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**SAME- AND OTHER-SEX VICTIMIZATION:  
RISK FACTORS, CONSEQUENCES,  
AND PROTECTION BY PEERS**

by

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*To the Most Precious One*

# **Same- and Other-Sex Victimization: Risk Factors, Consequences, and Protection by Peers**

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## **ABSTRACT**

Bullying can be viewed as goal-oriented behavior in the strive for dominance and prestige in the peer group (Salmivalli, 2010). To ensure the effectiveness of their power demonstrations, bullies often choose targets from among their vulnerable peers (Salmivalli, 2010; Veenstra et al., 2007). A large number of studies have also shown that victimization has severe consequences for the victims' psychosocial adjustment (Reijntjes, Kamphuis, Prinzie, & Telch, 2010; Ttofi, Farrington, Lösel, & Loeber, 2011). In this thesis I investigate – based on three empirical studies – whether similar dynamics on the risk factors and consequences apply to same- and other-sex victimization.

In the empirical studies, we used the data from the randomized control trial of the KiVa antibullying program for the elementary school grades 4–6 (2007–2008), and for the middle school grades 7–9 (2008–2009). We measured same- and other-sex victimization, and victims' defending relationships by dyadic questions: “By which classmates are you victimized?” and “By which classmates are you supported, comforted, or defended?” In addition, we used self-reports and peer reports to measure adjustment and social status.

The findings imply that other-sex victimization may be challenging for antibullying work. First, although targets of bullying seemed to be selected from among vulnerable peers for the most part, perceived popularity increased the risks of

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other-sex victimization. Popularity of these victims may falsely lead to an impression that the victims are doing well. Second, the consequences considering victims' later psychosocial adjustment were alarming concerning girls bullied by boys. Thus, despite the fact that the targets may be perceived as popular, other-sex victimization can have even more severe consequences than same-sex victimization. Third, we found that defending relationships were mostly same-sex relationships, and consequently, we may ask whether defending is effective against other-sex bullies. Finally, the KiVa antibullying program was less effective against other-sex victimization in the adolescent sample. The findings altogether emphasize the importance of taking into account the sex composition of the bully-victim dyad, both considering future research on bullying and in the antibullying work with children and adolescents.

# **Kiusattuna sukupuolen sisällä ja sukupuolten välillä: Riskitekijät, seuraukset, ja vertaisten tuki**

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## **TIIVISTELMÄ**

Kiusaaminen voidaan nähdä tavoitteellisena toimintana, jossa kiusaaja pyrkii saamaan valtaa ja arvostusta toveriryhmässä (Salmivalli, 2010). Kiusaaja varmistaa, että hänen toimintansa on tehokasta valitsemalla kohteekseen sellaisia ikätovereita, joilla on jollain tavalla heikko asema (Salmivalli, 2010; Veenstra et al., 2007). Lisäksi monet tutkimukset osoittavat, että kiusatuksi joutumisella on vakavia seurauksia kiusatun hyvinvoinnille (Reijntjes et al., 2010; Ttofi et al., 2011). Tässä väitöskirjassa tutkin – perustuen kolmeen empiriseen tutkimukseen – näyttävätkö kiusaamisen riskitekijät ja seuraukset samankaltaisina, silloin kun kiusaaminen tapahtuu sukupuolten välillä verrattuna sukupuolen sisällä tapahtuvaan kiusaamiseen.

Osatutkimuksissa käytimme KiVa Koulu -ohjelman vaikuttavuustutkimuksen yhteydessä kerättyä kyselyaineistoa alakoulun vuosiluokilta 4–6 (2007–2008) ja yläkoulun vuosiluokilta 7–9 (2008–2009). Mittasimme sukupuolten sisällä ja niiden välillä ilmenevää kiusaamista, sekä kiusatun suhteita heitä puolustaviin oppilaisiin dyadisilla kysymyksillä: ”Ketkä luokkasi oppilaat ovat kiusanneet sinua?” ja ”Ketkä luokkasi oppilaat tukevat, lohduttavat tai puolustavat sinua?” Lisäksi käytimme itse- ja toveriarvioita mittaamaan oppilaiden hyvinvointia ja sosiaalista asemaa ryhmässä.

Löydökset viittaavat siihen, että sukupuolten välinen kiusaaminen saattaa olla haastavaa kiusaamisen vastaisen työn kannalta. Vaikka kiusaamisen kohteet näyttivät pääasiassa valikoituvan heikossa asemassa olevien toverien joukosta, toverisuosio

osoittautui riskitekijäksi sukupuoli-rajat ylittävässä kiusaamisessa. Kiusatun toverisuosio saattaa antaa valheellisen kuvan näiden kiusattujen hyvinvoinnista. Toiseksi, kiusatuksi joutumisen seuraukset kiusatun myöhemmän hyvinvoinnin kannalta olivat hälyttävimpiä tytöillä, joita pojat kiusasivat. Toisin sanoen, huolimatta siitä, että kohde saattaa olla suosittu, sukupuoli-rajat ylittävän kiusaamisen seuraukset saattavat olla jopa vakavammat kuin saman sukupuolen sisällä tapahtuvan kiusaamisen. Kolmanneksi, kiusattuja puolustivat lähinnä samaa sukupuolta olevat ikätoverit. Voidaan kysyä, onko puolustaminen tehokasta kiusaajien ollessa toista sukupuolta. Lopuksi, KiVa Koulu -ohjelman tehokkuus oli heikompaa sukupuoli-rajat ylittävän kiusaamisen suhteen yläkouluaineistossa. Kaiken kaikkiaan tutkimusten tulokset tuovat esille sen, miten tärkeää on huomioida sukupuoli-rakenne kiusaamissuhteissa sekä tulevaisuudessa kiusaamista koskevissa tutkimuksissa että kiusaamisen vastaisessa työssä lasten ja nuorten kanssa.

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## **PREFACE**

The process of doing my PhD has often felt like a labyrinth in which one can just wish to know the right way. A promising path can turn out to be a very long and rocky one, and the path that looked like a shortcut, turns out to be a dead end. Alone, this path would have been miserable, but I was accompanied and guided by fantastic and highly-skilled people. My friends and colleagues, you have taught me the value of working together, and having a good time while working. You have made this labyrinth an adventure that I can now look back feeling happy.

Excellent supervisors have devoted their time and energy to guide me. Prof. Christina Salmivalli, you are not only an excellent researcher, but also the best personal trainer I know. I remember many times entering your room feeling tired and seeing my work meaningless, and then coming out full of energy and ideas. I admire your devotion and how you inspire people around you! Prof. René Veenstra, your coaching has been extremely valuable. You have guided me to use complex analysis methods, and given many tips for scientific writing. On top of that, you have been supportive and understanding when I have felt hopeless. I truly thank you for working with me during these years.

I also want to give credit to my two other supervisors who guided me to the entrance of the academic labyrinth. Thank you Prof. Jukka Hyönä and Dr. Raymond Bertram for providing me the opportunities and giving me the first lessons in the world of research.

Prof. Philip Rodkin, I am honored that you agreed to be my opponent. Your work has inspired me during these years, and therefore, I am especially grateful for your commitment at this point of the work. I also thank Prof. Noel Card for serving as the other reviewer of this thesis. I feel gratitude that such experts devoted their time to reviewing my work.

Several other people have contributed to this thesis. I would like to thank several other co-authors: Gijs Huitsing, Prof. Todd Little, Dr. Antti Kärnä, and Mikko Rönkkö.

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I am especially grateful for having had the possibility of working with many teachers in the KiVa program. The essence of the past years' work comes from you, and naturally from all the children who participated in the project. I would also like to thank all my colleagues with whom I have traveled around Finland and abroad, shared hotel rooms, apartment, office, car drives, lunchtime etc. The time with you has carried me through this challenging path. Learning from you and with you has been the best thing in the past years. You have also supported me through some personal life issues – something that I will never forget.

I have been provided with an excellent basis and a motivating atmosphere to do research at the Department of Psychology (special thanks to Minna, Outi, Terttu, and Nina). Moreover, I have been fortunate to have a position at the National Doctoral Program of Psychology which, in addition to providing funding, has offered important and interesting courses.

I could not be here without the enormous support and love from my parents. I am fortunate to have you there whenever I need. I also want to thank my parents-in-law, with whom I have managed to distract my thoughts from computer work at the summer cottage. Moreover, my close friends who I often call when I need support; thank you for having listened to my frustrations during these years. You are and will be an important part of my life!

