

victimization, and defending with peer acceptance and peer rejection among children in grades 1–2.

This study was focused not only on the negative behaviors of bullying and victimization (Veenstra et al., 2010), but also on the positive behavior of defending. The role of defenders is one of the most important and distinct roles in the work of Salmivalli on bullying as a group process (Salmivalli, Lagerspetz, Björkqvist, Osterman, & Kaukiainen, 1996). Defenders can be used effectively for prevention. For this reason, it is also important to have insight into the processes related to defending.

Because peer processes often show sex segregation (Maccoby, 1998), we argue that in order to better understand the nature of acceptance and rejection, it is important to take into consideration the sex of those involved (referring to the sex of the bully, victim, and defender, and the classmates who accept and reject the bullies, victims, and defenders). This study adds to our knowledge base by examining in a relatively young sample: (1) how bullying, victimization, and defending are related to peer acceptance and rejection among early elementary school children and (2) whether the examined associations are different for same-sex and other-sex relations.

THEORETICAL ELABORATION

We used a goal-framing approach in this study (Lindenberg, 2001, 2006). Much of human action occurs in the pursuit of goals and, in turn, goals influence people's perceptions and their evaluations of these perceptions. People are aware of the aspects of a situation that may potentially help or hinder their goal pursuit; therefore, they tend to positively evaluate (like) favorable aspects and negatively evaluate (dislike) the hindering aspects of the situation. Liking and disliking are thus the result of different goal-related processes. This goal-framing approach has recently been applied to questions of peer acceptance and rejection in children and adolescents (Dijkstra, Lindenberg, & Veenstra, 2007; Veenstra et al., 2010) and to questions concerning who bullies whom (Huitsing & Veenstra, 2012; Veenstra et al., 2007).

In studies of interactions among children, status and affection goals have been identified as important (Hawley, 2003). The crucial aspect of the pursuit of status is that it is conditioned by the pursuit of affection. People, and certainly children, want to pursue both status and affection (Lindenberg, 1996). For bullying, this means that children who want to dominate will be keenly aware of the opportunities to do so without risking loss of the affection of significant peers (O'Connell, Pepler, & Craig, 1999). Thus, bullies (referring to instrumental and not reactive bullies) are likely to divide the classroom

into potential sources of affection (significant others) and potential sources of domination (victims for whom the significant others do not care). A recent study by Huitsing and Veenstra (2012) provided evidence for such ingroup–outgroup processes among 10-year olds. Bullies are not interested in the opinions of all children in the class, only of those in their ingroup.

Young children's ingroups often consist of children of the same sex (Dijkstra et al., 2007; Martin & Halverson, 1981; Veenstra et al., 2010). From the age of 3, children have a preference for same-sex playmates (Maccoby, 1998). Sex segregation is perpetuated by the so-called homosocial norm (Mehta & Strough, 2009). At young ages, liking same-sex peers and spending time with them is considered normative, whereas almost the opposite is true of other-sex relations. As a result, boys are interested in the opinions of other boys with regard to choosing the right victim, and girls are interested in what other girls think. Bullies desire to be accepted by their same-sex mates and do not care about rejection by the rest (Huitsing & Veenstra, 2012; Olthof & Goossens, 2008).

With regard to rejection, the goal-framing theory suggests that bullies will be rejected by their victims and by those for whom they pose a potential threat (referring to those who are of the same sex as the victim). This will not interfere with the bullies' realization of peer affection, because the rejection does not come from significant others. From this follows our first set of hypotheses. We expected that the rejection of bullies would come primarily from the sex to which the victim belonged: (1a) Bullying same-sex classmates is related to being rejected by primarily same-sex classmates and (1b) bullying other-sex classmates is related to being rejected by primarily other-sex classmates.

In the context of peer affection, goal-framing theory implies that male bullies are likely to strategically choose victims who pose a minimal threat to their realization of peer affection: They choose victims from among those boys who are not preferred (low on acceptance and high on rejection) by other boys. In that way, bullies can gain status by dominating other children while also staying in the good graces of the ingroup. Considering that young children rarely have best friends in the other-sex group, the expectation regarding boys bullying girls was slightly different. Male bullies are likely to choose female victims among those who are rejected by boys; acceptance does not play a role in other-sex relations (Veenstra et al., 2010). For female bullies, we expected the reverse. There is no priori reason to assume that the goals of obtaining peer affection and dominance work differently for girls, other than that there will be fewer girls for whom domination is a prominent goal (Espelage, Mebane, & Adams, 2004; Hanish & Guerra, 2004; Pellegrini, Bartini, & Brooks, 1999; Salmivalli, 2001). From the

above, we deduced our second set of hypotheses. We expected that bullies would avoid loss of peer affection by choosing victims who were rejected by significant others: (2a) If children bully same-sex classmates, they choose their potential victims from among children who are low on acceptance and high on rejection by the bullies' same-sex classmates; (2b) if children bully other-sex classmates, they select their potential victims from among those children who are rejected by the bullies' same-sex classmates. Because bullies will try to avoid the loss of affection, we expected that (2c) bullies would not be low on same-sex peer acceptance.

