The costs and benefits of bullying

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Abstract

The present study examined the positive and negative outcomes of bullying for both victims and bullies in terms of the following variables: self-image, internalizing problems, social dominance and social acceptance. It can be concluded on the basis of peer reports, self-reports and teacher questionnaires ($n = 981$) that there are considerable differences in bullies and victims as regards the consequences of bullying. Bullies experience positive outcomes of bullying. This group encounters many benefits and few costs of bullying in terms of the impact on their self-image, internalizing problems, social dominance and social acceptance. In contrast, victims experience negative outcomes of bullying in terms of all aspects of the behavior. They experience an increased degree of internalizing problems, contend with a lower self-image, and are less socially accepted and socially dominant.

Keywords: participant roles, costs and benefits, self-image, internalizing problems, social dominance, social acceptance.

Introduction

All over the world, bullying affects boys and girls of different ages in terms of their cognitive, social, emotional and physical wellbeing (Olthof, Goossens, Vermande, Aleva, & Van der Meulen, 2011; Smokowski & Kopasz, 2005). The study "Health Behavior of School-aged Children" (Van Dorsselaer et al., 2010) showed that 6.4% of Dutch primary school students often bully (i.e., twice a month or more) and that 10.4% of them are victims of bullying at least twice a month. Bullying behavior is best captured in the three-part formulation of Olweus (1993), namely: (1) the intention to hurt someone, (2) recurrence over time, and (3) victims who have problems defending themselves. Thus, bullying is both planned and harmful (Olweus, 1993; Salmivalli & Peets, 2009). When bullying occurs within a classroom, there are several participant roles that children take. On the basis of prior research, we know that there are ringleader bullies, assistants, reinforcers (i.e., persons who promote bullying), victims, defenders (i.e., those who support and pleads for the victim), and outsiders (i.e., those who avoid or ignore the bullying). Those who do not fulfill any of these roles are called non-involved parties (Vermande, Van der Meulen, Aleva, Olthof, & Goossens, 2011).

The present study focused on the costs and benefits for bullies and victims. A comparison has been made with a control group of children who were non-involved parties. It

is hoped that this design will allow us to obtain insight into the advantages and disadvantages associated with bullying, and ultimately provide guidelines for appropriate interventions.

Bullying seems to be a negative phenomenon with adverse consequences for both victims and bullies. However, bullying remains stable over time. It is therefore important to examine the costs and benefits of bullying, because these are factors that contribute to its persistence. The present study took the subjects internalizing problems, self-esteem (measured by self-respect and self-perceived social acceptance) and social status into account. Social status was examined in the context of social dominance and social acceptance (Salmivalli & Peets, 2009).

Self-image in bullying situations
There are divergent views on the relationship between self-image and bullying. Self-image is the image that individuals have of him or herself, and of their physical, emotional, social and cognitive talents (Woltjer & Janssens, 2006; Salmivalli, 2001). The meta-analysis of Hawker in Boulton (2000) found that victims usually have a lower self-image than most of their peers. For bullies, there is no clear answer. A number of empirical studies found a relationship between high self-image and aggression, on the one hand, and bullying on the other (Baumeister, Smart, & Boden, 1996; Baumeister, Bushman, & Campbell, 2000; Van Boxtel, Orobio de Castro, & Goossens, 2004; Pollastri, Cardemil, & O'Donnell, 2010). Studies by Baumeister et al. (1996, 2000) showed that an inflated self-image is associated with aggression. Children become aggressive if their inflated self-image is threatened by others, a phenomenon known in the literature as "threatened egotism" or "threatened narcissism." However other studies found that bullies have low self-image (O'Moore & Kirkham, 2001) and that bullying at school and low self-image lead to increased risk of criminal activity (Rigby & Cox, 1996). Kaukiainen et al. (2002) found that non-involved children had a higher self-image than either bullies or victims. A longitudinal study of the relationship between self-perceived social acceptance and aggressive behavior showed that overestimation of bullies' own social competence has a major impact on proactive aggression (Orobio de Castro, Brendgen, Van Boxtel, Vitaro, & Schaepers, 2007).
It can be concluded that there is much confusion in the literature about the relationship between self-image and bullying. For bullies, the findings have been contradictory, in that bullying has been associated with both extremely high and low self-image. For victims, however, the results are much clearer, in that they have usually been found to have low self-image.

Internalizing problems
"Internalizing problems" include problems which are expressed internally and which can remain unnoticed by persons in the social environment. Examples include loneliness, depressive mood, anxiety, suicidal behavior and self-injurious behavior (Reijntjes, Kamphuis, Prinzie, & Telch, 2010), but current research is focused mainly on depressive mood and loneliness.