Finally, I want to thank (again) my husband (and co-author) Mikko, who has been standing by me during these years. I often ask myself if I could be more fortunate than what I am, having such a person beside me. You have not only been part of my

free time, sharing the passion for hiking and sports, but also an indispensable part of this work by providing technical support and guidance on statistics. Most importantly, we share the parenthood of the most precious girl in the world, our brave and adventurous daughter. Someone laughed at me when I said that Minka made it possible to finish this thesis. She did. She has given me the energy and a deep meaning for life, she has made me laugh and allowed me to take breaks from work and, well, she was a good sleeper during her first year.

Espoo, August 2013

Miia

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## LIST OF ORIGINAL PUBLICATIONS

- I. Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2012). Same- and other-sex victimization: Are the risk factors similar? *Aggressive Behavior*, 38(6), 442–455.
- II. Sainio, M., Veenstra, R., Little, T. D., Kärnä, A., Rönkkö, M., & Salmivalli, C. (2013). Being bullied by same- versus other-sex peers: Does it matter for adolescent victims? *Journal of Clinical Child & Adolescent Psychology*, 42(4), 454–466.
- III. Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2011). Victims and their defenders: A dyadic approach. *International Journal of Behavioral Development*, 35(2), 144–151.

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## 1. INTRODUCTION

Sex (or gender)<sup>1</sup> is a powerful categorization basis for humans, and in most research on peer relationships sex differences are examined in at least some level. It is not, however, only the sex of the individual that matters (Maccoby, 1990). Jacklin and Maccoby (1978) have given an intriguing example based on observations of 33-month-old same-sex and mixed-sex child pairs. They reported higher levels of both positive (e.g., touching the other child's toy) and negative (e.g., attempt to take the other child's toy) social behavior among same-sex than among mixed-sex pairs. Moreover, girls paired with boys showed more passivity and withdrawal than what was observed in any other subject pairing, and boys, in turn, did not respond to girls' vocal prohibitions as they did to boys'. Thus, sociability was not a feature of the sex of the individual, but of the social context, that is, whether a girl or a boy was paired with a girl or a boy. The importance of taking the sex composition of the relationships into account in peer relationship research is clear. However, in research on bullying and victimization the issue has largely been neglected.

In this thesis I investigate same- and other-sex relationships in bullying. Bullying is commonly defined as repeated aggression by one or several peers towards a relatively powerless victim (Olweus, 1993; Salmivalli, 2010; Smith & Brain, 2000). To distinguish bullying from other aggressive behaviors and peer conflicts, three defining characteristics are often mentioned: repetition, power imbalance, and the intent to harm (Salmivalli & Peets, 2009). Moreover, in the present day research, bullying is often viewed as goal oriented behavior in the strive for dominance and prestige in the peer group rather than as random aggressive acts (Björkqvist, Ekman, & Lagerspetz, 1982; Pellegrini & Long, 2002; Sijtsema, Veenstra, Lindenberg, & Salmivalli, 2009).

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<sup>1</sup> Whereas gender refers to cultural roles, sex is used in reference to the biological distinction between men and women (American Psychological Association, 2010). In the literature on bullying both terms have been used. In the Study III (chronologically the first study), we used gender whereas in Studies I and II, we started to use sex in reference to same- versus other-sex relationships. It is the biological sex of the students that is used to consider same- and other-sex relationships. However, I use gender in this thesis when referring to the sociocultural assumptions of femininity and masculinity.

Accordingly, the targets are selected from among the vulnerable peers, as this is the easiest way to demonstrate power in front of other peers (Salmivalli, 2010; Veenstra et al., 2007). Thus, the victims often have a low self-esteem and a disadvantaged position among peers to begin with (Boulton, Trueman, Chau, Whitehand, & Amatya, 1999; Hodges, Boivin, Vitaro, & Bukowski, 1999; Salmivalli & Isaacs, 2005). An interesting question is whether the same risk factors for victimization apply to both same- and other-sex bullying. Similarly, although the negative consequences for the victims' well-being (e.g., depression and low self-esteem) are widely acknowledged (Overbeek, Zeevalkink, Vermulst, & Scholte, 2010; Reijntjes et al., 2010; Salmivalli & Isaacs, 2005; Ttofi et al., 2011), researchers have hardly considered the possibility of the consequences being different between same- and other-sex victimization. In this thesis, my aim is to shed light on the possible differences between same- and other-sex victimization considering the risk factors (Study I) and consequences (Study II).

When the differences between same- and other-sex victimization are discussed, it is also relevant to take into account the potential protective relationships; victims can have peers who support and defend them (Salmivalli, 2010). Despite the increasing number of studies on defending behavior associated with peer victimization (Caravita, Di Blasio, & Salmivalli, 2009; Gini, Albiero, Benelli, & Altoè, 2008; Pöyhönen & Salmivalli, 2008), there is no research examining between whom defending takes place, or the defenders influence on the victims' well-being. Accordingly, my goal was to gain insight on the nature of defending relationships for victimized children, for instance, examining how likely defending is to cross sex boundaries (examined in Study III).

Finally, the differences behind same- and other-sex bullying can mean that different remedies are needed to address them. Therefore, to discuss the necessity for different approaches against same- and other-sex victimization, I also bring up some findings regarding the effects of the KiVa antibullying program on same- and other-sex victimization (Study I). Before discussing in more detail the research questions, I will introduce theoretical ideas along with some empirical findings on the grounds to expect differences between same- and other-sex victimization.

## **1.1 The Two Sexes Growing Together: Implications for Same- versus Other-Sex Victimization and Defending Relationships**

Children start having a preference for same-sex playmates already from the age of three (Maccoby, 1998), and other-sex avoidance can be considered almost normative in middle childhood (Sroufe, Bennett, Englund, Urban, & Shulman, 1993). Although other-sex encounters increase considerably in adolescence, same-sex peers tend to outnumber other-sex peers in close relationships, and this trend persists throughout the lifespan (Mehta & Strough, 2009). Behavioral differences may be one factor driving segregation, making the two sexes incompatible play partners (Maccoby, 1998; Martin, Fabes, Hanish, Leonard, & Dinella, 2011). For instance, boys are typically more driven by competition and dominance goals than girls, and they use direct aggression in their peer group more than girls do, whereas girls' interactions are described as more cooperative striving to maintain social relationships, and they also engage more in prosocial behavior than boys (Maccoby, 1998, pp. 32–58; Rose & Rudolph, 2006). In line with cognitive theories, identification of oneself as a boy or a girl segregates most children into their same-sex peer group despite the underlying individual differences among boys and girls (Maccoby, 1998, p. 153; Martin et al., 2011). Segregation to same-sex peer group, consequently, may contribute to adapting sex typed behavioral and interaction styles (Rose & Rudolph, 2006; see also Tobin et al., 2010 for a model of gender self-socialization).

Whether a cause or a consequence of sex segregation, the differences in the interaction styles are also reflected in the frequencies and styles of bullying. First, boys are consistently reported to bully others more frequently than girls, whereas girls are found to defend their victimized peers more often than boys (e.g., Olweus, 2010; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Second, boys use more direct forms of aggression than girls (e.g., verbal and physical), whereas girls rely mostly on relational forms of aggression (Card, Stucky, Sawalani, & Little, 2008; Salmivalli & Kaukiainen, 2004). It also appears that boys are in an advantaged position to bully girls than vice versa. The few studies that have reported the prevalence of same- and other-sex victimization show a considerable imbalance between sexes in the

bully-victim dyads. Boys are consistently reported to be victimized mainly by same-sex peers, and only around 5% of victimized boys report being bullied mainly or only by girls (Eslea & Smith, 1998; Olweus, 2010). Girls, in turn, are often victimized by boys (30–40% of female victims in Eslea & Smith, 1998; 46% of female victims in Olweus, 2010), although also being victimized by girls is relatively frequent, either comparable to girls being victimized by boys (Eslea & Smith, 1998), or somewhat less frequent (Olweus, 2010). These discrepancies seem to exemplify the power imbalance in terms of physical strength and styles of interaction. It may also be that boys ignore girls' means to exert power, similar to Jacklin and Maccoby's (1978) observation of boys typically ignoring girls' styles to influence. Manipulating the relationships, often in hidden ways, may be a powerful way to negotiate a better position in girls' peer groups, but for boys' group this may not be as effective, especially when done by girls.

Importantly, in addition to the different interaction styles, sex segregation means a fundamental ingroup and outgroup distinction (Bigler & Liben, 2007; Maccoby, 1998, p. 155). This distinction can be a reason for further differences between same- and other-sex victimization; it may be different to target outgroup peers, and it may also be different for the victim to be bullied by outgroup than ingroup members. One reason can be the source of protection among peers. Although bullying may cross the sex boundary (e.g., Eslea & Smith, 1998; Olweus, 2010), defending perhaps does not. Based on social identity theory (Tajfel & Turner, 1979), one's self-concept is partly related to group membership, seen in ingroup favoritism and outgroup derogation. Defending behavior may reflect this ingroup favoritism, and thus be directed to same-sex peers. As bullies are likely more concerned about maintaining affection among their same-sex peers (Veenstra, Lindenberg, Munniksma, & Dijkstra, 2010), targeting other-sex peers can be less risky in the sense that the important same-sex peers are less likely to defend the other-sex targets. Yet, despite the ingroup and outgroup distinction, the fundamental basis for same- and other-sex victimization may be similar, *to gain status and dominance among peers*. Whereas ingroup bullying perhaps reflects individual negotiations of power within the group, outgroup hostility could be viewed as a means to enhance one's group based status.