The association between defending and peer acceptance and rejection has been investigated in children aged 10 or older (Caravita, Di Blasio, & Salmivalli, 2009; Gini, Albiero, Benelli, & Altoe, 2008; Pöyhönen, Juvonen, & Salmivalli, 2010; Sainio, Veenstra, Huitsing, & Salmivalli, 2011; Salmivalli et al., 1996), but has hardly been considered in the early school years. In the few studies that have been conducted, a positive association was found between defending and peer acceptance, and a negative association between defending and peer rejection (Caravita et al., 2009; Monks, Ruiz, & Val, 2002).

Defenders exhibit prosocial behavior by comforting victimized students. With their behavior, defenders indicate that they care for the victims, which is likely to lead to acceptance by the victims. But are defenders also accepted by bystanders? If so, why would others like defenders? We propose that bystanders like defenders if defending helps bystanders' goal pursuit. If bystanders of bullying identify themselves with the victims, they may also consider themselves potential victims of the bully (compare Huitsing, Veenstra, Sainio, & Salmivalli, 2012; Nishina & Juvonen, 2005). Therefore, bystanders may perceive defenders of victims also as their potential sources of protection. This may explain the likeability of defenders among bystanders. Bystanders might be more likely to identify themselves with same-sex victims (compare Stets & Burke, 2000). Therefore, if bystanders are not the same sex as victims, they are unlikely to feel that they belong to the same group as the victim and subsequently will not feel that the defenders might defend them too. Consequently, bystanders will be less likely to accept the defenders under such conditions. We deduced our third set of hypotheses, expecting the following: (3a) Defending same-sex victims is primarily related to the social preferences (high on peer acceptance and low on peer rejection) of same-sex classmates and (3b) defending other-sex victims is primarily related to the social preferences of other-sex classmates.

The hypotheses imply that four major processes are involved in bullying and defending. First, those who

reject bullies are the peers who feel most threatened by them. Additionally, among their own sex and across the sexes, bullies choose victims who are rejected by significant others. In this way, bullies aim to avoid being low on acceptance by their ingroup. Finally, defenders are highly accepted by those peers who feel most protected by them.

METHODS

Sample

This study was carried out in collaboration with the Generation R Study (Jaddoe et al., 2010), a large population-based prospective cohort study from fetal life onwards in Rotterdam, the Netherlands. The Generation R study is designed to identify early environmental and genetic causes and causal pathways leading to normal and abnormal growth, development, and health during fetal life, childhood, and adulthood. Data collection in mothers, fathers, and children includes questionnaires, detailed physical and ultrasound examinations, behavioral observations, and biological samples. For a detailed description of the cohort and assessments please see Jaddoe et al. (2010) and Tiemeier et al. (2012).

In this study we used data from a peer assessment among a substantial number of Generation R Study children. At the moment of data collection, the oldest Generation R participants were attending grades 1–2 of elementary school. Schools were selected randomly from the list of schools attended by Generation R Study participants. Schools received a letter with a booklet about the study and were invited to visit the website describing the study and the assessment. Fifty-five elementary schools were invited to participate in the study (Verlinden et al., 2012). Twenty-two schools participated in the 2010–2011 school year, 19 schools were not willing to participate, and 14 schools opted to participate at a later moment. The 22 schools that participated in the study had 94 classes and 2,161 children in grades 1–2. The letters and booklets for parents were sent to the teachers at the schools which agreed to participate; they were asked to distribute them to the parents and to inform parents about the upcoming study. Parents were invited to visit a website containing more information about the topic and a demo-version of the assessment instrument. If parents did not want their child to participate, they were asked to inform a teacher or researcher before the assessment. Out of the 2,161 schoolchildren who were invited to participate, the parents of 26 children declined to participate. Therefore, the total sample of the study consisted of 2,135 children (participation rate 99%): 1,072 girls (50.2%) and 1,063 boys (49.8%), with a mean age of 8.0 years ($SD = 0.8$). The mean class size was 22.7 children ($SD = 4.7$). In

total, 861 out of the 2,135 children were participants in the Generation R Study.¹

Peer relationships were assessed during school visits in February–June 2011. Peer nomination data were available for all participating children. Self-reported data were not obtained for 50 children because they were absent from school on the day of the assessment. The study was approved by the Medical Ethics Committee of the Erasmus Medical Centre, Rotterdam the Netherlands (MEC-2010-230).

Instrument

An interactive animated web-based computer program, the PEERS Measure, was used to assess peer relationships in the early school years (Verlinden et al., 2012). Prior to the assessment, researchers visited the schools in order to discuss logistic issues with the directors and teachers, and to tell the children about the upcoming study. Information regarding the children's names, dates of birth, and sex were obtained from the school registries. Recent portrait photographs of the participating children (required for peer nomination questions) were either provided by the school or taken by a researcher during the introduction visit. Before the PEERS Measure was administered, the demographic data and photographs were entered into the PEERS assessment program. The assessment procedure was standardized and a strict protocol was followed at all times.