Several studies have shown that victims of bullying experience a higher level of depressed and lonely feelings (Hawker & Boulton, 2000; Schwartz, 2000). When a distinction is made between relational bullying (i.e. bullying that is focused on social relations) and direct bullying (i.e., physical and verbal aggression), only victims of relational bullying appear to show higher levels of loneliness (Van der Wal, De Wit, & Hirasing, 2003; Woods, Done, & Kalsi, 2009). This is especially the case when the victim experiences negative interactions with friends (Greca & Harrison, 2005). In addition, internalizing problems appear to play both a causal and consequential role in victimization (Griffin & Gross, 2004; Reijntjes et al., 2010). Victimization is a risk factor because of its association with negative social

relationships. Rejection by friends increases the risk of internalizing problems, while acceptance by friends is regarded as a protective factor (Hay, Payne, & Chadwick, 2004). Bullies have generally not been found to be at higher risk of depression unless they engage in the behavior frequently (Klomek et al., 2008). Victims of bullying are at highest risk (Kumpulainen & Rasanen, 2000; Van der Wal et al., 2003). It can be concluded that involvement in bullying increases the risk of depression for both victims and bullies (Kaltiala-Heino, Frojd, & Marttunen, 2010). This effect is greater for victims than for bullies (Roland, 2002).

Social dominance

The concept of social dominance originally arose as an answer to the question of whether aggressive behavior towards peers leads to submission of peers (Vaughn & Santos, 2009). Perceived popularity refers to fame, prestige or dominance (De Bruyn, Cillessen, & Wissink, 2010; Lafontana & Cillessen, 2002) and the aim of maintaining popularity may be an important motivator for bullying (Salmivalli, Ojanen, Haanpää, & Peets, 2005). Children who are not perceived as friendly by their peers, can nevertheless be seen as popular, powerful and cool (Vaillancourt, Hymel, & McDougall, 2003). Perceived popularity is measured by asking children who they consider most popular and least popular within their peer group (Cillessen & Rose, 2005; Lafontana, & Cillessen, 2010; Mayeux, Sandstorm, & Cillessen, 2008). Current research has also found non-aggressive ways to achieve and/or maintain a status that is socially dominant (Olthof et al., 2011). The Resource Control Theory (RCT) defines social dominance in terms of relative success in accessing valuable social, material, and or informational resources. This access can be achieved through coercive and pro-social strategies (Hawley, 2003; Hawley, Little, & Card, 2007).

Bullies appear to have better resource control than non-involved children, and are more often perceived as popular than victims. Bullies who often take the initiative score highest on the desire to be socially dominant (Olthof et al., 2011). Victims of bullying or aggression achieve extremely low resource control and perceived popularity (Olthof et al., 2011; Prinstein & Cillessen, 2003). Non-involved children experience both low resource control and perceived popularity, thus falling between bullies and victims on these measures. This manifests itself in a "weak dominant" position, where they (unlike bullies) show no desire to be dominant. The non-involved children are not easily vulnerable to becoming victims, probably due to the higher appreciation they enjoy from peers and/or protective friends (Olthof et al., 2011). In sum, it can be stated that bullies achieve the highest social dominance, followed by non-involved children, and finally victims.

Social acceptance

Children seen as powerful and popular are not necessarily also characterized as "nice" by their peers (Warden & Mackinnon, 2003). "Social acceptance" is an index of the degree of affection that children enjoy from their peers, and of their sociometric status among peers (De Bruyn et al., 2010). The observance of social rules and prosocial interactions has often been associated with high social acceptance (Warden & Mackinnon, 2003). Children with high social acceptance would be emotionally well adjusted, are experienced as highly socially competent, have high quality friendships, and are less often victims of bullying (Pellegrini & Long, 2002; Rubin, Bukowski, & Laursen, 2008).

Social acceptance is usually measured by asking children whom they like most and whom they like least (De Bruyn & Van der Boom, 2005; LaFontana & Cillessen, 2002). The degree of acceptance or rejection by peers can be visualized by scores on social preference (positive scores minus negative scores) and scores on social impact (i.e., the sum of positive and negative scores). Social impact reflects the extent to which a child is "seen" by his

classmates and the strength of feeling he or she incites in others (Lease, Musgrove, & Axelrod, 2002).

Social acceptance can also be measured by using sociometric status groups (Coie, Dodge, & Coppotelli, 1982, 1983) characterized as "popular" (high score on social preference), "rejected" (low score on social preference), "neglected" (low score on social impact), "controversial" (high score on social impact), or "average" (mean score on social preference and social impact).