In previous literature, there are, however, suggestions that same- and other-sex victimization are based on different motivations (Felix & Greif Green, 2010), and this may be related to the nature of other-sex relationships; the two sexes are not only “growing apart”, but there is the “coming together” aspect as well (Maccoby, 1998). It can be considered as a developmental task to learn and gain information about other-sex peers for successful future heterosexual relationships (Sroufe et al., 1993; Sullivan, 1953). More generally, Sippola (1999) stated other-sex relationships as important for the present day “heterosocial world” in which communication between men and women is as important as within-sex socialization. Consequently, instead of being motivated by the strive for power and dominance in the peer group, bullying has been suggested to be a safe means to cross the sex boundary without losing one’s face in front of same-sex peers, or even be an immature way to express heterosexual interest (Rodkin & Berger, 2008; Sroufe et al., 1993). *Romantic interest* (bully secretly fancies the victim) is also suggested by adolescents themselves as a possible motivation behind other-sex victimization (O’Brien, 2011). Viewing other-sex victimization as related to heterosexual interest, would essentially mean that same- and other-sex victimization were different phenomena. Consequently, target selection would be different, other-sex victims being well adjusted peers rather than selected from among the vulnerable peers. Moreover, we may ask whether the consequences of other-sex victimization are equally severe as in same-sex victimization. Finally, if same- and other-sex victimization are fundamentally different phenomena, we should use different remedies to address them.

## **1.2 Are the Risk Factors for Same- and Other-Sex Victimization Similar?**

Rodkin and Berger (2008) reported a curious finding examining the status of same- and other-sex victims in a cross-sectional study. They reported female victims bullied by boys being above average in popularity whereas male victims of male bullying were clearly unpopular. They considered that the popularity of other-sex targets might, indeed, be an indication of bullying as an immature expression of romantic interest. Interestingly, they also reported that the male bullies targeting girls were unpopular in

contrast to bullies targeting their same-sex peers. According to Noel, Wann, and Branscombe (1995), low status members of a group derogate outgroup members to gain acceptance among their ingroup members. Accordingly, the findings by Rodkin and Berger on high status other-sex victims could be interpreted by the targets being outgroup members without the need to explain it by romantic interest. It is possible that the targets being popular may be related to saliency of those specific other-sex peers, or even felt as threatening for the low status members of a group.

Furthermore, another cross-sectional study (Veenstra et al., 2010) can be interpreted as supporting the view of same- and other-sex victimization being related to similar goals of gaining status among same-sex peers, thus contradicting the heterosexual hypothesis. Veenstra and colleagues found that both same- and other-sex targets were rejected among peers, an indication of targets being selected from among the vulnerable peers. Specifically, rejection came from bullies' same-sex peers, in accordance with their suggestion that bullies' are interested in maintaining affection among their same-sex peers.

In Study I, our goal was to examine the question of target selection more carefully. Different from previous studies, we used longitudinal data with a representative sample of both boys and girls victimized by same- and other-sex peers (as due to relatively small dataset, Rodkin and Berger could only include bully-victim dyads with male bullies). We also examined separately same- and other-sex evaluation of peer status (perceived popularity and peer rejection) in line with Veenstra et al. (2010), as this may be an important aspect considering same- and other-sex peers as ingroup and outgroup members. Finally, we considered other risk factors typically related to victimization, namely low self-esteem and lack of friends. Children with a low self-esteem among peers are likely to be submissive and signal vulnerability, thus they are relatively easy targets for bullies (Egan & Perry, 1998; Salmivalli & Isaacs, 2005). However, this has not been examined considering same- and other-sex victimization separately. Similarly, the lack of friends is a relevant vulnerability factor in target selection (e.g., Boulton, Trueman, Chau, Whitehand, & Amatya, 1999; Hodges et al., 1999). As bullies are probably most interested in not losing affection

among their ingroup, or same-sex peers (Veenstra et al., 2010), having same-sex friends may not be a relevant protective factor against other-sex victimization (as victims' friends would be bullies' other-sex peers). We may also discuss whether other-sex friends provide protection against victimization at all. Other-sex friendships may be rather an indication of gender-atypical behavior (Lenton & Webber, 2006; Reeder, 2003), or a sign of outgroup favoritism, and thus, even increase same-sex victimization. Yet, other-sex friendships increasing other-sex victimization could, indeed, be an indication of other-sex victimization as related to heterosexual interest, especially if other-sex victims were overall well adjusted peers.

### **1.3 Are the Consequences of Same- and Other-Sex Victimization Comparable?**

It is not uncommon to hear adults comforting victims of other-sex bullying explaining it as a sign of liking. It is, however, questionable whether such explanations are helpful. Moreover, viewing other-sex victimization as a normative consequence of opposite sex dynamics may lead practitioners working less to address victimization crossing sex boundaries. However, perhaps the consequences for the victim are indeed less severe for other-sex victimization. Therefore, we examined this question in Study II by asking whether the consequences of same- and other-sex victimization for victims' well-being are comparable.

One could well argue that it does not matter who the bully is, but that bullying is always bad. In the focus group interviews, however, O'Brien (2011) found that only in 17% of adolescents' suggestions on whether it is worse being bullied by boys versus girls indicated that they were equally bad. Curiously, data from the interviews implied that being victimized by girls is the worst for both boys and girls (67% of all statements considering different sex compositions; O'Brien, 2011). The most stated reason was the "bitchiness" of girls, which referred to girls being nastier and having more capacity to harm psychologically. Nevertheless, adolescents also brought up ideas why each alternative could be worse, and offered explanations for each. Being bullied by boys may be worse because boys being physically stronger have more

capacity to harm. Same-sex victimization may be worse as it means being turned down by one's "own kind" and "the expected peer group", whereas other-sex victimization could be considered worse because this likely means that "everyone is against you" (O'Brien, 2011).

To my knowledge, the only study examining the consequences of same- versus other-sex victimization empirically was conducted in a cross-sectional design with a relatively small sample ( $n = 111$ ) of adolescents (Felix & McMahon, 2006). In this study, only victimization by boys was related to both boys' and girls' internalizing behavior. Therefore, Study II was designed to examine the psychosocial consequences of same- versus other-sex victimization in a longitudinal setting. Instead of expecting that same- or other-sex victimization is instinctively worse, we measured three different aspects of psychosocial adjustment (depression, negative perception of peers, and social self-esteem), as it is possible that the consequences are different depending on the sex composition of the bully-victim dyad. Given the importance and saliency of the same-sex peer group (Furman & Buhrmester, 1992; O'Brien, 2011), same-sex victimization could be related especially to adolescents' depression and generalized negative perception of peers. Then again, the normative challenge of creating positive other-sex relationships (Buhrmester & Furman, 1986; Sullivan, 1953) could make adolescents vulnerable to the negative treatment by other-sex peers, influencing in particular their social self-esteem.

#### **1.4 What Characterizes Victims' Defending Relationships?**

Turning to defending relationships of victimized children, the question *between whom defending takes place* has not been previously studied. Given the ingroup and outgroup distinction, a reasonable assumption is that also defending relationships are similar to other close relationships (Maccoby, 1998; Mehta & Strough, 2009). Thus, although girls may more often defend victims than boys (Gini et al., 2008; Goossens, Olthof, & Dekker, 2006; Salmivalli et al., 1996), they are not necessarily defending male victims. Moreover, although studies on defending behavior are recently published (e.g., Caravita et al., 2009; Gini et al., 2008; Pöyhönen, 2013), little is done to consider the

function of defenders for victimized children. Perhaps defenders are victims' ingroup peers, and thus victimized themselves (Huitsing & Veenstra, 2012). This would mean that they have little influence in putting an end to bullying. These questions are certainly important considering the risk factors and consequences of same- and other-sex victimization, as well as planning specific remedies to address them.

Therefore, in Study III, we focused on defending relationships, examining first, whether defended victims are better adjusted than undefended victims, and second, between whom defending takes place. Besides hypothesizing defending relationships to be same-sex, we were also interested in whether defenders have high status. The high status would mean that they have a position to influence peers to put an end to victimization. As peer support is often used as a component in antibullying programs, these questions are highly relevant.

