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Chapter 5

Classroom Peer Rejection and Changes in Elementary School Children's Sharing Behavior with Peers

In preparation as:
Asscheman, J.S., Koot, S., Buil, J.M., Krabbendam, L., & van Lier, P.A.C. Classroom peer rejection and changes in elementary school children's sharing behavior with peers.

Abstract

Classroom peer rejection is a highly salient experience in the lives of children and may motivate children to use prosocial behavior to improve their social position among peers. However, little is known about how peer rejection affects sharing behavior, a form of prosocial behavior, and how this differs for different recipients. As children are placed in a classroom with children they have specific feelings about, it is important to understand the effect that classroom peer rejection has on sharing behavior with these different peers during childhood. Therefore, this one-year longitudinal study examined associations between peer rejection and sharing behavior with a friend, disliked peer, and anonymous other in 963 elementary school children (mean age = 9.07 years, 52% boys). Using the Dictator Game, children shared coins with someone they considered a friend, a disliked peer, and an anonymous other. Peer rejection was assessed using peer nominations of likeability and dislikeability. A cross-lagged panel model was used to assess the unique longitudinal effects of peer rejection on sharing behavior. Results showed that peer rejection predicted decreases in sharing behavior with a disliked peer one year later. No changes in sharing behavior with friends or anonymous others were found. Findings highlight the impact of classroom peer rejection on children's sharing behavior depending on the child's relationship with a peer.

Introduction

Positive social experiences during elementary school are fundamental in the cognitive, social and emotional development of children (Miller-Johnson, Coie, Maumary-Gremaud, Bierman, 2002). However, some children experience difficulties in engaging in satisfactory relationships and are rejected by their peers (Rubin, Bukowski, Parker, 2006). Peer rejection, which is typically defined as being poorly liked and simultaneously being highly disliked by peers, has been linked to high levels of aggression and low levels of prosocial behavior (Deater-Deckard, 2001; McDonald & Asher, 2018). Prosocial behaviors shown toward classroom peers may improve a child's social position which may mitigate their aggressive tendencies (He, Koot, Buil, Van Lier, 2018; Williams, 2007). However, little is known about how classroom peer rejection changes sharing behavior, a form of prosocial behavior, and how this may differ for different recipients (e.g., friends, disliked peers). Therefore, the goal of this study was to examine the longitudinal associations between children's peer rejection in the classroom and their sharing behavior with friends, disliked peers, and anonymous others across a one-year interval, among children attending mainstream elementary schools.

Peer rejection and prosocial behavior

Peer rejection may threaten children's fundamental need to belong to a peer group and is therefore experienced as painful and distressing (Baumeister & Leary, 1995). This pain and distress associated with peer rejection are, for instance, reflected by activation in brain regions associated with affective regulation (Eisenberger, Lieberman, Williams, 2003; Williams, 2007). This initial affective response to peer rejection is thought to be followed by a reflective stage to attribute importance and meaning to the rejection experience (Williams, 2007). This reflective stage is aimed at selecting socio-cognitive skills and behavioral responses that may counter the threat imposed by peer rejection (Williams, 2007). For example, rejected children may respond to peer rejection by increasing their prosocial behavior to try to reinstall social connections or social inclusion. In line with this, studies have shown that after rejection adults cooperate more and act more generously in order to become more liked by others, to restore social bonds or to establish inclusion (Gardner, Pickett, Brewer, 2000; Maner, DeWall, Baumeister, Schaller, 2007). The few studies available on children suggest that after rejection children act prosocial toward peers that provide opportunities for social inclusion (Gunther Moor et al., 2012; Will, Crone, van Lier, Guroglu, 2016). Thus, increasing prosocial behavior may be a possibility to restore social bonds and establish inclusion to fortify the need to belong (Williams, 2007).

