a more negative relationship with their teachers compared to non-maltreated absentees.

As a whole, this thesis highlights how maltreated adolescents run a higher risk of maladaptation in many areas of development. Hence, a trauma informed perspective should not only be incorporated within the praxis of mental health services but rather within the whole spectrum of health-care, social services, and education

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APPENDIX

- I. Hagborg, J., Tidefors, I., & Fahlke, C. (2017). Gender differences in the association between emotional maltreatment with mental, emotional, and behavioral problems in Swedish adolescents. *Child Abuse and Neglect*, 67, 249-259.

- II. Hagborg, J., Berglund, K., & Fahlke, C. (2017). Evidence for a relationship between child maltreatment and absenteeism among high-school students in Sweden. *Child Abuse and Neglect*. (In press)