### **1.5 Is the KiVa Antibullying Program Equally Effective Addressing Same- and Other-Sex Victimization?**

The KiVa antibullying program is not differentiating between same- and other-sex victimization, and consequently, does not provide separate remedies to address them. In the KiVa program one main goal is to reduce the social rewards behind bullying, and to increase support for the victimized children. The program aims to increase students' awareness of bystanders' contribution to bullying and emphasizes everyone's responsibility in putting an end to bullying. Victims' side in bullying situations is discussed in order to raise empathic understanding of their plight, and ultimately to encourage peers to support and defend their victimized peers. Universal actions of the program involve, for instance, student lessons during which the topics of group processes and bullying issues are discussed with the help of role-play exercises, videos, and a computer game. Moreover, the KiVa program involves indicated actions that are used when a bullying case comes to the attention of the school personnel. Indicated actions consist of a series of individual and small group discussions with the victim and the bullies, as well as certain students being challenged to support the victimized peers

(see KiVa teachers' manuals: Sainio et al., 2009; Salmivalli, Pöyhönen, & Kaukiainen, 2009; or more information on the program in Salmivalli, Kärnä, & Poskiparta, 2010).

The effectiveness of the program has been evaluated for all elementary and middle school grades (1–9, ages 7–15) in a randomized controlled trial (Kärnä, Voeten, Little, Poskiparta, Kaljonen, et al., 2011; Kärnä et al., 2012), as well as during large-scale dissemination in Finnish schools (Kärnä, Voeten, Little, Poskiparta, Alanen, et al., 2011). In these evaluation studies, the KiVa program seemed to be more effective in the elementary than in middle school. For middle school, Kärnä and colleagues (2012) reported some findings that indicated that the reduction of bullying (but not victimization) was stronger for boys or in classrooms with a higher proportion of boys. The effectiveness of KiVa or other antibullying programs have not been reported separately for same- versus other-sex victimization. Thus, in Study I we examined whether the effects of KiVa on same- and other-sex victimization are different, to discuss whether antibullying programs should put more emphasis on considering other-sex victimization, or even consider distinct remedies to address same- and other-sex victimization.

## **2. AIMS OF THE THESIS**

The main purpose of this thesis was to go beyond sex differences on the individual level on victimization and defending by asking victims to nominate who bullies them and who defends them. This way we could capture the sex composition of these relationships. The overarching goal was to examine the differences in same- and other-sex victimization with the focus on the risk factors and consequences.

The specific research questions were as follows:

1. Do we gain similar prevalence rates on same- and other-sex victimization using the dyadic questions as in previous studies? (Study I)
2. To what degree do same- and other-sex victimization have the same risk factors? (Study I)
3. Are the consequences of same- and other-sex victimization comparable regarding victims' psychosocial adjustment? (Study II)
4. What characterizes victim-defender relationships? (Study III)
5. Is the KiVa program effective in reducing both same- and other-sex victimization? (Study I)

### 3. METHODS

#### 3.1 Study Samples and Data Collection

In each of the three studies included in this thesis, we used the data collected during the randomized controlled trial of the KiVa antibullying program in Finland during 2007–2009. During the trial, KiVa was aimed at all grade levels (1–9, ages 7–15). During 2007–2008 the trial took place in the elementary school grades 4–6 (first phase), and during 2008–2009 in the elementary school grades 1–3 and the middle school grades 7–9 (second phase)<sup>2</sup>. All Finnish schools providing comprehensive education were invited to participate in the trial by a letter including information about the program. A total of 38 control and 38 intervention schools were selected for the first phase of the trial from among 275 volunteering schools. Stratified random sampling was used so that the five provinces in mainland Finland as well as the Swedish-speaking minority population were proportionally represented. In the first phase, the schools in the control condition were given the priority to participate as an intervention school in the second phase of the trial (31 schools continued). The rest of the second phase sample (48 intervention schools and 78 control schools) was, again, selected by stratified random sampling procedure from among the remaining volunteering schools.

Student data were collected three times. The first wave (T1) took place in May of the previous school year prior to intervention schools starting to implement the KiVa program. The second wave (T2) took place between December and February, when the intervention schools had been using KiVa for about five months (starting from August, the beginning of Finnish school year). The third wave (T3) took place at the end of the school year, in May.

Students with active parental consent (requested prior to data collection) answered to Internet-based questionnaires during school hours, using individual single-use passwords. Teachers administered the process in the school computer labs. They

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<sup>2</sup> I use *grade cohort* to refer to the grade levels when students participated in the trial. During T1, the students were finishing the previous grade level.

received instructions prior to the data collection. For instance, they were reminded that responding is voluntary, and asked to make sure that seating in the computer lab did not allow students to see each other's responses. Also, teachers were recommended not to walk around the lab when students answered to the questionnaires. Students answered in Finnish or Swedish depending on the language they used at school. The questionnaire started with demographic questions including questions on sex, age, and immigrant background, following by a definition of bullying as formulated in the *Revised Olweus' Bully/Victim Questionnaire* (Olweus, 1996): "It is bullying, when another student makes a child feel bad on purpose and repeatedly. The child being bullied finds it difficult to defend himself/herself." Several examples on different forms of bullying were given, and an explanation that teasing in a friendly and playful way, or fights between students of equal strength, is not considered as bullying. To remind students of the meaning of the term bullying, a shortened version of it appeared on the upper part of the computer screen with each bullying-related question. The questionnaire was programmed so that the order of scales and items within the scales, were randomized to avoid systematic order effects on responding.

## 3.2 Participants

In each study, different subsamples and measurement waves were used as described in the following (see also Table 1). Common to all studies, we excluded students from grade cohorts 1–3 and 7. The dyadic questions were not asked from the younger students due to shortened form of the questionnaire, and students in grade 7 did not answer at T1, as they had not entered the participating schools. The total number of students in the remaining grade cohorts (4–6 and 8–9) was 21,794 (50.3% boys; 60.0% in middle school). There were slightly more students in the intervention condition (53.5%), because four control schools from the middle school sample dropped out prior to data collection.

### 3.2.1 Participants in Study I

In Study I, we used the longitudinal data from the grade cohorts 4–6 and 8–9. The target sample consisted of 21,778 students from 1,123 classes in 151 schools among

which 78 schools participated as intervention schools in the randomized controlled trial of the program. For reliable peer reports, used from T2, we excluded classrooms with less than seven children. We also restricted to classes below 60% of participation rate (Cillessen, 2009). This sample consisted of 17,011 students in 926 classes in 147 schools (51.5% girls; 58.9% in middle school, and around 2% of immigrants). The response rate was 91.9% at T1, which was the sample used for prevalence rates of same- and other-sex victimization ( $n = 15,628$ ). Moreover, for the longitudinal analyses predicting T3, as much as 90.0% of the data could be used based on combined response rates at T1 and T2 from which the independent variables were obtained.

### ***3.2.2 Participants in Study II***

For Study II, only the middle school sample in control condition was included, (i.e., grades 8–9, ages 14–15). During the first phase of the trial (grades 4–6), some of the questions used in this study were asked slightly differently, or excluded from T2. The target sample consisted of 5,905 students in 35 schools. Parental consent was received from 86.6% of the students ( $n = 5,111$ ). In this sample 96.7% of the students were responding in either T1 or T2. Consequently 4,941 students in 306 classes in 35 schools could be included in the analyses (52.3% girls; about 2% immigrants).

### ***3.2.3 Participants in Study III***

In Study III, we used the T1 data from the first phase of the randomized controlled trial including 8,248 students from 429 classrooms in 78 schools. Other data were not available when we started the study. At the time of measurement, students were finishing grades 3–5 (ages 10–12 years). Parental consent form was returned from 91.7% of the participants, and 7,312 children responded the questionnaire (50.3% girls; 2.4% immigrants).

We restricted the analyses on defended versus undefended victims to classrooms with at least seven children and 50% of participation rate in order to obtain reliable peer reported data<sup>3</sup>. There were 7,481 children from 356 classes in this subsample, with

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<sup>3</sup> At the time of the Study III, we were not aware of the recommendation by Cillessen (2009) on the 60% participation rate for using the sociometric nominations.

a response rate of 93.2%. Furthermore, to examine the relationship between victims and their defenders, we excluded the low-density networks of less than three defending relationships. Consequently, the dyadic analyses were done with a sample of 209 classes including 4,614 children.