Given these findings, we would expect that children who experience peer rejection by their classmates may respond to the rejection by increasing their prosocial behavior. However, this may not always be the case. Rejection has also been linked to various negative behavioral responses including immediate (Twenge, Baumeister, DeWall, Ciarocco, Bartels, 2007; Twenge, Catanese, Baumeister, 2002) and later decreases in prosocial behavior (Wentzel, 2003; Zimmer-Gembeck, Geiger, Crick, 2005). Likewise, another study showed that children who perceived themselves as being lowly accepted by peers were less prosocial one year later (Malti, Gummerum, Keller, Chaparro, Buchmann, 2012). Therefore, it is uncertain whether rejected children will indeed respond with increases in prosocial behavior. Negative behavioral responses to rejection may emerge if rejected individuals anticipate that their prosocial behavior will not be rewarded with the fortification of their need to belong (Twenge et al., 2007; Twenge, Baumeister, Tice, Stucke, 2001). This may, for instance, be the case when rejected individuals feel that there is no opportunity to reconnect or if they feel there is a risk of being rejected again. As such, this may suggest that the choice of a rejected child to act prosocial or not may depend upon whom the rejected child is interacting with.

The influence of the recipient in sharing behavior

Sharing behavior, one form of prosocial behavior, is shown in social contexts and plays a key role in forming and maintaining relationships (Berndt, 2002; Fehr, Fischbacher, Gächter, 2002; Laursen & Hartup, 2002; Paulus & Moore, 2017). Therefore, the amount children share may depend on the recipient. Indeed, prior studies found that children and adolescents share more with a friend than with disliked or anonymous peers (Güro lu, van den Bos, Crone, 2014; Moore, 2009; Paulus & Moore, 2014). Importantly, it has been suggested that social stressors (e.g., peer rejection) may influence sharing behavior (Malti et al., 2012; Starcke & Brand, 2012; Vinkers et al., 2013). The willingness of a rejected child to share with classroom peers may depend upon the characteristics of the recipient. The previously mentioned study by Malti et al. (2012) showed that children who perceived themselves as not accepted by peers decreased the number of stickers shared with an anonymous peer one year later. However, in the classroom children are placed among peers they may have specific feelings about. For instance, some peers may be considered as friends, whereas other peers may be disliked. Sharing behavior with friends following peer rejection may differ from sharing behavior with a disliked peer, and thus may differ from findings from the previous studies regarding sharing behavior with an anonymous peer (Malti et al., 2012). For example, after peer rejection a child may have an increased motivation to socially reconnect with friends, and show increased effort to maintain and intensify the relationship (Maner et al., 2007;

Williams, 2007). These friends could then provide a supportive context to fortify the rejected child's need to belong or function as allies to protect or compensate for the vulnerable social position of the rejected child (Hodges, Boivin, Vitaro, Bukowski, 1999; Williams, 2007).

In contrast to sharing behavior with friends, sharing behavior with a peer that is disliked by the child may decrease as a consequence of peer rejection. Interactions with disliked peers may be less satisfying and therefore more hurtful of nature (Vangelisti, 2001). In addition, previous studies demonstrate that rejected children experience their peers as more hostile, untrustworthy, and unsupportive (Salmivalli & Isaacs, 2005) which may be particularly true for peers they dislike (Burgess, Wojslawowicz, Rubin, Rose-Krasnor, Booth-LaForce, 2006; Peets, Hodges, Salmivalli, 2008). Therefore, these disliked peers may be perceived as being unrealistic sources of renewed social connection or may even be a danger for new rejection experiences. In this study, we will examine whether elementary school peer rejection changes sharing behavior and whether this depends upon the characteristics of the recipient.

The present study

The present study addressed the longitudinal associations between peer rejection and sharing behavior with different peers. To this end, 963 children attending mainstream elementary school were assessed twice across a one-year interval on their classroom peer rejection and sharing behavior with an undefined recipient, friend, and disliked peer. In line with the previous study by Malti et al. (2012), we hypothesized that peer rejection would predict decreases in sharing behavior with an undefined recipient henceforth referred to as an anonymous other. We hypothesized that peer rejection would also decrease sharing behavior with a disliked peer over time. In contrast, we hypothesized that peer rejection would predict increases in sharing behavior with a friend.