Bullying and aggressive behavior are often associated with low social acceptance and a rejected sociometric status (Goossens, Olthof, & Dekker, 2006; Parkhurst & Hopmeyer, 1998). However, research shows that bullies, mainly relational-aggressive bullies, can also be rewarded by peers with controversial and even popular sociometric statuses (Samivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Victims have a rejected sociometric status and score low on acceptance and high on rejection. Both bullies and victims tend to score low on acceptance and high on rejection. However, not all bullies are rejected (Dijkstra, Lindenberg, & Veenstra, 2007; Salmivalli et al., 1996).

Current research
To explore the costs and benefits of bullies and victims, they were compared to non-involved children. The goal of this study was to investigate to what extent bullies and victims experience negative and positive outcomes of bullying. What makes bullying attractive to bullies, thus reinforcing bullying behavior? Do they experience negative outcomes or just benefits from bullying, and what about the consequences for victims? We will enumerate the expectations of the four aspects below. Based on previous research, we expected a higher self-image for bullies and non-involved children compared with victims. Between bullies and the non-involved, we expected that bullies would have the higher self-image. In addition, the highest degree of self-perceived social acceptance was expected for bullies, following non-involved and finally victims. Regarding internalizing problems, both victims and bullies were expected to score higher on the degree of loneliness and depression than non-involved youth. Furthermore, we expected a higher score for victims than for bullies. Bullies were expected to be more socially dominant than victims and non-involved children (i.e., because of their greater resource control and perceived popularity). In addition, we expected victims to be less socially dominant than the non-involved. Regarding social acceptance, both victims and bullies were expected to be less socially accepted than the non-involved. The most negative outcome was expected for victims. Regarding sociometric status, the hypothesis was that victims are more often rejected and bullies are both rejected and controversial. We expected non-involved children to fall between bullies and victims on both preference and impact.

Method

Participants
This study used data from the academic years 2009-2010 and 2010-2011, that was collected by undergraduate students. The database contained data from 1001 elementary school children. Twenty children did not participate in the study (2.0%), including 14 children who received peer nominations. The reasons for refusal to participate in this study were as follows: no consent of parents or child; child attends another school; illness of child; inability to understand the questions; or unknown. From the 981 participants (98.0%), 50% were female; 82.9% of the children had Dutch parents; and 17.1% had at least one parent originating from a European country (other than the Netherlands), Morocco, Turkey, Suriname or the Netherlands Antilles. There were 29 schools and 41 classes that participated in this study. The

schools were located in the southern and central regions of the Netherlands. The parents received a letter with information about the study that gave them the opportunity to either accept or refuse their children's participation. The participants were enrolled in grades 6- 8. Of the 1001 children, 305 were in grade 6 (30.5%), 82 were in combination grade 6-7 (8.2%), 272 were in grade 7 (27.2%), 169 were in combination grade 7-8 (16.9%), 89 were in grade 8 (8.9%) and 84 were in combination grade 6-7-8 (8.4%). The mean age in grade 6 was 10.2 years (*SD* = 6.1 months; 48.5% female); in grade 6-7 the mean age was 10.9 years (*SD* = 8.7 months; 47.6% female); in grade 7 the mean age was 11.3 years (*SD* = 5.6 months; 49.6% female), in grade 7-8 the mean age was 11.8 years (*SD* = 8.6 months; 53.3% female); in grade 8, the mean age was 12.2 years (*SD* = 6.6 months; 44.9% female) and in grade 6-7-8, the mean age was 11.4 years (*SD* = 12.8 months; 58.3% female).

Measurements

Participant roles in bullying situations
The "Pestrollen Questionnaire" is an instrument for peer evaluation consisting of 32 items covering the six previously mentioned participant roles. The questionnaire is an adaptation of two similar instruments created by Salmivalli et al. (1996) and Goossens et al. (2006) that involves administration of an individual interview. Respondents are initially presented a general definition of bullying. This definition reads as follows: 'By bullying we mean intentional , repetitive, and nasty actions that hurt others. Examples include: hitting, kicking or pinching someone; stealing, destroying or hiding someone's belongings; cursing or insulting someone; intentionally keeping someone out of a game; or getting others to think badly about a person by saying ugly things about him or her. Bullying is not a fight between two children of about the same size and strength. Bullying also is not teasing somebody. Bullying is constantly hurting somebody or making him or her sad." In the interview, five categories of bullying were used: physical, material, verbal, direct social and indirect social. There were also questions that focused on participant roles in bullying situations. In the present study, a distinction was made between bullies (initiating perpetrators and followers), victims and non-involved children. The items identifying bullies displayed good internal consistency (Cronbachs alfa = .89). Cronbachs alfa for the items identifying victims was .91, indicating a good internal consistency for those items as well.