On the day of the assessment, prior to the start of the assessment, a researcher gave the children instructions about the assessment and explained the meaning of bullying, using illustrations from the assessment instrument. Children were asked to answer questions about themselves and their classmates. They were asked to listen to the questions very carefully, and it was emphasized that they should answer questions honestly. The researcher explained that this assessment was about children at school and that many children have friends at school; however, it can also happen that some children get bullied. The concept of bullying was then introduced and some examples of behaviors that are not considered bullying were discussed. Also, some extra instructions with regard to technical issues were given. For example, children were told that researchers were available to help if needed; that they should not get up or walk around during the assessment; and that when they had finished

the assessment, they should remain seated until the researcher came by. Children were tested in groups of six or less pupils at a time. After the introduction, children were seated in front of computers with a sufficient distance between them to ensure privacy. Participating children were told that their answers would be treated confidentially. Children heard via headsets a short introduction and instructions. A self-identification task was carried out to check whether the children could recognize themselves and their classmates on the pictures. The assessment was completed by each child independently. Each question was accompanied by an audio and visual description of a situation specific to the concept being investigated. For instance, to assess physical bullying, a picture depicting physical bullying was shown and described. Children were asked whether any of their classmates often behaved that way towards them. If children answered this affirmatively, they were asked to nominate the classmates who exhibited the depicted behaviors towards them. They could nominate classmates by clicking on their photographs. The photos were displayed in a random order in each assessment. The number of nominations was restricted to six for peer acceptance and rejection questions, and to 10 for questions regarding bullying, victimization, and defending. The average time required to complete the assignment was 7.9 min (SD = 1.5 min).

Measures

Peer acceptance and rejection. The assessment of *peer nominations* started with questions about *peer acceptance and rejection*. Children were asked to imagine that they were going to go on an exciting school trip, and to nominate the children they would like to take with them on the trip (peer acceptance) and those they would rather not take along (peer rejection). They could click on the photos of their classmates to answer the questions. The numbers of nominations children received individually from their same- and other-sex classmates with regard to “acceptance” and “rejection” were used to create measures of same- and other-sex peer acceptance and peer rejection. After the numbers of received nominations had been summed, proportions were calculated to take the differences in the number of respondents per class into account, yielding scores from 0 to 1 (see Veenstra et al., 2007 for more information on this dyadic peer nomination procedure).

Bullying and victimization. The concept of bullying was explained to the children in accordance with Olweus's (1996) definition of bullying: it was described as intentional, repeated, and continuous actions of peer aggression, in a context in which the victim finds it difficult to defend him- or herself. The concept was described extensively using age-appropriate language,

¹Socio-demographic characteristics were available for these 861 children, including maternal education and household income. The educational level of the mother was at the most elementary education for 13.9%, lower or intermediate vocational education for 48.0%, and higher vocational training or higher academic education for 38.1% of the Generation R subsample. The net monthly income of the household was below social security level for 7.8% of the subsample.

and different forms of bullying were discussed. In addition, examples of behaviors that should not be considered bullying (teasing in a friendly and playful way; fighting between children of equal strength) were also provided.

The numbers of nominations children received individually from their same- and other-sex classmates with regard to different forms of bullying and victimization were used to create measures of same- and other-sex bullying and victimization. We asked about four forms of bullying: (1) verbal: calling names or saying mean things to a child; (2) material: taking, hiding, or breaking the belongings of a child; (3) physical: hitting, kicking, or pushing; (4) relational: excluding or ignoring a child. The four different forms of victimization were assessed using dyadic questions, referring to questions asking by whom they were bullied. All forms of bullying correlated positively with each other, with relational bullying having the weakest correlation with all three other types of bullying. The correlations between verbal, material, and physical ranged from .52 to .69, whereas the correlations of relational bullying with the three other forms ranged from .28 to .47. We combined the different forms of bullying into a reliable bullying scale, using the nominations that children received from their classmates for these four questions ($\alpha = .78$). The victimization scale was derived from the nominations that children gave for these four questions to indicate their bullies ($\alpha = .72$). The intra-class correlation coefficients (for bullying: ICC = .78, $P < .001$; for victimization: ICC = .67, $P < .001$) and Bland–Altman plots demonstrated good test–retest reliability with a 3-month interval between the assessments (Verlinden et al., 2012).

Defending. Next, the children answered a question about defending. Children were asked “By whom are you defended if you are bullied?” If children were not bullied, they were told they could nominate those who they believed would defend them in the event of bullying. We felt justified in asking also children other than pure victims to nominate their defenders in bullying situations (Huitsing & Veenstra, 2012), because children do not necessarily have to be victimized in order to be defended (Adler & Adler, 1995). In essence, it can be expected that successful defending prevents victimization or alleviates its consequences (Sainio et al., 2011). Again, we followed the dyadic peer nomination procedure to derive measures of same- and other-sex defending.

Analyses

We tested our hypotheses with multiple regression analyses using cross-sectional data. Because both acceptance and rejection deviated from normality, we conducted regression analyses using the Tobit model, which accounts for violations of normality of the dependent variables (Long, 1997; Smith & Brame,

2003; Tobin, 1953). The regression analyses included main effects of sex, bullying of boys and of girls, victimization reported by boys and by girls, defending of boys and of girls, and (the significant) interaction effects between sex and bullying, victimization, and defending. White–Huber standard errors that adjust for clustering of individuals within classrooms are reported.

The effects for girls are equal to the main effects in Table III, but the effects for boys are the sum of the main and interaction effects (Aiken & West, 1991). All continuous variables were standardized for the whole sample ($M = 0$, $SD = 1$).

RESULTS

Descriptive Analyses

Table I shows that same-sex classmates were more accepted and more defended and less rejected than other-sex classmates by both boys and girls. Furthermore, boys were more rejected than girls. Table I also shows that boys were more often nominated as perpetrators of bullying by both boys and girls. The proportion of nominations that, for instance, boys gave (the so-called outdegree) was .061 for being victimized by other boys and .039 for being victimized by girls. These same numbers are also listed in Table I in the row for bullying of boys: the number of nominations for bullying that boys received (the so-called indegree) from other boys was .061 and from girls was .039. Note that the standard deviations of the outdegrees are, as usual, larger than the standard deviations of the indegrees (Veenstra et al., 2007).