Method

Participants

Participants were children from 70 classrooms in 13 elementary schools, situated in the eastern and central part of the Netherlands, from the overarching longitudinal study 'Happy Children, Happy Adolescents?' (Behnsen, Buil, Koot, Huizink, van Lier, 2018; de Wilde, Koot, van Lier, 2016; Tieskens, Buil, Koot, Krabbendam, van Lier, 2018). All study procedures were approved by the medical ethical committee of the Vrije Universiteit Amsterdam, The Netherlands (protocol number: NL37788.029.11).

Parents were informed about the study and asked to provide informed consent for their child to participate in the assessments. Of the 1340 children that could be included, parents of 261 children did not consent with the participation of their child.

In the present study, data were used from two annual school-based assessments, conducted in the spring of 2015 (T1) and 2016 (T2). At T1 children were in grade 2 to 4 (M_{age} = 9.07 years, *SD* = 0.96, range = 6.05 – 12.26 years). Children were re-assessed with a mean interval of 12.18 months (*SD* = 1.61 months), when children were in grade 3 to 5. Of the 1077 children that participated at T1, 114 children did not have valid data on T2 due to technical problems (n = 63), absence on the test day (n = 6), change of school (n = 9), change of classroom (n = 3), or withdrawal of consent (n = 33). Given our focus on predicting changes in sharing behavior from T1 to T2, we only included children with complete data. This seems justified given that children with incomplete data (n = 114) did not differ at T1 on age ($t(130.56) = 0.27$, $p = .791$), sex ($\chi^2(1) = 0.02$, $p = .920$), peer likeability ($t(130.79) = 0.33$, $p = .739$), peer dislikeability ($t(131.47) = -1.92$, $p = .058$), sharing behavior with a friend ($t(1077) = -0.08$, $p = .941$), sharing behavior with an unknown peer ($t(1077) = 0.68$, $p = .501$), or sharing behavior with a disliked peer ($t(1077) = -0.82$, $p = .418$) from children with complete data. The final sample was comprised of 963 children (52% boys) with a mean age of 9.07 years (*SD* = 0.94, range = 6.05 – 11.43 years). Most children were from Dutch origin (76.1%), with the remaining children having a Turkish (2.7%), Moroccan (2.0%), or other (15.2%) ethnic background and of 4.0% of the children there was no information on ethnic background.

Procedure

During each annual school visit, children participated in two 45-minute assessment sessions; one in the morning and the other in the afternoon. All questionnaires and tests were completed using a tablet computer (Apple iPad 2, Cupertino, CA). Typically, children filled out the questionnaires, including peer nominations, in the morning session in the classroom. Trained research assistants (master level or completed psychology education) were present in the classroom to provide verbal instructions and to assist children when needed. In the afternoon, children completed the Dictator Game to assess their sharing behavior as part of a larger test battery in another room outside the classroom. Children were supervised one-on-one by a trained research assistant. The duration of the Dictator Game was approximately five minutes and was administered halfway during the larger test session. Children received a small gift for participation at the end of each yearly school visit. All instructions, questionnaires, and tasks in the test battery were identical for all children on both assessments.

Measures

Peer rejection. Children's peer likeability and dislikeability were assessed using peer nominations (Cillessen & Bukowski, 2018). Children were asked to nominate an unlimited number of peers in their classroom grade they liked (*"Who do you like in your class?"*) and disliked (*"Who do you dislike in your class?"*). Children were presented with a list of all children in their classroom and were asked to nominate their classmates on each of these items. To correct for differences in classroom size a normalized score for both likeability and dislikeability was calculated by dividing the number of nominations received on an item by the number of classmates that completed the peer nominations questionnaire minus one (i.e., children could not nominate themselves). The normalized likeability and dislikeability scores could, therefore, range between 0 and one 1 with higher scores either indicating that a child is being more liked by its classroom peers (likeability) or a child is being more disliked by its classroom peers (dislikeability). As peer rejection implies a combination of low likeability and high dislikeability, we computed a measure of peer rejection by using an interaction term between likeability and dislikeability (Coie, Dodge, Coppotelli, 1982; Gunnar, Sebanc, Tout, Donzella, van Dulmen, 2003; London, Downey, Bonica, Paltin, 2007). To this end, both likeability and dislikeability were Z-standardized.