Table 1

Study samples from the KiVa antibullying program

	<i>Study I</i>	<i>Study II</i>	<i>Study III</i>
Grade cohorts <sup>a</sup>	4–6; 8–9	8–9	4–6
Schools, <i>N</i>	151	35	78
Schools in intervention condition, <i>n</i>	78	–	39
Classrooms, <i>N</i>	1,135	318	429
Students, <i>N</i>	21,778	5,905	8,248
Active parental consent	88.5%	86.6%	91.7%
Response rate (T1)	90.2%	86.2%	93.2%
Further data restrictions	> 6 students in the class; at least 60% participation rate in the class at T2		> 6 students in the class; at least 50% participation rate in the class
Students in the analyses, <i>n</i>	15,628	4,941	6,968 <sup>b</sup>
Boys, %	48.5%	47.7%	49.9%
Age at T1, <i>M</i>	13.0 years	14.5 years	11.0 years

<sup>a</sup> Grade cohort refers to the grade level students were during the KiVa trial (at T2 and T3).

<sup>b</sup> The dyadic analyses in Study III were further restricted to 209 classroom that had at least three defending relationships ( $n = 4,614$ ).

Table 2

## Study measures

	<i>Example Item</i>	<i>Measurement Times Used</i>		
		<i>Study I</i>	<i>Study II</i>	<i>Study III</i>
Dyadic bullying <sup>a</sup>	“By which classmates are you victimized?”	T1; T3	T1; T2	T1
Dyadic defending <sup>a</sup>	“By which classmates are you supported, comforted, or defended?”			T1
Social self-esteem (10 items) <sup>b</sup>	“Report the way you feel about yourself when around peers: I feel that I have a number of good qualities” (0 = <i>not true at all</i> , 4 = <i>exactly true</i> )	T1	T1; T2	T1
Negative perception of peers (7 items) <sup>c</sup>	“When I am with my peers, they don’t really care about me” (0 = <i>not true at all</i> , 4 = <i>exactly true</i> )		T1; T2	
Depression (7 items)	“How satisfied or dissatisfied are you with your life?” (0 = <i>I am quite satisfied with my life</i> , 4 = <i>I am dissatisfied with everything</i> )		T1; T2	
Frequency of victimization (10 items)	“Have you been bullied at school during the past couple of months in this way? I was called mean names, was made fun of or teased in a hurtful way” (0 = <i>not at all</i> , 4 = <i>several times a week</i> )			T1
Peer acceptance /Friendship	“Who do you like the most?”	T2		T1
Peer rejection	“Who do you like the least?”	T2		T1
Perceived popularity	“Who are the most popular peers in your class?”	T2		T1

<sup>a</sup> Asked if victimized 2–3 times a month on global question of victimization, or on one of the ten items of different forms (Olweus, 1996), and if bullied/defended by own classmates.

<sup>b</sup> In Study I, one item was excluded due to better reliability; in Study II, only positively coded items were used due to problems with factorial invariance.

<sup>c</sup> Only negatively coded items were used from the complete 13-item scale due to problems with factorial invariance.

### 3.3 Measures

Table 2 provides an overview of the measures used along with the information from which wave the measure was taken. The studies differed to some degree on how the measures were used (explained in the description of each measure). Moreover, in Study I and III, we used manifest variables, and in case of multiple-item scales the items were averaged, whereas in Study II, we used latent variables, and for the multiple-item scales we used parceling (i.e., averaging several items to form one indicator) to obtain more parsimonious models (Little, Cunningham, Shahar, & Widaman, 2002; Little, Rhemtulla, Gibson, & Schoemann, 2013). We parceled the items using item-to-construct balance method, allocating the items into three parcels based on their relative loadings (Little et al., 2002).

#### 3.3.1 Dyadic Measures on Defenders and Bullies

The dyadic questions on “By which classmates are you victimized?” and “By which classmates are you supported, comforted, or defended?” were asked from victims only. The victims were identified based on the global item on victimization (“How often have you been victimized at school in the last couple of months?”) and ten similarly formulated items on different forms of bullying, in which they could answer *not at all*, *only once or twice*, *two or three times a month*, *about once a week*, or *several times a week* (Olweus, 1996). If students answered *two or three times a month* or more often (a cut-off point suggested by Solberg & Olweus, 2003), they were further asked whether they were victimized by (in the case of defending, whether they were supported, comforted, or defended by) their own classmates and/or by peers in other classes. If *own classmates* was included in their answer, a list of names of classmates (in randomized order) was presented so that they could mark their bullies or defenders. The Figure 1 provides an example for the question on defending relationships.

In Study I, we categorized students into four groups based on the bully nominations: *victimized by same-sex peers*, *victimized by other-sex peers*, *victimized by both sexes*, and *nonvictimized*. This was done in order to obtain the prevalence rates and to predict the belonging to one of the categories in the longitudinal analyses. In

addition, we used dummy-coded same- and other-sex victimization variables as control variables in the analyses.

In Study II, we used the proportion scores of peers nominated as bullies to measure *same-sex* and *other-sex victimization*. Given nominations of same- and other-sex peers as bullies were divided by the number of same- and other-sex classmates, respectively. That is, a student scored zero if no nominations were given, and the more bullies they nominated the higher the score was.

In Study III, we categorized students as *defended victims* (if they nominated at least one defender), *undefended victims*, and *nonvictims* to examine whether having defenders is related to victims' well-being. We created adjacency matrices of the nominations to be used in the analyses of the victim-defender relationships.

Ketkä luokkasi oppilaat tukevat, lohduttavat tai puolustavat sinua?

- Christina Salmivalli
- René Veenstra
- Gijs Huitsing
- Todd Little
- Mikko Rönkkö
- Antti Kärnä

Seuraava

*Figure 1.* Example of the dyadic question as presented in the questionnaire: “Which classmates support, comfort, or defend you?”

### 3.3.2 *Self-Reported Measures*

*Social self-esteem* items were derived from the Rosenberg's Self-Esteem Scale (Rosenberg, 1965) by instructing students to report the way they feel about themselves when around peers (Harter, Waters, & Whitesell, 1998; Salmivalli, Ojanen, Haanpää, & Peets, 2005). Students answered on a five-point scale (0 = *not true at all* to 4 = *exactly true*). In Study I, nine items from T1 were averaged (Cronbach's  $\alpha = .86$ ; one negatively worded item was left out from the complete 10-item scale due to very low correlations with other items). In the longitudinal Study II, only the five positively worded items were included (Cronbach's  $\alpha = .91$ ), as including the negatively worded items resulted in problems with factorial invariance. In Study III, the complete 10-item scale was used by averaging the items (Cronbach's  $\alpha = .80$ ).

*Negative perception of peers* (Study II) was measured by the seven negatively worded items from a complete 13-item scale on Generalized Perception of Peers (Salmivalli et al., 2005). Students answered on a five-point scale (0 = *not true at all* to 4 = *exactly true*). Cronbach's  $\alpha$  for the seven items was .90.

*Depression* items (Study II) were derived from the Raitasalo's modification of the short form of the Beck Depression Inventory (RBDI, Beck & Beck, 1972; Raitasalo, 2007). Students responded on a five-point scale to questions about their mood (Cronbach's  $\alpha = .89$ ).

*Frequency of victimization* (Study III) was created by averaging the ten specific items about different forms of bullying (Olweus Bully/Victim Questionnaire, Olweus, 1996; see the items in Salmivalli, Kärnä, & Poskiparta, 2011). The items formed a reliable scale (Cronbach's  $\alpha = .84$ ).

### 3.3.3 *Peer Reported Measures*

Students were asked to select from the list of classmates "who do you like the most" (*friendship* in Study I; *peer acceptance* in Study III), "who do you like the least" (*peer rejection* in Studies I and III) and "who are the most popular students in your class" (*perceived popularity* in Studies I and III).

In Study I, the measures were used from T2. With regard to liking and liking the least, students were asked to mark an unlimited number of peers from the list of classmates, whereas three nominations were asked in the case of perceived popularity. The received nominations on peer rejection and perceived popularity were summed for each individual and divided by the number of classmates (nominators). Liking nomination, in turn, was considered as *friendship* if the nomination was reciprocated (when liking nomination was given to student missing at T2, friendship was coded if the nomination was reciprocated at T1 or T3). The reciprocated nominations were summed and divided by the number of nominators in the class to obtain the proportion of friends.

In Study III, the measures used from T1 differed slightly from Study I, in that students were asked to mark *three* peers for each question. The received nominations were summed and divided by the number of nominators in the class for each student for peer acceptance, peer rejection, and perceived popularity. In the dyadic modeling of victim-defender dyads, we also created a corrected score excluding victims' nominations on liking, liking the least, and popularity from the scores of their defenders (before averaging the scores for each child). This measure was used to estimate the status of defenders by other students than the victims they defended. Finally, the three measures were used at the dyadic level by creating adjacency matrices similar to the matrices for the dyadic defending relationships.