The correlations between the study variables are shown in Table II. Defending of boys and girls, referring to the indegrees for defending, is almost not correlated ($r_s = .14$ for girls and .15 boys); acceptance by boys and girls ($r_s = .20$ for girls and .25 for boys) is weakly correlated; whereas bullying of boys and girls ($r_s = .38$

TABLE I. Means and Standard Deviation of Peer Acceptance and Rejection, Bullying, Victimization, and Defending for Boys (N = 1,063) and Girls (N = 1,072)

	Boys		Girls	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Acceptance by boys	.378	(.222)	.070	(.119)
Acceptance by girls	.073	(.114)	.364	(.236)
Rejection by boys	.138	(.159)	.226	(.187)
Rejection by girls	.269	(.211)	.093	(.134)
Bullying of boys	.061	(.072)	.039	(.048)
Bullying of girls	.078	(.076)	.040	(.049)
Victimization by boys	.061	(.095)	.079	(.121)
Victimization by girls	.039	(.083)	.040	(.064)
Defending of boys	.231	(.162)	.055	(.087)
Defending of girls	.053	(.081)	.268	(.179)

TABLE II. Correlations among the Study Variables for Boys (Below the Diagonal) and Girls (Above the Diagonal)

		1	2	3	4	5	6	7	8	9	10
1.	Acceptance by boys	—	.20	-.25	-.10	.00	.05	-.04	-.06	.51	.13
2.	Acceptance by girls	.25	—	-.18	-.47	-.11	-.14	-.07	-.17	.17	.64
3.	Rejection by boys	-.50	-.13	—	.42	.35	.29	.20	.20	-.16	-.09
4.	Rejection by girls	-.22	-.28	.50	—	.28	.43	.16	.27	-.10	-.35
5.	Bullying of boys	-.15	-.06	.44	.34	—	.38	.21	.15	.07	-.06
6.	Bullying of girls	-.04	-.03	.31	.50	.49	—	.19	.26	.06	-.14
7.	Victimization by boys	-.05	.04	.18	.16	.26	.20	—	.51	-.05	-.06
8.	Victimization by girls	-.01	.03	.12	.12	.18	.21	.53	—	-.04	-.15
9.	Defending of boys	.56	.16	-.30	-.13	-.04	.07	-.02	.01	—	.14
10.	Defending of girls	.14	.46	-.06	-.16	.02	.01	.00	.03	.15	—

Note. $N = 2,135$. All correlations larger than $|.08|$ are significant at $P < .01$.

for girls and .49 for boys), rejection by boys and girls ($r_s = .42$ for girls and .50 for boys), and victimization by boys and girls ($r_s = .51$ for girls and .53 for boys) are moderately correlated. These findings reveal that same-sex and other-sex relations share at most a quarter of the variance. It is, thus, worthwhile to examine them separately, which we did in the following analyses.

Regression Analyses

Bullies as potential threats. The results of the regression analyses are presented in Table III. If children bully girls, they are more rejected by girls ($b = .46$, $t(2,134) = 10.93$, $P < .01$) than by boys ($b = .19$, $t(2,134) = 4.98$, $P < .01$). Children who bully boys are more rejected by boys ($b = .36$, $t(2,134) = 9.45$, $P < .01$) than by girls ($b = .12$, $t(2,134) = 3.04$, $P < .01$). Thus, for same-sex and other-sex bullying, it holds that there is more rejection by those of the same sex as the victims.

Selection of victims. The left panel of Table III shows that victims of male bullies are rejected by boys only ($b = .08$, $t(2,134) = 2.24$, $P = .03$). Female victims of female bullies are rejected by girls only ($b = .11$, $t(2,134) = 2.53$, $P = .01$). Thus, bullies seem to select victims who are rejected by the same-sex classmates of the bullies.

From the results presented in the right panel of Table III, we see that females victimized by girls have a low level of acceptance among girls ($b = -.11$, $t(2,134) = -2.59$, $P = .01$). Contrary to our expectations, males victimized by girls or boys and girls victimized by boys do not have a low level of acceptance.

Bullying and peer acceptance. There is, as predicted, no negative relationship between bullying of girls and acceptance. However, contrary to our expectations, children who bully boys are less accepted by boys ($b = -.10$, $t(2,134) = -3.18$, $P < .01$) and by girls ($b = -.07$, $t(2,134) = -2.46$, $P = .01$). This may

TABLE III. Multiple Regression Analyses on Peer Rejection and Peer Acceptance and Their Relation to Bullying, Victimization, and Defending (N = 2,135)

	Peer rejection by boys		Peer rejection by girls		Peer acceptance by boys		Peer acceptance by girls	
	B	(SE)	B	(SE)	B	(SE)	B	(SE)
Sex (1 = boys)	-.51	(.09)*	.68	(.08)*	1.17	(.09)*	-.80	(.08)*
Bullying of boys	.36	(.04)*	.12	(.04)*	-.10	(.03)*	-.07	(.03)**
Bullying of girls	.19	(.04)*	.46	(.04)*	-.01	(.03)	-.04	(.03)
Victimization by boys	.08	(.03)**	.03	(.03)	.00	(.02)	.03	(.02)
Victimization by girls	.03	(.04)	.11	(.04)**	-.01	(.02)	-.11	(.04)*
Defending of boys	-.41	(.04)*	-.17	(.03)*	.78	(.06)*	.12	(.02)*
Defending of girls	-.04	(.05)	-.39	(.03)*	.08	(.04)**	.64	(.03)*
Sex X Victimization by girls			-.12	(.05)**			.11	(.04)*
Sex X Defending of boys					-.27	(.06)*		
Sex X Defending of girls							.20	(.07)*
Left-censored observations	540		690		683		671	
Pseudo R^2	11.2%		19.5%		30.6%		30.8%	

Note. White-Huber standard errors that adjust for clustering of individuals within classrooms are reported. Pseudo R^2 values obtained from Tobit analyses are reported.