Sharing behavior. The Dictator Game was used to assess sharing behavior (Kahneman, Knetsch, Thaler, 1986). Children performed three rounds of this digital game and in each round they shared coins with another recipient. In the first round, children had to share coins with an undefined recipient (i.e., anonymous other). In the second round, children were instructed to think of someone they considered their best friend and were then asked to share the coins with this friend. Last, children were instructed to think about someone they considered to be a peer they disliked, and to share the coins with this peer. The recipients were presented in the same order throughout the assessments. Children were instructed that in each round they had 10 coins that they could divide between themselves and the recipient and it was emphasized that children were free to choose how to divide the coins. On the interface of the tablet computer children could slide the coins they wanted to keep for themselves to a field on the left side of the screen. They could slide coins they wanted to share with the recipient to a field on the right side of the screen. The sharing behavior score of the child was based on the number of coins allocated to the recipient with higher scores indicating higher sharing behavior. No monetary reward based on their allocations during the Dictator Game was offered to the children at the end of the game.

Statistical analysis

An autoregressive cross-lagged panel model (Farrel, 1994; Jöreskog, 1970) was fitted in Mplus version 7.4 (Muthén & Muthén, 1998-2017) to test our study hypotheses.

Allocations of the number of coins to the three recipients (anonymous other, friend, disliked peer) were analyzed in one model. The model consisted of autoregressive paths and within-time residual error correlations between our study variables. We also allowed for reverse cross-lagged paths in our model to control for effects of sharing behavior on peer rejection over time. All paths estimates were controlled for the effects of age and sex. Before testing our study hypotheses regarding peer rejection, we first fitted a model containing only control variables followed by a model containing the main effects of likeability and dislikeability on changes in the number of coins allocated to the different peers from T1 to T2. We then tested our study hypothesis on peer rejection predicting changes in the number of coins allocated to the different peers from T1 to T2 by adding the interaction term between peer likeability and dislikeability (likeability x dislikeability) to the model. Significant interactions were further examined using post-hoc probing (Holmbeck, 2002) to explore whether the peer rejection end of this interaction term accounted for this result. To this end, a conditional moderator was computed using a standard deviation of 1.5 from zero as this represents the 10-15% of the children that are rejected by their peers (Coie et al., 1982).

Standard errors of the path estimates were adjusted for the clustering of data within schools using a sandwich estimator (Williams, 2000). Model fit indices were used to assess goodness-of-fit for our fitted models. Values for the Comparative Fit Index (CFI) above .90 (Bentler, 1990), and values for Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Square Residual (SRMR) below .08 indicated acceptable model fit (Bollen & Curran, 2006; Browne & Cudeck, 1992).

Results

Descriptive statistics

Table 5.1 shows the means and standard deviations for the number of coins allocated to the different recipients and peer likability and dislikeability on both assessments. Children allocated on average fewer coins to a friend from T1 to T2, but more coins to an anonymous other and a disliked peer. Correlations between the study variables are in Table 5.2. Although not consistently significant across recipients across time, positive correlations between likeability and the number of coins allocated to the different recipients were found. Correlations between dislikeability and the number of coins allocated to a disliked peer were in the expected negative direction on both assessments. Negative correlations between dislikeability and the number of coins allocated to friends or an anonymous other were also found, although not consistently.

Table 5.1. Means and standard deviations of study variables at T1 and T2

	T1		T2		Test
	M	*SD*	*M*	*SD*	Time
Coins to friend	5.18	1.33	4.75	1.16	-8.40**
Coins to disliked peer	1.79	1.82	2.14	1.92	4.82**
Coins to anonymous other	3.92	1.77	4.10	1.50	2.59*
Likeability	0.39	0.18	0.36	0.17	-3.90**
Dislikeability	0.23	0.17	0.24	0.19	3.15**

Note. Test statistics (Time) of a paired-samples *t*-test represent *t*-values; **p* < .05, ***p* < .01.