### 3.4 Statistical Analyses

In each study, specific analyses approaches were utilized to answer the particular research question. In Studies I and II, the prevalence rates and other descriptive statistics, along with the chi-square tests or *t*-tests on the differences between boys and girls (or grade levels), were performed using IBM SPSS 19. For the main analyses, we used statistical package Mplus 6.1 (Muthén & Muthén, 1998–2010). In Study I, we used multinomial logistic regression analyses to examine the risk factors (from T1 or T2) for being same-sex victimized, other-sex victimized, or both, at T3, with nonvictims as the reference category. Between-level variances were examined at the

class level, while also taking into account the school level variances. In Study II, we used latent variable modeling to estimate cross-lagged paths between same- versus other-sex victimization and adjustment. School level variance was taken into account in the estimation of standard errors and model chi-square. Nested model chi-square difference tests were used to determine the differences between groups (in the multiple group analyses) and between the path coefficients of same- and other-sex victimization.

In Study III, univariate ANOVAs were used to compare nonvictims, defended victims and undefended victims, using SPSS software. The dyadic analyses were done using a  $p_2$ -model (Zijlstra, Van Duijn, & Snijders, 2009; Zijlstra, Veenstra, & Van Duijn, 2008; Zijlstra & Van Duijn, 2003). With the  $p_2$ -model we could estimate the probabilities of the defending relationships in the class networks including covariates in the model to examine the characteristics of victims (nominators), defenders (targets) and the relationships (dyads). This model is a three-level random effects model, taking into account that the defending relationships (dyads) are cross-nested in students (actors) who are nested in classrooms (networks).

## 4. OVERVIEW OF EMPIRICAL STUDIES

### STUDY I

**Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2012). Same- and other-sex victimization: Are the risk factors similar? *Aggressive Behavior*, 38(6), 442–455.**

The aim of the study was to examine the prevalence of same- and other-sex victimization using the dyadic nominations of bullies, and to examine whether the risk factors are similar for same- and other-sex victimization. Using the data from the randomized controlled trial of the KiVa antibullying program (grade cohorts 4–6 and 8–9), we were also able to examine whether the program was effective in reducing both same- and other-sex victimization.

Boys were more often victimized exclusively by same-sex peers (12.3% of boys) than girls (4.4% of girls), whereas girls were more often victimized by only other-sex peers (5.7% of girls) than boys (0.7% of boys). In addition, in elementary school girls were more often victimized by both sexes (6.4% of girls) than boys (3.5% of boys), whereas in middle school the difference was not statistically significant (2.6% of boys and 3.1% of girls). We could also detect an overall decrease in victimization with increasing age, except for the category of boys victimized by only other-sex peers.

Controlling for same- and other-sex victimization at T1, we estimated the likelihood of being victimized by only same-sex peers, by only other-sex peers, and by both at T3 using multinomial logistic regression analyses. The nonvictims were treated as the reference category. Low self-esteem and peer rejection predicted victimization regardless of the bullies' sex. Low perceived popularity and low number of friends were statistically significant risk factors for victimization, but only in the case of same-sex victimization. On the contrary, being perceived as popular increased the risk for other-sex victimization. As for the KiVa antibullying program, the one-year participation decreased the risk for victimization in grades 4–6, regardless of the

bullies' sex, whereas in middle school the decrease was observed only in same-sex victimization.

The study raises concern for other-sex victimization. Victims of same- and other-sex bullying share some vulnerability factors, however, other-sex victims may be overlooked because of their relatively high status. Especially, in middle school, it may be challenging to address other-sex victimization.

## STUDY II

**Sainio, M., Veenstra, R., Little, T. D., Kärnä, A., Rönkkö, M., & Salmivalli, C. (2013). Being bullied by same- versus other-sex peers: Does it matter for adolescent victims? *Journal of Clinical Child & Adolescent Psychology*, 42(4), 454–466.**

The purpose of the study was to examine whether the consequences of same- and other-sex victimization are different focusing on adolescent sample (grade cohorts 8–9). Using structural equation models, we examined whether same- and other-sex victimization are differently related to psychosocial adjustment: depression, negative perception of peers, and social self-esteem. Multiple group models were estimated to examine the differences between boys and girls.

In cross-sectional analyses, based on nested model chi-square difference tests, the effect of same-sex victimization on perception of peers was statistically significantly stronger than the effect of other-sex victimization. The opposite was found in the case of social self-esteem, both for boys and girls. Regarding effects on depression, there were no statistically significant differences between same- and other-sex victimization. As for longitudinal effects (from May to following December–February), statistically significant differences between same- and other-sex victimization were found only for girls; other-sex victimization was more strongly related to later depression and negative perception of peers. For boys, only the effect of same-sex victimization on negative perception of peers approached statistical significance. We also tested the longitudinal effects of adjustment on same- and other-sex victimization, finding no differences between same- and other-sex victimization, or

between boys and girls. Additionally, we tested whether the effect of adjustment on victimization could be larger than the other way around. In adolescence, the selection among the vulnerable targets could be stronger as victimization may have had its influence earlier on (no longer influencing the changes in adjustment). For girls, depression predicted later same-sex victimization more strongly than same-sex victimization predicted later depression, and for boys and girls combined, there was a tendency of a stronger effect from low social self-esteem to same-sex victimization.

Although concurrently both same- and other-sex victimization seemed to be related to adjustment, the effect of other-sex victimization on girls' adjustment stood out from the longitudinal findings. This highlights the importance of addressing other-sex victimization seriously.

### STUDY III

**Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2011). Victims and their defenders: A dyadic approach. *International Journal of Behavioral Development*, 35(2), 144–151.**

In this study we focused on the dyadic defending relationships by asking victims to nominate the peers who supported, comforted, or defended them when they were victimized. We used the pretest (T1) data of the KiVa randomized controlled trial from children finishing grades 3–5. The aim was first, to examine whether being defended is related to the frequency of victimization and to adjustment, and second, to unravel between whom defending takes place. Most victims (72.3%) had defenders in their class. The ANOVA results revealed that the defended victims were less frequently victimized, and they had higher social self-esteem, were better accepted and less rejected by their peers, and were more often perceived as popular than the undefended victims. The better adjustment was seen even when controlling for the frequency of victimization, thus the difference was not merely an artifact of less frequent victimization.

The dyadic analyses using the *multilevel  $p_2$ -model* revealed that the overall scarce victim-defender relationships were likely to be reciprocated. Defending most

likely took place among same-sex peers, and more likely among girls than among boys. Also, expectedly, victims were more likely to nominate peers whom they liked and perceived as popular, and less likely to nominate the ones they liked the least in their class. Nevertheless, being nominated frequently as a defender was negatively related to being victimized (seen in the negative nominator-target covariance). Moreover, being nominated as a defender was positively related to social self-esteem and negatively associated with peer rejection. Defenders were also likely to be perceived as popular by classmates, even by the ones who did not nominate them as their defenders.

The study shows that being defended makes a difference. At the same time the study also raises concern over the 27.7% of victims without defenders. Some implication of defending being an ingroup phenomenon was seen in the fact that defending mainly took place among same-sex peers. However, defenders were also perceived as popular even among peers other than the victims who the defenders had supported.

## 5. DISCUSSION

In this thesis, I have investigated peer victimization and defending in dyadic context, focusing on the sex composition of the relationships. Specifically, I have been interested in the degree to which same- and other-sex victimization differ in their risk factors and consequences and, ultimately, whether we should consider different remedies to address them. The three empirical studies included in this thesis brought up differences between same- and other-sex victimization, which deserve attention regarding antibullying work, and also considering the future research on bullying and victimization. More specifically, other-sex victimization may have some features which seem to contrast the image of victims as vulnerable targets (Study I). However, other-sex victimization appeared at least as severe as same-sex victimization considering the consequences for victims' psychosocial adjustment (Study II). Moreover, as defending relationships take place mainly among same-sex peers (Study III), and same-sex peers may not function as an effective protection against other-sex victimization (Study I), other-sex victimization may be challenging for children to deal with. We also found that despite the success of the KiVa program in reducing victimization (Kärnä, 2012), KiVa seemed to have little influence on other-sex victimization in the middle school sample.

Altogether, the differences we found between same- and other-sex victimization imply that we may need to pay more attention to addressing other-sex victimization, although, the differences were not substantial in the sense that an alternative explanation for other-sex victimization was necessary (e.g., heterosexual interest). Bullying, either among same-sex or other-sex peers, could be explained by bullies' motivations to enhance their status position in the peer group, perhaps more importantly among same-sex peer group. Underlying sex differences in behavioral styles and the powerful tendency to segregate to boys' and girls' groups (Jacklin & Maccoby, 1978; Maccoby, 1998; Rose & Rudolph, 2006) can be the reasons for the differences between same- and other-sex victimization. In the following, I will discuss the differences and similarities we found between same- and other-sex victimization in

more detail, and finally consider the implications of the findings for practitioners and future research on bullying.