In order to classify the participant roles according to the peer nominations, average scores on the five types of bullying and victimization were calculated and standardized for each grade. Participants were classified as victims if they had a mean standardized score on victimization of >.50 and < 0 for bullying. Participants were classified as bullies if they had a mean standardized score on bullying of >.50 and victimization < 0. Participants were classified as non-involved if they had a mean standardized score on both victimization and bullying of < 0. Of the 981 participants, 113 were characterized as victims (11.5 %); 141 as bullies (14.4 %); and 506 as non-involved (51.6 %) (Giang & Graham, 2008).

Self-image
Self-image was measured using the six items from the subscale "Self-esteem" and six items from the subscale "Self-perceived social acceptance,", both from the Perceived Competence Scale for Children (CBSK), the Dutch version of the Self-Perception Profile for Children (Veerman, Straathof, Treffers, Van den Bergh, & Ten Brink, 1997).
Participants were given 12 contradictory statements like: "Some children are very happy with how they are" but "Other children would like to be different." First a statement had to be selected that was most attractive to the who was then asked to indicate to what extent this statement referred to him- or herself. Each statement could be scored regarding truthfulness

from 1 (not at all true for me) to 4 (completely true for me). Six statements were formulated in a different direction so they were reversed to make ensure that a high score on the items means the same. The psychometric qualities of the CBSK as a whole are considered sufficient (Kievit, Tak, & Bosch, 2009). The subscales "Self-esteem" and "Self-perceived social acceptance" both yielded good internal consistency, with a Chronbachs alpha of .80 and .81 respectively. The mean scores on the two subscales are computed and reported in Table 2.

Internalizing problems
"Internalizing problems" were objectified in terms of depressed feelings and loneliness. In order to measure this variable, the Revised Child Anxiety and Depression Scale (RCADS) was used (Muris, Meesters, & Schouten, 2002). This self-report questionnaire is based on the definition and symptoms of anxiety and depression in children as described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). In the present study, only ten items of the scale "Depressive disorder" were used. In addition, five items regarding loneliness were added, three from the Loneliness and Social Dissatisfaction Questionnaire (LSDQ) (Cassidy & Asher, 1982) and two from Ladd and Kochenderfer-Ladd (2002). The items on the degree of depressive feelings and loneliness both have good internal consistency, with a Cronbachs alpha of .81 and .88 respectively.

The questionnaire was administered in class and consisted of 15 sentences of which the participant had to answer to what extent these sentences referred to him- or herself (e.g., "I am sad and lonely at school." The selection and scoring options were: "Never" (1), "Sometimes" (2), "Often" (3) and "Always." (4). All items referred to a high degree of depressed feelings and loneliness, so no items needed to be reversed. The mean scores on the degree of depressed feelings and loneliness are computed and reported in Table 2.

Social dominance
This study used the constructs "resource control" (Olthof et al., 2011) and "perceived popularity" (Cillessen & Mayeux, 2004) to measure social dominance. Resource control was measured by self-report, teacher report, and peer nominations. By taking all informants into account, a wide variety of input was received regarding this variable. The self-report contained six questions on resource control, including the question: "How often do you get the first pick or the best toys?" The selection and scoring options ranged from: "almost never" (1) to "very often" (5). The self-report has good internal consistency (Cronbach's alpha = .80). The average on the scale was 2.70 (SD = .64). The teacher reports consisted of the same six questions about each child. A sample item is: "How often does the child get his way at the expense of other children (if children want the same thing)?" The teacher report has good internal consistency (Cronbach's alpha = .95). The average score on the scale was 3.00 (SD = .90). Participants were presented six similarly formulated items, such as: "Which children in your class are usually the first to get the best toys?" Once the participant responded, the following question was always asked: "Are there any more such children?" The peer report has good internal consistency as well (Cronbach's alpha = .91). The average score on the scale was 0.07 (SD = .09).

Perceived popularity was measured by peer nominations. Participants were asked two questions: "Which children in your class are popular?" and "Which children in your class are not popular?" For both questions, participants were able to indicate up to five peers. The total number of positive and negative scores were standardized per child per class, thus forming the basis for the variables "popular" (positive scores) and "unpopular" (negative scores). The difference between these scores was calculated, and was again standardized to facilitate interpretation of the results. A standardized score greater than 0 was interpreted as more

popular than average and a standardized score of less than 0 was interpreted as less popular than average (Cillessen & Mayeux, 2004; Lease, Kennedy, & Axelrod, 2002).

Social acceptance
For measuring social acceptance, participants were asked which classmates they liked most and which classmates they liked least (Coie et al., 1982, 1983; Maassen, Goossens, & Bokhorst, 1998). The scores were calculated in the same way as perceived popularity, but instead the variables "social preference" and "social rejection" were used.
A standardized score greater than 0 was interpreted as a greater social acceptance than average and a standardized score of less than 0 was designated as a lower-than-average social acceptance.