Longitudinal associations between peer rejection and sharing behavior

The results of the path estimates regarding our study hypotheses of the fitted models are in Table 5.3. The model including the interaction between likeability and dislikeability (i.e., peer rejection) predicting changes in the number of coins allocated to a peer from T1 to T2 had a significant better fit to the data than the model containing only main effects of likeability and dislikeability (Satorra-Bentler $\Delta\chi^2(3) = 9.77$, $p = .021$; Satorra, 2000). Model fit of the model containing the interaction term was acceptable (CFI = .99, RMSEA = .05, SRMR = .02).

Parameter estimates in Figure 5.1 and Table 5.3 demonstrate a significant and positive effect of the interaction between likeability and dislikeability on changes in the number of coins allocated to a disliked peer (B = 0.09, β = .06, SE = 0.05, *p* = .048). Post-hoc probing of the simple slopes was used to breakdown this significant interaction term.

Table 5.2. Correlations between study variables

		1	2	3	4	5	6	7	8	9
1	Friend T1	-								
2	Disliked peer T1	.16**	-							
3	Anonymous other T1	.22**	.36**	-						
4	Friend T2	.16**	.08**	.16**	-					
5	Disliked peer T2	.10**	.27**	.17**	.24**	-				
6	Anonymous other T2	.09**	.14**	.12**	.40**	.46**	-			
7	Likeability T1	.11**	.03	.09**	.06	.05	.05	-		
8	Dislikeability T1	-.04	-.11**	-.10**	-.01	-.09**	-.06*	-.58**	-	
9	Likeability T2	.06	.08*	.06	.01	.04	.02	.45**	-.41**	-
10	Dislikeability T2	-.09**	-.15**	-.13**	-.07*	-.10**	-.11**	-.42**	.61**	-.56**

**p* < .05, ***p* < .01.

Table 5.3. Parameter estimates of model on peer likeability and dislikeability predicting changes in number of coins allocated to different recipients

		Friend			Disliked peer			Anonymous other		
		B	*SE*	β	*B*	*SE*	β	*B*	*SE*	β
1	Age	0.10	0.04	.08**	0.08	0.05	.04	0.09	0.04	.05*
	Sex[1]	0.22	0.05	.10***	0.35	0.14	.09*	0.31	0.11	.10**
2	Age	0.10	0.04	.09**	0.09	0.05	.04	0.09	0.04	.06*
	Sex[1]	0.22	0.04	.10***	0.31	0.15	.08*	0.28	0.11	.10**
	Likeability	0.07	0.04	.06	0.01	0.06	.00	0.02	0.06	.02
	Dislikeability	0.05	0.05	.04	-0.10	0.08	-.05	-0.05	0.07	-.04
3	Age	0.10	0.04	.08**	0.09	0.05	.04	0.09	0.04	.06*
	Sex[1]	0.22	0.04	.10***	0.31	0.15	.08*	0.28	0.11	.09**
	Likeability	0.08	0.04	.07	0.04	0.07	.02	0.01	0.08	.01
	Dislikeability	0.06	0.05	.05	-0.05	0.08	-.03	-0.08	0.09	-.05
	Likeability x Dislikeability	0.02	0.03	.02	0.09	0.05	.06*	-0.04	0.05	-.03

Note. [1] Boys = 0, Girls = 1. * $p < .05$, ** $p < .01$, *** $p <. 001$.

Conditional moderator variables were calculated using 1.5 standard deviation above and below zero for both variables in the interaction term (Holmbeck, 2002). Results displayed in Figure 5.2 show that the combination of low likeability and high dislikeability (i.e., peer rejection) predicted a decrease in number of coins allocated to a disliked peer (B = -0.19, β = -.10, SE = 0.04, p = .028). No effects of peer rejection on changes in the number of coins allocated to a friend or an anonymous other from T1 to T2 were found.

Discussion

The present study examined the influence of classroom peer rejection on the development of sharing behavior with peers among mainstream elementary school children. Across the one-year span, children allocated on average more coins to a disliked peer in the Dictator Game. However, against this general trend, children who experienced peer rejection by their classmates at baseline allocated fewer coins to a disliked peer from baseline to re-assessment. No effects of peer rejection on changes in the number of coins allocated to a friend or an anonymous other were found. Together, these results suggest that peer rejection decreased sharing behavior with disliked peers over time, but did not change sharing behavior with friends nor general tendencies to share with anonymous others.