* $P < .05$.

** $P < .01$.

suggest that children who bully boys lose (same-sex) peer affection.

Defenders as potential protectors. Table III shows that defenders are more preferred (higher on peer acceptance and lower on peer rejection) by the group toward which the defending is directed. The left panel shows that boys and girls who defend boys are less rejected by boys ($b = -.41$, $t(2,134) = -11.10$, $P < .01$) than by girls ($b = -.17$, $t(2,134) = -4.93$, $P < .01$). Boys and girls who defend girls are only less rejected by girls ($b = -.39$, $t(2,134) = -12.55$, $P < .01$).

The right panel shows that if girls defend girls, they are more accepted by girls ($b = .64$, $t(2,134) = 21.26$, $P < .01$) than by boys ($b = .08$, $t(2,134) = 2.14$, $P = .03$). Boys who defend boys are more accepted by boys ($b = .51$, $t(2,134) = 17.46$, $P < .01$) than by girls ($b = .12$, $t(2,134) = 4.70$, $P < .01$). If boys defend girls, they are by far more accepted by girls ($b = .84$, $t(2,134) = 12.18$, $P < .01$) than by boys ($b = .08$, $t(2,134) = 2.14$, $P = .03$). Girls who defend boys are by far more accepted by boys ($b = .78$, $t(2,134) = 14.17$, $P < .01$) than by girls ($b = .12$, $t(2,134) = 4.70$, $P < .01$).

In sum, these results suggest that defenders are primarily preferred by the group toward which the defending is directed. We also found that, for both boys and girls, there is a higher effect of defending on peer acceptance if it is directed toward the other sex.

DISCUSSION

This study is the first to examine the relations of bullying, victimization, and defending with peer acceptance and peer rejection among children in grades 1–2. A computerized assessment was conducted among 2,135 children from 22 elementary schools to examine the associations. Same-sex and other-sex bullying, victimization, defending, acceptance, and rejection were distinguished using dyadic data. Both boys and girls were more likely to accept same-sex classmates than other-sex classmates, and boys were more often nominated than girls as perpetrators of bullying against both boys and girls.

Based on goal-framing theory, we argued that both status and affection are important goals for children, and that children who want to dominate in a group will be keenly aware of the opportunities that assist them in achieving the status goal without risking loss of affection from significant others. Our first set of hypotheses dealt with bullying as a so-called selective threat. This means that we hypothesized that bullies would only be rejected by those for whom they were a potential threat, and this bore out. Our findings demonstrated that bullies were

indeed rejected by the sex who experienced their bullying. This association did not depend on the sex of the bully.

Our second set of hypotheses dealt with the bullies' choice of victims who were disregarded by significant others. We hypothesized that strategic bullies would focus on potential same-sex victims who were not preferred by the bullies' same-sex classmates. For potential other-sex victims we hypothesized that these children would focus only on victims who were rejected by the bullies' same-sex classmates. Thus, we expected that boys would bully only girls who were disliked by other boys, regardless of what girls thought about them; and the same would apply to girls who bullied boys. We found that victims of male bullies were indeed rejected by boys only, and that victims of female bullies were rejected by girls only.

Female victims bullied by girls scored low on peer acceptance by girls. We did not find the same for male victims bullied by boys. This last finding is contrary to our expectations and is also not in line with Veenstra et al. (2010), who found that male victims have a low level of acceptance among boys. In addition, bullying of boys was related to less peer acceptance by both sexes. It may thus very well be that these bullies did not choose their victims wisely. Bullies at these young ages may not always be strategic enough in selecting victims of the relevant outgroup or skilled in determining ingroup and outgroup membership. Veenstra et al. (2010) found that preadolescent boys who bullied other boys were more accepted by girls. This study did not provide evidence for that. It seems that the traits that bullies display in the early school years are not attractive to the other sex, whereas this is the case in adolescence (Volk, Camilleri, Dane, & Marini, 2012). Some children who bully may be dysregulated and bully from a reactive stance. These may be the extremely disruptive children with whom most children in the class have problems. In controlling for victimization, we believe that we were able to isolate bullies who are instrumental rather than reactive as evidence suggests reactive children are more likely victimized by their peers, but it is possible that there was still a lack of discrimination among the bullies in our analyses and that that accounts for some of the unexpected findings.