In addition, participants were classified into the previously mentioned sociometric status groups (Coie et al., 1982, 1983; Maassen et al., 1998). In order to determine to which group a participant belonged, social preference scores (standardized positive scores minus standardized negative scores) and social impact scores (the sum of standardized positive and negative scores) were determined. The status groups "popular" and "rejected" were determined by scores on social acceptance and "liked most" (LM) and "liked least" (LL) scores. The status groups "neglected and "controversial" were determined by scores on social impact and LM and LL scores (Cillessen & Ten Brink, 1991).

The popular status group ($n = 113$) consisted of all children with a standardized social preference score greater than 1.0, a standardized LM score greater than 0 and a standardized LL score less than 0. The rejected children ($n = 82$) however, had a standardized social preference score less than -1.0, a standardized LL score greater than 0 and a standardized LM score of less than 0. The neglected group ($n = 112$) consisted of the children with a standardized social impact score less than -1.0 and both LM and LL scores of less than 0. Thus, the neglected children are practically not identified by anybody as either LM or LL children. The controversial children ($n = 37$) had a standardized social impact score greater than 1.0 and LM and LL scores greater than 0. Finally, the average group ($n = 435$) consisted of all children who were not classified in the previous groups (Coie & Dodge, 1983; Cillessen & Ten Brink, 1991; Maassen et al., 1998).

Procedure
Data for this study was collected through self-reports, peer nominations and teacher questionnaires. Before collecting the data, participants were told that the responses would be treated confidentially. The classroom questionnaires and individual interviews were conducted by students in the Bachelor of Educational Sciences program at Utrecht University. All students conducted the same research protocol. A general instruction was given prior to the classroom questionnaire. Thereafter, each component had an additional instruction, and all participants filled in the component simultaneously. These self-reports were gathered in the classroom and separately from the individual interview in order to minimize the number of socially desirable answers. The individual interviews of approximately 30 minutes were conducted by a student in a private enclosed area. All responses were entered into a specially designed web application. The peer nominations were surveyed in the individual interview and not in the classroom questionnaires, so that students could ask follow-up questions without any perceived pressure on the child from his or her classmates. In addition, the teacher completed a short questionnaire for each child in the class. This was completed individually and without any guidance.

Results

A multivariate analysis of variance (MANOVA) was used to determine whether there was a difference between bullies, victims and non-involved children on the following multiple dependent variables: Depression, Loneliness, Self-perceived Social Acceptance, Self-esteem, Perceived Popularity, Resource Control Peer nominations, Resource Control Teacher reporting and Self-perceived Resource Control.
The assumption of normality was violated for the variables Resource Control and Loneliness. Both variables were normalized by means of the RANKIT procedure, thus reducing the sufficient skew (Salmivalli & Helteenvuori, 2007; Salmivalli & Voeten, 2004).

The multivariate analysis of variance showed a main effect of groups (Wilks' Lambda = .32, $F (18,1498) = 18.00$, $p < .001$). The correlations between the dependent variables are reported in Table 1. Subsequent univariate tests showed significant group differences for all dependent variables. The univariate F-values, p-values and $\eta^2 p$-values are reported in Table 2. All p-values are two-sided.

The univariate analysis of variance showed a significant result for all variables. A moderate to large effect size of bullying roles on Self-perceived Social Acceptance was found for Self-image ($F (2,757) = 52.45$; $p < .001$; $\eta^2 p = .12$) and a mild to moderate effect size of bullying roles on Self-esteem ($F (2,757) = 20.34$; $p < .001$; $\eta^2 p = .05$) (Cohen, 1988).
A mild to moderate effect size of bullying roles on Depression was found for Internalizing problems ($F (2,757) = 18.78$; $p < .001$; $\eta^2 p = .05$) and a moderate to large effect size of bullying roles on Loneliness ($F (2,757) = 54.82$; $p < .001$; $\eta^2 p = .13$) (Cohen, 1988).
A large effect size of bullying roles on Perceived Popularity was found for Social dominance ($F (2,757) = 305.33$; $p < .001$; $\eta^2 p = .45$), on Resource Control Peer nominations ($F (2,757) = 157.56$; $p < .001$; $\eta^2 p = .29$) and for Resource Control Teacher Questionnaires ($F (2,757) = 142.85$; $p < .001$; $\eta^2 p = .27$). Analysis shows a moderate effect size of bullying roles on Self-perceived Resource Control ($F (2,757) = 33.60$; $p < .001$; $\eta^2 p = .08$) (Cohen, 1988). A large effect size of bullying roles on Social Preference was found ($F (2,757) = 146.37$; $p < .001$; $\eta^2 p = .28$) (Cohen, 1988).