### **5.1 Prevalence of Same- and Other-Sex Victimization**

The prevalence of same- and other-sex victimization obtained using the dyadic measures (Study I) were largely in line with previous studies using self-reports (Eslea & Smith, 1998; Olweus, 2010) and peer reports (Rodkin & Berger, 2008). Same-sex victimization was, overall, more common than other-sex victimization. Most typically, bullying took place between boys. For girls, other-sex victimization was, however, comparable with or even slightly more common than same-sex victimization. Moreover, there was a small proportion of boys who were victimized by girls (either only by girls, or by both boys and girls). Thus, victimization does cross the sex boundary, although the different interaction styles (Jacklin & Maccoby, 1978) and the physical power imbalance (Miller, MacDougall, Tarnopolsky, & Sale, 1993) are possibly the reasons why bullying of boys by girls is less likely. As men are supposed to be stronger than women, boys may also be embarrassed to report being bullied by girls (O'Brien, 2011). It is, moreover, possible that boys do not always acknowledge girls' aggression, or they ignore it (Berdahl, 2007).

### **5.2 Risk Factors of Same- and Other-Sex Victimization**

In Study I, we found that the other-sex victims were selected from among the popular peers. This finding is in line with the cross-sectional finding by Rodkin and Berger (2008) on popular female victims. In our study, perceived popularity was related to later other-sex victimization for both boys and girls, whereas the association with later same-sex victimization was negative. It also appeared that the lack of friends was not a risk factor for other-sex victimization, whereas the lack of same-sex friends was related to later same-sex victimization. Low self-esteem and peer rejection, however, predicted both same- and other-sex victimization. Thus, although the other-sex targets were perceived as popular, the other findings do not quite support the assumption according to which other-sex victimization is based on heterosexual interest.

Same- and other-sex peers as one's ingroup and outgroup could explain the differences on target selection between same- and other-sex bullying. In the strive for status and dominance in the same-sex peer group, bullies need to carefully choose their same-sex victims from among those peers who lack same-sex friends and who have a low status in the same-sex status hierarchy. Also other-sex targets need to be selected carefully. For instance, the target being rejected means that bullying is likely to be approved among peers, and the target's low self-esteem can be a sign of the victim to be less likely to defend oneself. Having friends, however, may not be an issue when targeting other-sex peers. The reason why high status other-sex peers are targeted could, in turn, be related to these peers being salient members of the outgroup. Perhaps they have characteristics which are valued by the ingroup members (e.g., showing gender-atypical behavior, such as a girl being tough and competitive, or a boy being sensitive and caring), and therefore present a threat for the ingroup status hierarchy. There is some evidence in the literature on adult samples supporting this idea. For instance, Berdahl (2007) reviewed literature reporting that women with masculine personalities or in male-dominated occupations were more often sexually harassed, whereas Eriksen and Einarsen (2004) reported male nurses to be more often victimized in the female-dominated organizations. Thus, it is possible that popularity of the outgroup member may be threatening, especially for the low status members of the group. The finding by Rodkin and Berger (2008) according to which unpopular boys target popular girls calls, therefore, further studies, as this could indeed support the hypothesis of low status members of a group to be inclined to derogate outgroup members (Noel et al., 1995).

### **5.3 Consequences of Same- Versus Other-Sex Victimization**

In the adolescent sample, the cross-sectional findings on the effects of same- versus other-sex victimization on psychosocial adjustment imply some differences between same- and other-sex victimization, yet both were related to adjustment measures. Whereas same-sex victimization was more strongly related to a negative perception by peers than other-sex victimization, other-sex victimization was more strongly related to

a low self-esteem. However, no difference was found in depression, which was similarly related to same- and other-sex victimization. These findings were largely in line with our expectations. Adolescents mostly spend time with their same-sex peers (Mehta & Strough, 2009). Consequently, same-sex peers are the ingroup who they refer to when considering peers in general. For most adolescents, other-sex peers, in turn, represent potential romantic partners. Therefore, other-sex victimization may be interpreted as the person being undesirable among other-sex peers, and thus, influences one's self-views.

The longitudinal findings, in turn, seemed to fit the power differential between boys and girls, and not so much reflect the ingroup and outgroup distinction. Only bullying by boys had carry-over effects on girls' adjustment, and if any indication of longitudinal consequences for boys has to be mentioned, it was by other boys. Thus, at least the long term effects seem to show a different pattern from what was proposed in the focus group interviews with adolescents, suggesting that female bullying is the worst for both boys and girls (O'Brien, 2011). Instead, the longitudinal findings were in line with the cross-sectional study by Felix and McMahon (2006). Possibly, bullying by boys is more intense or frequent (Felix & McMahon, 2006). Bullying by boys may also be more threatening due to their larger capacity to inflict physical harm (O'Brien, 2011). Nevertheless, these findings indicate that other-sex victimization may be equally severe, or even more severe when regarding female victims' psychosocial adjustment. Consequently, there is no reason to undermine other-sex victimization as something normative. Rather, it should seriously be considered how to address it.

#### **5.4 Same-Sex Peer Protection**

Turning to the question of peer protection, in Study III, we found girls to defend their peers more often than boys, which is in line with previous studies on defending behavior (Caravita et al., 2009; Gini et al., 2008; Pöyhönen & Salmivalli, 2008). More importantly, defending relationships were clearly more likely among same-sex peers than among other-sex peers, for both boys and girls, and thus, similar to other supportive relationships for school-aged children (Furman & Buhrmester, 1992; Mehta

& Strough, 2009). This finding means that defending is likely ingroup behavior, and consequently, has important implications considering antibullying work. Namely, we may ask whether same-sex defenders are effective against other-sex victimization, as bullies may be concerned about maintaining affection only among their same-sex peers (Veenstra et al., 2010). In this thesis I did not examine the effectiveness of defending against same- versus other-sex victimization; however, an indirect answer to the question was found in Study I. Same-sex friends did not protect from other-sex victimization, although they did protect from same-sex victimization. Especially, I would raise a concern over bullying of girls perpetrated by boys. Although girls were defending their same-sex peers more often than boys, we may ask whether this is effective against bullying by boys. Perhaps boys, overpowering girls in physical strength, ignore girls' attempts to defend their victimized peers.

Nevertheless, it also seems that defenders nominated by victims had a good position in the class in line with the findings using peer reports on defending (Caravita et al., 2009; Pöyhönen, Juvonen, & Salmivalli, 2010). Importantly, we found victims' defenders to be perceived as popular even by other students than the victims they supported. This means that defenders may be influential students in the class, and it is also possible that they are appreciated because of providing support for the victims. Moreover, the defended victims were more well adjusted both intra- and interpersonally, and less frequently victimized than the undefended ones. Although the findings were cross-sectional, they can be considered to support the idea of the KiVa antibullying program to encourage children to defend their victimized peers.

## **5.5 Same- and Other-Sex Victimization in Antibullying Work**

Because defenders consists mainly of same-sex peers, their actions may turn out to be ineffective against other-sex victimization, as bullies are perhaps mainly concerned about defending done by their same-sex peers (Veenstra et al., 2010). This is one of the main reasons to believe that other-sex victimization was be reduced less effectively by the KiVa program, in which one important aim is to increase peer support for the victimized children.

In Study I, we found that KiVa was not effective in putting an end to other-sex victimization in middle school. Possibly, the increasing contact between boys and girls is a part of the reason why other-sex bullying is harder to address in middle school. The two sexes have engaged most of their time among same-sex peers learning the gender-typed interaction styles (Maccoby, 1998) which may not always fit together. This may lead to misunderstandings, and ultimately to harassment behaviors. It is also possible that other-sex victimization is regarded as normative, or viewed by adults observing the situations as harmless teasing. Also, adolescent boys themselves seem to justify harassing other-sex peers as “having fun” (Shute, Owens, & Slee, 2008), although it may be experienced as highly intimidating by the victims. Finally, in adolescence, other-sex victimization may involve embarrassing contents about victims’ appearance or it may approach sexual harassment victimization. This may prevent adolescents from reporting what is happening, and thus victimization remains unrecognized by the school personnel.

## **5.6 Overall Conclusions and Practical Implications**

Same- and other-sex victimization have differences which need to be taken into account in addressing bullying problems, although it is debatable whether we need different explanations for them. This thesis does not straightforwardly answer the question whether other-sex victimization is based on heterosexual interest. However, examining the overall image of same- and other-sex victims, I would be cautious about referring to it as romantic interest. This does not mean that other-sex victimization has nothing to do with opposite sex dynamics. For instance, there are examples in the literature of other-sex victimization having started after the target had refused to date the bully (e.g., in Herkama, 2012). However, the correct labeling for these instances would not be “romantic interest” but “former romantic interest”. The bully has experienced rejection, perhaps in front of his or her peers, and consequently bullying may be a way to demonstrate one’s own power and the weakness of the target to the peer group.