Furthermore, we hypothesized that defenders would be accepted primarily by those for whom they were a potential defender, and this bore out. Defenders were indeed preferred by the sex to whom their prosocial behavior was directed but not by the sex to whom it was not directed. In addition, this differed for same-sex and other-sex defending. The peer acceptance of other-sex defenders was even higher than the acceptance of same-sex defenders. This was found for boys who defended

girls as well as for girls who defended boys. In defending, the bystander takes a clear stand on behalf of the victim by directly stepping in, seeking help, or comforting the victim (Gini et al., 2008; Pöyhönen et al., 2010; Pöyhönen, Juvonen, & Salmivalli, 2012; Pozzoli & Gini, 2010). Such behavior is usually highly rewarded. This reward seems even to be higher when children defend the other sex, probably because they exhibit behavior that is unique and quite brave, and that in turn reinforces their likeability in the group (compare Hawkins, Pepler, & Craig, 2001; Sainio et al., 2011).

In line with earlier research (Dijkstra et al., 2007; Veenstra et al., 2010), we found that the explained variance for acceptance (about 30%) was higher than the explained variance for rejection (about 15%). It is likely that this difference is due to the fact that sex plays a larger role in the realization of interaction goals (and thus peer acceptance) than in the disturbance or threat of disturbance of goal pursuit (and thus peer rejection). However, as Dijkstra et al. (2007) pointed out, acceptance and rejection are not simply an ingroup (same-sex acceptance) and outgroup (other-sex rejection) phenomenon (see also Card, Hodges, Little, & Hawley, 2005). Thus, studies which are focused only on same-sex relations underestimate the importance of other-sex relations.

The findings of this study show that already at an early age, bullying and defending are related to ingroup and outgroup processes. Bullies were rejected by those for whom they posed a potential threat, whereas defenders were preferred by those classmates for whom they were a potential source of protection. In addition, we found that children who bullied girls already chose their victims strategically (see for research on perspective taking and goal-oriented behavior in early childhood: Harris, Johnson, Hutton, Andrews, & Cooke, 1989; Kuhn, 2000; Mason & Macrae, 2008). Strategic bullies are unlikely to change their behavior without the help of others, because bullying gives them many advantages with regard to admiration, status, and dominance (Sijtsema et al., 2009). What is needed is an anti-bullying program that changes the attitudes of all children in the class and makes clear to children that if they want the bullies to stop, they have to take joint actions. Such a program should also strengthen teachers' anti-bullying attitudes and self-efficacy in tackling bullying, because children often struggle with intervening without the support of authority figures. At the same time, children should be made aware of the importance and taught the skills of standing up for their classmates irrespective of whether they are friends with the victimized child or not, and whether that child is a boy or a girl. A very promising program to stop bullying is the KiVa program (Kärnä et al., 2011b; Salmivalli, Kärnä, & Poskiparta, 2011), which

also has a version for the early school years (Kärnä et al., 2011a).

Strengths and Limitations

Our study had a number of strengths and limitations. One of the strengths is the inclusion of boys' and girls' nominations for peer acceptance and rejection, bullying, victimization, and defending in the same-sex and other-sex nominations. In this study, young children were able to use the peer nominations method independently with the help of the animated interactive computer assessment. Another strong point is the large sample. We used a sample of 2,135 children, including a proportional number of boys and girls. In view of this sample size and the use of network questions, the findings can be considered robust.

Some limitations of the present study should be taken into account. First, a cross-sectional correlational design was used. Ultimately, in future studies, the relations between same-sex and other-sex peer acceptance and rejection, bullying, victimization, and defending should be investigated using a longitudinal design. For example, the relation between same-sex victimization and peer acceptance may be bi-directional. But even such a bi-directional relation would be consistent with the approach taken here. Peers who are not accepted might be even less accepted when they are bullied, because victimization is likely to lower their likeability. Being associated with victims might lower children's peer acceptance and make them more vulnerable to peer victimization (Hodges, Boivin, Vitaro, & Bukowski, 1999; Pozzoli & Gini, 2010; SunWolf & Leets, 2003).

Second, whereas Veenstra et al. (2007, 2010) used dyadic nominations from the perspectives of both victims and bullies, we only had such information from the perspective of the victim. Our measures of same-sex and other-sex victimization were consequently based on the nominations provided by a victim (the so-called out-degree) instead of the nominations received (the indegree) for victimization. The latter way of measuring victimization is potentially more reliable and valid (Cornell & Brockenbrough, 2004; Newcomb, Bukowski, & Pattee, 1993; Salmivalli, 2001), because it aggregates all the victimization nominations persons receive from others.

Third, a more complex measure of bullying that takes into account its form and its function may be able to capture how same-sex and other-sex bullying may affect peer acceptance and rejection and shed light on the unexpected finding that male victims bullied by boys did not score low on peer acceptance by boys.

Fourth, we examined same-sex and other-sex relations and their associations with acceptance and rejection by aggregating dyadic nominations. Future researchers may

answer questions using network analysis (Huitsing et al., 2012) and examine triadic relationships (Ellwardt, Labianca, & Wittek, 2012), such as the following: do defenders help in all bullying situations or do they only help when a specific bully or victim is involved; which characteristics of bullies, victims, and defenders predict the occurrence of such a triadic relationship?

In sum, the current findings provide evidence that the processes underlying bullying and defending are quite comparable in childhood and preadolescence. Already in grades 1–2 there is evidence for strategies involved in bullying and defending. We found that bullies were rejected by those for whom they posed a potential threat, and that defenders were preferred by those classmates for whom they were a potential source of protection. Bullies chose victims who were rejected by significant others, but contrary to our expectations, children who bullied boys scored low on affection. These bullies were possibly not strategic enough in selecting victims of the relevant outgroup.