Table 1 *Pearsons Product-Moment Correlation coefficients between the Dependent Variables*

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.
Resource Control Teacher reporting	-								
Perceived Popularity	.60*	-							
Social Preference	-.04*	.16*	-						
Depressive Feelings	-.12*	-.18*	-.13*	-					
Social Acceptance	.28*	.41*	.25*	-.45*	-				
Self-image	.09*	.16*	.16*	-.51*	.52*	-			
Loneliness	-.15*	-.30*	-.24*	.58*	-.55*	-.42*	-		
Resource Control Peer nominations	.59*	.66*	-.11*	-.10*	.25*	.09*	-.13*	-	
Self-perceived Resource Control	.22*	.26*	.06*	-.21*	.39*	.23*	-.28*	.21*	-

*$p < .01$

Table 2 *Average Scores by Group on the Dependent Variables (Standard error in Parentheses)*

	Victims (n = 113)	Bullies (n = 141)	Non-involved (n = 506)	F(2, 757)	η²p
Self-perceived Social Acceptance	2.55 (.86)	3.32 (.56)	3.17 (.60)	52.45*	.12
Self-image	3.00 (.73)	3.42 (.51)	3.37 (.57)	20.34*	.05
Depressed Feelings	1.71 (.47)	1.44 (.38)	1.49 (.36)	18.78*	.05
Loneliness	0.74 (.97)	-0.13 (.72)	-0.07 (.74)	54.82*	.13
Resource Control Peer Reporting	-.55 (.80)	.99 (.76)	-.24 (.80)	157.56*	.29
Self-perceived Resource Control	2.36 (.69)	3.00 (.65)	2.69 (.59)	33.60*	.08
Resource Control Teacher Reporting	-.86 (.88)	.86 (.87)	-.14 (.80)	142.85*	.27
Perceived Popularity	-1.32 (.85)	.93 (.82)	.01 (.66)	305.33*	.45
Social Preference	-.55 (.94)	-.62 (.92)	.45 (.71)	146.37*	.28

*p < .001

Subsequently, pairwise comparisons were carried out. Because the assumption of homogeneity of variance was violated on six different occasions, the Games-Howell procedure was chosen.

Self-image
The degree of Self-image was measured by the variables "Self-perceived Social Acceptance" and "Self-esteem." The results for Self-perceived Social Acceptance revealed that victims score lower than bullies and the non-involved (*p's* < .001). Bullies experienced higher levels of Self-perceived Social Acceptance than non-involved children(p < .05). The results for Self-esteem showed that victims have lower self-esteem than bullies and non-involved children (*p* < .001). There appears to be no significant difference between bullies and the non-involved.

Internalizing Problems
The degree of "internalization of problems" was measured by means of the variables "Depressed feelings" and "Loneliness." The post hoc test for differences between the groups showed that victims and bullies score higher than non-involved (*p* <.001). The degree of Depressed feelings for bullies and non-involved are equal. Similar results were obtained for the variable "Loneliness": Victims and bullies scored higher than non-involved children (*p* <.001) and there was no difference between bullies and the non-involved.

Social Dominance
In the analysis of social dominance, the variables Perceived Popularity, Peer Resource Control Reporting, Self-Perceived Control and Resource Teacher/Resource Control Reporting were included. The results showed that victims scored lower than non-involved children and bullies on all four variables (*p* <.001), and that bullies scored higher than the non-involved on all four variables (*p* <.001).

Social Acceptance

Social preference
The non-involved scored highest on Social Preference and differed significantly from both victims and bullies (*p's* < .001). Victims and bullies did not significantly differ from each other.

Sociometric status groups
In order to display how victims, bullies and non-involved children relate to the five sociometric status groups, a crosstab was used (see Table 3). A significant, moderate correlation was found (Baarda, De Goede, & Van Dijkum, 2007) between sociometric status and participant role (*Chi²* = 236,25; *df* = 8; *p* < .001; *Cramér's V* = .39). Adjusted standard residues showed that victims were more rejected and less often popular than would be expected by chance. Victims were not more or less frequently neglected, controversial or average than would be expected by chance. Bullies were more often rejected or controversial and less often sequentially neglected, popular or average. The non-involved were less often controversial or rejected, and more often popular or neglected. They were not significantly more frequently in the average group than bullies or victims.