The finding of other-sex victims being regarded as high status students is, nevertheless, important to consider. If a victim is perceived as popular, it can be misleading for the practitioners working against bullying. For instance, popular victims may be viewed as capable of defending themselves. Given the carry-over effect of other-sex victimization on girls' adjustment, it is clear that other-sex victimization should be taken seriously. Although we do not necessarily need different remedies to address same- and other-sex victimization, more emphasis should be put to address other-sex victimization, in particular in adolescence when the relationships between the sexes become more complex and tense. In the KiVa materials for middle school students, there are a few discussions on the topics of sexual harassment and victimization, but possibly the topics would deserve to be expanded and emphasized. Additionally, perhaps antibullying programs could include more discussion about other-sex relationships, and also consider the importance of defending other-sex peers as well. It is also important to make a clear distinction between "teasing", or "push-and-poke" behaviors, and "bullying" in everyday language, as well as keep them apart in scientific literature. Naturally, discussions with students should engage them to consider that teasing, although considered as merely having fun, may be experienced as highly intimidating by another person. Finally, we need to encourage students to report victimization, even when it takes forms that are felt embarrassing by the victims (e.g., sexual harassment victimization).

## **5.7 Strengths of the Studies**

Although same- and other-sex relationships have been studied extensively in the peer relationships literature (e.g., Maccoby, 1998; Mehta & Strough, 2009; Rose & Rudolph, 2006), differentiating same- and other-sex victimization has not been done systematically. Only a handful of studies have estimated the prevalence of same- and other-sex victimization (e.g., Eslea & Smith, 1998; Olweus, 2010) or taken the sex composition into account in the analyses (e.g., Berger & Rodkin, 2009; Felix & McMahon, 2006; Rodkin & Berger, 2008; Veenstra et al., 2010). Consequently, this thesis contributes to research literature on bullying in important ways .

Several strengths and unique aspects of the studies are worth mentioning. First, an important aspect of the thesis is the relatively novel approach of using the dyadic nominations to capture victims' relationships (Huitsing & Veenstra, 2012; Veenstra et al., 2007). This has not been done previously to estimate prevalence rates for same- and other-sex victimization. Second, the longitudinal designs in Studies I and II offer stringent tests of risk factors and consequences of same- and other-sex victimization as compared with the previous cross-sectional studies. Third, Study III, although limited to a cross-sectional design, is unique in examining defending relationships for victimized children, with the additional advantage of using methodology specifically designed for dyadic data. Finally, testing the effectiveness of the KiVa antibullying program on same- versus other-sex victimization (Study I) is also something previously unseen in the literature. Altogether, this thesis presents several important findings in bullying research.

## **5.8 Limitations and Directions for Future Research**

Naturally, this thesis has its limitations which are important to mention, and there are several further questions that would be fruitful considering prospective studies on the topic. To begin with, the dyadic measures on bullying and defending deserve a few thoughts. Although dyadic nominations can be considered as strength, the measure could be improved by allowing students to nominate other peers than classmates. Especially in middle school it would be relevant to include the whole school, or even examine relationships outside the school. Another issue is that the dyadic nominations were reported by victims only, containing partly similar limitations as self-reports (e.g., Ladd & Kochenderfer-Ladd, 2002). Although I argue that it is nevertheless highly important to obtain the victims' view on their situation, it would be ideal to examine the study questions from other perspectives as well. For instance, Rodkin and Bergen (2008) used the dyadic question in the form of peer reports of "who bullies whom." Furthermore, in this thesis my focus was on the victims' side of the dyad. It would be relevant to examine simultaneously the bullies' side, as was done by Rodkin and

Berger (2008), who found that the popular female victims were bullied by unpopular boys.

The bullies' side of the relationships would be relevant also when considering the question of underlying motivations behind bullying. It would be interesting to directly examine whether the motivations depend on the sex composition of the bully-victim dyad. For instance, one could study bullies' status goals in relation to same-sex versus other-sex victimization (e.g., as Sijtsema et al., 2009 did on same-sex bully-victim dyads). Moreover, a more direct measure of romantic attraction should be included in the analyses to consider the implications of heterosexual interest, perhaps by asking adolescents who they would like to date. Then one could examine whether the bullies nominated by victims are likely to nominate the victims as desired dating partners (e.g., examining the bullying and dating choice networks considering the sex composition; see Huitsing et al., 2012 for a multivariate analysis on networks).

It should also be kept in mind that the viewpoint of this thesis has been heteronormative. We did not assess sexual identities, or include gender-atypical behaviors in our analyses, which are important to consider in future studies on same- and other-sex victimization. Moreover, the study questions would deserve to be studied in non-Western cultures in which gender roles are, perhaps, different. Also, although same- and other-sex peers form a salient ingroup and outgroup, there are certainly more defined group boundaries in real life, and also groups that surpass the sex boundaries. Especially in adolescence, mixed-sex groups become common. In these cases, defending could well cross sex boundaries, but it can also be that an increased contact with other-sex peers provides more possibilities for bullying behaviors. Therefore, it would be relevant to capture a more detailed image of students' peer relationships when studying same- and other-sex victimization. Similarly, it would be interesting to actually study gender-atypical behaviors (which may of course differ in different cultural contexts, or even in different groups). This would enable us to examine, for example, whether boys target more often girls who are tough or competitive, and moreover, whether this happens more likely when these girls hang out with boys.

In future studies it would also be relevant to consider the different forms of bullying along with the sex composition. Sex differences in the forms of aggression are consistently reported (Card et al., 2008), and the amount and the form of aggression may also depend on the target's sex (Russell & Owens, 1999; Von Marées & Petermann, 2010). The risk factors may differ depending on the form of aggression. For instance, Salmivalli, Sainio, and Hodges (2013) found that electronic victimization was not predicted by low levels of acceptance, whereas the more traditional victimization was. Similarly, the consequences may differ to some degree depending on the nature of bullying (Prinstein, Boergers, & Vernberg, 2001). Finally, it is also possible that the form by which a victim is targeted is related to whether the victim will be defended. For instance, it may be different to stand by a victim who is directly bullied in front of other peers than a peer who is isolated from the group.

As for defending relationships, Study III can be considered as the first step considering the questions between whom defending takes place and the role of defenders for individual victims. Importantly, in future studies these questions need to be studied longitudinally. Then we could answer the questions whether gaining defenders is effective in reducing victimization, or protecting from the negative consequences of victimization. It may well be that the less frequently victimized and better-adjusted victims have more defenders to begin with. Moreover, we found that defenders are often perceived as popular, which suggests that they may be influential students. It would be interesting to actually examine whether it matters if the defender has a high status. The best way to examine this would be by measuring the victim-defender relationships several times, and asking whether victimization reduces when a high status student starts to defend the victim.

Linking defending with same- and other-sex victimization would also be highly relevant to consider in future studies. First, we may wonder whether defending is more common among victims of other-sex bullies. This would be in line with the ingroup and outgroup distinction of same- and other-sex relationships. Second, although it is possible that same-sex defending does not protect effectively from other-sex victimization (a question that also deserves to be studied), it may still protect from the

negative consequences. Finally, we may ask whether an antibullying intervention can be effective in recruiting other-sex defenders, and whether this turns out effective in reducing other-sex (or same-sex) victimization.

Finally, as for the longitudinal studies (Study I and II), the effects of victimization on later adjustment were very small, and largely nonsignificant. This was anticipated considering several past studies which found weak effects from longitudinal studies concerning consequences of victimization in general (2008). As Juvonen et al. (2000) suggested, few weeks or months could be a more proper time gap, than six months. Moreover, the weak effects in adolescence may be due to the already stable roles in the class. Victimization may have started at an earlier age, and therefore, does not further influence victims' adjustment. In Study II we actually hypothesized that the effect in adolescence could be even stronger from adjustment to victimization because of the already established relationship patterns, as well as considering that adolescents may be highly skillful in selecting their targets from among their vulnerable peers. Although for the most part there were no statistically significant differences between the effects depending on the direction, the few tendencies found implied that this may be true. Thus, in future studies it would be important to capture the starting point of victimization, examine its stability, as well as examine the proper time gap between measurement waves. Moreover, although challenging, it would be important to study more systematically the developmental changes in same- and other-sex victimization, and defending relationships, perhaps following up students from young age until adolescence.

To conclude, despite some limitations, this thesis conveys an important message for future research on bullying, encouraging researchers to examine between whom bullying takes place. By taking into account the sex composition of the bully-victim dyad, we can gain important information that we miss if we only focus on the sex differences at the individual level.

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