REFERENCES

- Adler, P. A., & Adler, P. (1995). Dynamics of inclusion and exclusion in preadolescent cliques. *Social Psychology Quarterly*, 58, 145–162.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: SAGE.
- Caravita, S. C. S., Di Blasio, P., & Salmivalli, C. (2009). Unique and interactive effects of empathy and social status on involvement in bullying. *Social Development*, 18, 140–163.
- Card, N. A., Hodges, E. V. E., Little, T. D., & Hawley, P. (2005). Gender effects in peer nominations for aggression and social status. *International Journal of Behavioral Development*, 29, 146–155.
- Cornell, D. G., & Brockenbrough, K. (2004). Identification of bullies and victims: A comparison of methods. *Journal of School Violence*, 3, 63–87.
- Dijkstra, J. K., Lindenberg, S., & Veenstra, R. (2007). Same-gender and cross-gender peer acceptance and peer rejection and their relation with bullying and helping among preadolescents: A goal-framing approach. *Developmental Psychology*, 43, 1377–1389.
- Ellwardt, L., Labianca, G., & Wittek, R. (2012). Who are the objects of positive and negative gossip at work? A social network perspective on workplace gossip. *Social Networks*, 34, 193–205.
- Espelage, D. L., Mebane, S. E., & Adams, R. S. (2004). Empathy, caring, and bullying: Toward an understanding of complex associations. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 37–61). Mahwah, NJ: Erlbaum.
- Gini, G., Albiero, P., Benelli, B., & Altoe, G. (2008). Determinants of adolescents' active defending and passive bystander behavior in bullying. *Journal of Adolescence*, 31, 93–105.
- Hanish, L. D., & Guerra, N. G. (2004). Aggressive victims, passive victims, and bullies: Developmental continuity or developmental change? *Merrill-Palmer Quarterly*, 50, 17–38.
- Harris, P. L., Johnson, C. N., Hutton, D., Andrews, G., & Cooke, T. (1989). Young children's theory of mind and emotion. *Cognition & Emotion*, 3, 379–400.
- Hawkins, D. L., Pepler, D. J., & Craig, W. M. (2001). Naturalistic observations of peer interventions in bullying. *Social Development*, 10, 512–527.
- Hawley, P. H. (2003). Strategies of control, aggression, and morality in preschoolers: An evolutionary perspective. *Journal of Experimental Child Psychology*, 85, 213–235.
- Hodges, E. V. E., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology*, 35, 94–101.
- Huitsing, G., Van Duijn, M. A. J., Snijders, T. A. B., Wang, P., Sainio, M., Salmivalli, C., ... Veenstra, R. (2012). Univariate and multivariate models of positive and negative networks: Liking, disliking, and bully-victim relationships social networks. *Social Networks*, 34, 645–657.
- Huitsing, G., & Veenstra, R. (2012). Bullying in classrooms: Participant roles from a social network perspective. *Aggressive Behavior*, 38, 494–509.
- Huitsing, G., Veenstra, R., Sainio, M., & Salmivalli, C. (2012). "It must be me" or "It could be them?": The impact of the social network position of bullies and victims on victims' adjustment. *Social Networks*, 34, 379–386.
- Jaddoe, V. W. V., Van Duijn, C. M., Van der Heijden, A. J., Mackenbach, J. P., Moll, H. A., Steegers, E. A. P., ... Hofman, A. (2010). The Generation R Study: Design and cohort update. *European Journal of Epidemiology*, 25, 823–841.
- Kärnä, A., Voeten, M., Little, T. D., Alanen, E., Poskiparta, E., & Salmivalli, C. (2011a). Going to scale: A nonrandomized nationwide trial of the KiVa antibullying program for grades 1–9. *Journal of Consulting and Clinical Psychology*, 79, 796–806.
- Kärnä, A., Voeten, M., Little, T. D., Poskiparta, E., Kaljonen, A., & Salmivalli, C. (2011b). A large-scale evaluation of the KiVa antibullying program: Grade 4–6. *Child Development*, 82, 311–330.
- Kuhn, D. (2000). Metacognitive development. *Current Directions in Psychological Science*, 9, 178–181.
- Lindenberg, S. (1996). Continuities in the theory of social production functions. In H. Ganzeboom & S. Lindenberg (Eds.), *Verklarende sociologie: Opstellen voor Reinhard Wippler* (pp. 169–184). Amsterdam, the Netherlands: Thela Thesis.
- Lindenberg, S. (2001). Social rationality versus rational egoism. In J. H. Turner (Ed.), *Handbook of sociological theory* (pp. 635–668). New York, NY: Plenum.
- Lindenberg, S. (2006). Prosocial behavior, solidarity, and framing processes. In D. Fetchenhauer, A. Flache, A. P. Buunk, & S. Lindenberg (Eds.), *Solidarity and prosocial behavior: An integration of sociological and psychological perspectives* (pp. 23–43). Berlin, Germany: Springer.
- Long, J. S. (1997). *Regression models for categorical and limited dependent variables*. Thousand Oaks, CA: SAGE.
- Maccoby, E. E. (1998). *The two sexes: Growing up apart, coming together*. Cambridge, MA: Belknap.
- Martin, C. L., & Halverson, C. F. (1981). A schematic processing model of sex typing and stereotyping in children. *Child Development*, 52, 1119–1134.
- Mason, M. F., & Macrae, C. N. (2008). Perspective-taking from a social neuroscience standpoint. *Group Processes and Intergroup Relations*, 11, 215–232.
- Mehta, C. M., & Strough, J. (2009). Sex segregation in friendships and normative contexts across the life span. *Developmental Review*, 29, 201–220.
- Monks, C., Ruiz, R. O., & Val, E. T. (2002). Unjustified aggression in preschool. *Aggressive Behavior*, 28, 458–476.
- Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin*, 113, 99–128.
- Nishina, A., & Juvonen, J. (2005). Daily reports of witnessing and experiencing peer harassment in middle school. *Child Development*, 76, 435–450.