Table 3 *Number of Victims, Bullies and Non-involved by Sociometric Status group (Adjusted Standard Residues)*

Bullying roles		Sociometrische status				
		Popular	Rejected	Neglected	Controversial	Average
Victims (*n* = 118)	Number	2	28	16	4	68
	Adjusted standard residues	(-4.3)	(5.1)	(-.3)	(-.8)	(.4)
Bullies (*n* = 146)	Number	7	43	2	27	67
	Adjusted standard residues	(-3.7)	(8.3)	(-5.0)	(8.7)	(-2.7)
Non-involved (*n* = 515)	Number	104	11	94	6	300
	Adjusted standard residues	(6.3)	(-10.7)	(4.3)	(-6.6)	(1.9)
Total (*n* = 779)		113	82	112	37	435

Conclusion and Discussion

The present study was designed to investigate the costs and benefits of bullying for bullies, victims and non-involved children. This was investigated in terms of self-image, internalizing problems, social dominance and social acceptance.

As was expected, victims reported lower self-image than bullies and non-involved children did (Hawker & Boulton, 2000). Contrary to expectations, there were no differences found between bullies and the non-involved. These results are contrary to those obtained by Kaukiainen et al. (2002). A possible explanation for this difference is that, in this study, no distinction was made between subgroups of bullies (i.e., pure bullies and bullies who are also victims) (Pollastri et al., 2010). The lower scores of bully-victims compared to pure bullies may have diminished the scores for both categories of bullies. In line with expectations, the

results indicated that bullies experience the highest degree of self-perceived social acceptance, followed by non-involved children and finally victims (Orobio de Castro et al., 2007).

The conclusions concerning victims of bullying and internalizing problems are consistent with expectations. Victims experience a higher degree of depressed feelings and loneliness (Hawker & Boulton, 2000; Roland, 2002; Schwartz, 2000). In contrast to what was expected, no difference was found between bullies and non-involved children (Kaltiala-Heino et al., 2010). The result of bullies not experiencing a higher degree of internalizing problems can perhaps be explained, at least in part, by the different roles of bullies. Previous studies show that bully-victims are at highest risk of depression and loneliness (Kumpulainen & Rasanen, 2000; Van der Wal et al., 2003).

As we anticipated regarding social dominance, bullies achieved the highest scores on resource control (i.e., from self-, peer, and teacher reports) and perceived popularity. Victims have the least social dominance, while the non-involved obtained score levels between those of bullies and victims. All these findings were consistent with previous research (Olthof et al., 2011; Prinstein & Cillessen, 2003) and thus provide support for the assumption that bullies seek to achieve and maintain popularity and a high degree of resource control (Hawley, 2003; Salmivalli et al., 2005; Vaillancourt et al., 2003). Current research also confirms that victims have almost no resources and are very unpopular.

As was expected, the non-involved children were socially accepted to a greater extent than both victims and bullies, while the latter two groups did not differ from each other. In terms of sociometric status, victims were clearly rejected by their peers. Low social acceptance and a sociometric status of "rejected" are consistent with the findings of previous research (Salmivalli et al., 1996). Bullies have both rejected and controversial sociometric statuses, which means that not all bullies are socially rejected by their peers. This also was in line with expectations (Dijkstra et al., 2007). The bullies in this study were not characterized as popular by their peers, as Salmivalli et al. (1996) found in previous research. Perhaps this is related to the type of bullying involved in this study, specifically the fact that relatively fewer "relational-aggressive bullies" participated. Interestingly, non-involved children have popular and neglected statuses, while it was expected that they would mainly be classified in the average group. This could indicate a heterogeneous group of non-involved children.

It can be concluded that there are considerable differences in the effects of bullying on victims and bullies. Bullies mainly experience positive outcomes of bullying. Their self-image is higher, have a higher degree of resource control, are perceived as popular, and do not have internalizing problems. In addition, not all bullies get socially rejected by their peers. In contrast, victims have negative outcomes on all these variables. These results are broadly consistent with the literature. The non-involved were expected to have an average position, but it appears that there are generally few differences between non-involved children and bullies. This does not apply to social dominance and social acceptance. Bullies are socially more dominant than non-involved children, but the latter are more socially accepted than the former.

It is noteworthy that bullies experience practically no negative outcomes from their behavior. This could explain the fact that bullying is a stable phenomenon over time. It can be said that, in terms of behavioral psychology, the fact that bullies receive positive reinforcement for bullying makes it logical that they continue to engage in such behavior. In order to put an end to bullying, the problem has to be confronted at its source. Therefore, increasing the social costs of bullying is the most important implication for practice. In order to stop bullying, engaging in the behavior has to be unrewarding for children. Because it is more difficult to reduce the benefits for bullies, the easiest and most practical way to make bullying unattractive to children is by enacting disciplinary measures. Bullying must not be

tolerated in any way, and teachers should react immediately by imposing consequences that are experienced by the offending children as negative.