- O'Connell, P., Pepler, D., & Craig, W. (1999). Peer involvement in bullying: Insights and challenges for intervention. *Journal of Adolescence, 22*, 437–452.
- Olthof, T., & Goossens, F. A. (2008). Bullying and the need to belong: Early adolescents' bullying-related behavior and the acceptance they desire and receive from particular classmates. *Social Development, 17*, 24–46.
- Olweus, D. (1978). *Aggression in the schools: Bullying and whipping boys*. Washington, DC: Hemisphere.
- Olweus, D. (1996). *The revised Olweus bully/victim questionnaire*. Bergen, Norway: University of Bergen.
- Pellegrini, A. D., Bartini, M., & Brooks, F. (1999). School bullies, victims, and aggressive victims: Factors relating to group affiliation and victimization in early adolescence. *Journal of Educational Psychology, 91*, 216–224.
- Pöyhönen, V., Juvonen, J., & Salmivalli, C. (2010). What does it take to stand up for the victim of bullying? The interplay between personal and social factors. *Merrill-Palmer Quarterly, 56*, 143–163.
- Pöyhönen, V., Juvonen, J., & Salmivalli, C. (2012). Standing up for the victim, siding with the bully or standing by? Bystander responses in bullying situations. *Social Development, 21*, 686–703.
- Pozzoli, T., & Gini, G. (2010). Active defending and passive bystander behavior in bullying: The role of personal characteristics and perceived peer pressure. *Journal of Abnormal Child Psychology, 38*, 815–827.
- Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2011). Victims and their defenders: A dyadic approach. *International Journal of Behavioral Development, 35*, 144–151.
- Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2012). Same- and other-sex victimization: Are the risk factors similar? *Aggressive Behavior, 38*, 442–455.
- Salmivalli, C. (2001). Group view on victimization: Empirical findings and their implications. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school. The plight of the vulnerable and victimized* (pp. 398–419). New York: Guilford.
- Salmivalli, C., Kärnä, A., & Poskiparta, E. (2011). Counteracting bullying in Finland: The KiVa program and its effects on different forms of being bullied. *International Journal of Behavioral Development, 35*, 405–411.
- Salmivalli, C., Lagerspetz, K., Björkqvist, K., Osterman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior, 22*, 1–15.
- Salmivalli, C., & Peets, K. (2009). Bullies, victims, and bully-victim relationships in middle childhood and early adolescence. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 322–340). New York, NY: Guilford.
- Sijtsema, J. J., Veenstra, R., Lindenberg, S., & Salmivalli, C. (2009). Empirical test of bullies' status goals: Assessing direct goals, aggression, and prestige. *Aggressive Behavior, 35*, 57–67.
- Smith, D. A., & Brame, R. (2003). Tobit models in social science research. Some limitations and a more general alternative. *Sociological Methods and Research, 31*, 364–388.
- Stets, J. E., & Burke, P. J. (2000). Identity theory and social identity theory. *Social Psychology Quarterly, 63*, 224–237.
- SunWolf, & Leets, L., (2003). Communication paralysis during peer-group exclusion: Social dynamics that prevent children and adolescents from expressing disagreement. *Journal of Language and Social Psychology, 22*, 355–384.
- Tiemeier, H., Velders, F. P., Szekely, E., Roza, S. J., Dieleman, G., Jaddoe, V. W. V., ... Verhulst, F. C. (2012). The Generation R Study: A Review of Design, Findings to Date, and a Study of the 5-HTTLPR by Environmental Interaction From Fetal Life Onward. *Journal of the American Academy of Child & Adolescent Psychiatry, 51*, 1119–1135.
- Tobin, J. (1953). Estimation for relationships with limited dependent variables. *Econometrica, 26*, 24–36.
- Veenstra, R., Lindenberg, S., Munniksma, A., & Dijkstra, J. K. (2010). The complex relation between bullying, victimization, acceptance, and rejection: Giving special attention to status, affection, and sex differences. *Child Development, 81*, 480–486.
- Veenstra, R., Lindenberg, S., Zijlstra, B. J. H., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2007). The dyadic nature of bullying and victimization: Testing a dual perspective theory. *Child Development, 78*, 1843–1854.
- Verlinden, M., Veenstra, R., Ringoot, A. P., Jansen, P. W., Raat, H., Hofman, A., ... Tiemeier, H. (2012). *Detecting Bullying in Early Elementary School with a Computerized Peer-Nomination Instrument*.
- Vlachou, M., Andreou, E., Botsoglou, K., & Didaskalou, E. (2011). Bully/victim problems among preschool children: A review of current research evidence. *Educational Psychology Review, 23*, 329–358.
- Volk, A. A., Camilleri, J. A., Dane, A. V., & Marini, Z. A. (2012). Is adolescent bullying an evolutionary adaptation? *Aggressive Behavior, 38*, 222–238.