Bullying is a group process and therefore a focus on group interventions is appropriate, in addition to individual interventions. Such interventions should aim at getting bullies to recognize the disadvantages of their behavior (for themselves and their victims) and to teach them new and socially acceptable strategies to achieve their goals. Though bullies are perceived as popular, bullies are in fact not very popular with their peers. They attain whatever popularity they have through predominantly negative behaviors (i.e., manipulative, controlling and intimidating behavior). They need instead to learn to attain popularity in more socially acceptable ways.

For interventions aimed at individual victims, it is vitally important to promote peer acceptance. Because the bullying of a socially rejected individual entails little risk of revenge or retaliation (De Bruyn et al., 2010), peer acceptance may contribute to the prevention of victimization (Pellegrini & Long, 2002). Opportunities for victims include social skills training, anxiety-reduction training and early identification of symptoms of depression. Interventions aimed at making the victim stronger will help address bullying as a group problem. Self-image also plays a significant role in attaining the acceptance of others. It is important to attaining a realistic self-image in order to eliminate anxiety, depression and vulnerability, and to reduce the risk of social rejection (Van der Ploeg, 2011). A high self-image leads to optimism, good adaptation skills and self-confidence. A victim who has such a self-image will be more prepared to be more proactive, take risks and attain a higher social position with greater self-confidence. This can result in both an improved social position and enhanced resource control. Finally, teachers have to deal in a preventive way with the risk factors for victimization. Early identification of children who have low self-esteem or internalizing problems is vital in this regard. Given the relationship between internalizing problems and victimization, it is necessary to make these children both socially and emotionally stronger.

Given the limitations of the present study, caution should be exercised in generalizing its results (Landsheer & De Goede, 2003). In the present study, composite and custom instruments were used, the validity and reliability of which should be investigated further. For example, the fact that the questionnaire on loneliness includes five questions with highly overlapping content means that high validity is not unexpected. Whereas depression is a disorder with typical symptoms, loneliness is a subjective feeling rather than an identifiable psychiatric disorder. Whether the concept of loneliness can be measured with these five closely rated questions is therefore open to doubt. Furthermore, the completion of the questionnaires was supervised by a large number of different interviewers, allowing possible interview-effects to have an impact on the results (Baarda, 2009). There also is the possibility that socially desirable answers were elicited from participants in this study, given that bullying is a sensitive subject (Baarda et al., 2007). For example, children who needed additional guidance sat together with a student who read out the questions. This increases the likelihood of children looking at each other's answers and the consequent expression of a "consensus" position.

Despite these limitations, this study does have several strengths. The use of multiple informants (i.e., peer, teacher and self-report) increases both its reliability and validity. In addition, the extensive database can be mentioned as a strength of this study. Due to the large sample size and its geographical dispersion across the central and southern Netherlands, it seems possible to generalize the results to two-thirds of the primary schools in the Netherlands. Another strength of the present study is the standard procedure described in the research protocol. The large number of researchers conducting the present study made the use of a standard protocol obligatory (Landsheer & De Goede, 2003).

In conclusion, it can be stated that the variables used in this study provide a good impression of the positive and negative phenomena regarding bullying, which is confirmed by the literature. Thus, there is a relationship between social rejection and internalizing problems. Rejection increases the chance of a child developing internalizing problems while social acceptance reduces the probability of such an occurrence (Hay et al., 2004). For depression, rejection is an underlying problem that results in bullying, although depression can also occur because of rejection (Kaltiala-Heino et al., 2010). Depression also seems to have a negative impact on self-esteem. Low self-esteem increases the risk of victimization (Kaltiala-Heino et al., 2010) and higher self-esteem leads to a marked decreas of anxiety, depression, and vulnerability, while also reducing the risk of social rejection (Van der Ploeg, 2011).

Given the results of the present study, a number of recommendations for future research can be made. This paper has confirmed that there is a relationship between the nine variables and the participant roles. However, other participant roles (e.g., supporters, followers, defenders and outsiders) were not included in this study. Future research should focus on the costs and benefits that such roles entail in order to provide a complete picture of bullying behavior. In addition, the present study paid no attention to the effect of gender on the costs and benefits of bullying. It will be necessary to focus on this effect in further studies in order to better understand the phenomenon of bullying. In conclusion, it is striking that no bullies experienced internalizing problems, despite their victims having suffered. More research should be done in order to determine why this is so.

Despite these limitations and recommendations, our research led to new insights and confirmation in the field of bullying among elementary school children. Bullies appear to gain the most benefits from bullying, compared with victims and the non-involved. It is striking that bullies experienced virtually no problems as a result of their bullying behavior and even had a certain advantage in terms of resource control, perceived popularity and their self-image. Current research thus provides guidelines for interventions, while suggesting promising directions for future research.

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