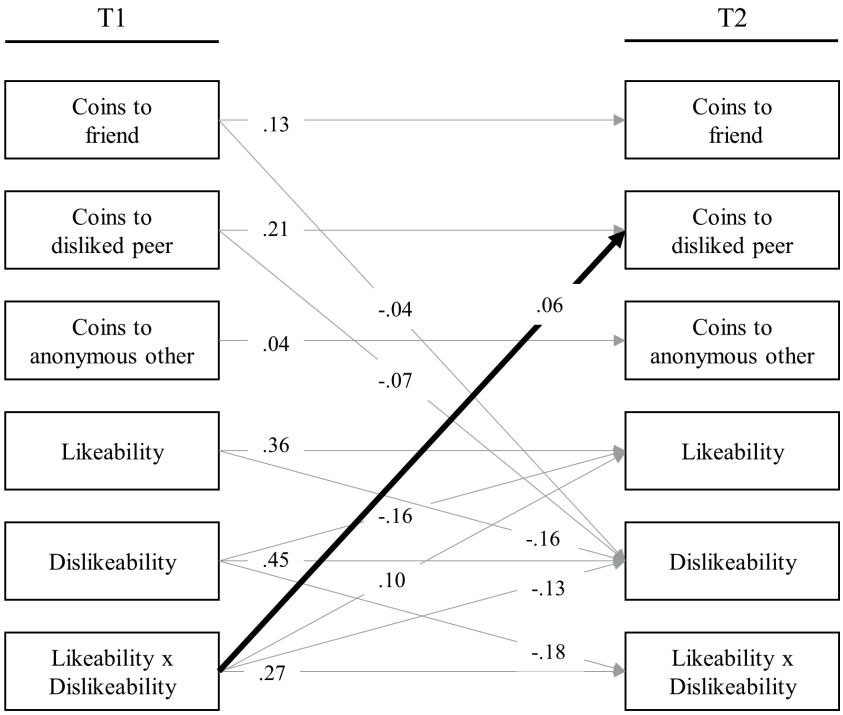

Figure 5.1. Full cross-lagged panel model on peer likeability, dislikeability, likeability x dislikeability, and the number of coins allocated to peers. Only significant beta estimates are shown ($p < .05$). Within-time residual error correlations are omitted. Model fit: Comparative fit index (CFI) = .99; Root mean square error of approximation (RMSEA) = .05; Standardized root mean squared residual (SRMR) = .02.

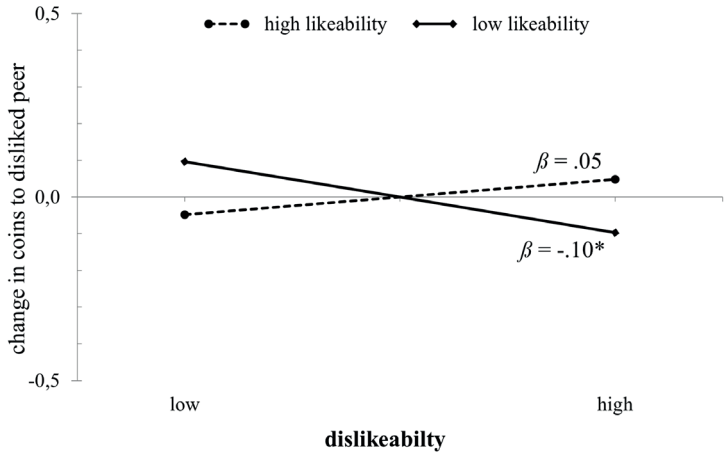

Figure 5.2. Post-hoc probing of the significant interaction term (likeability x dislikeability) on the change in the number of coins allocated to a disliked peer from T1 to T2. *$p < .05$.

Our hypothesis regarding sharing behavior with disliked peers was supported. This result was consistent with previous studies showing that rejection can lead to decreases in prosocial behavior if social inclusion seemed unrealistic (Twenge et al., 2007; Twenge et al., 2002; Wentzel, 2003; Zimmer-Gembeck et al., 2005). However, the results did not support our hypothesis concerning sharing behavior with anonymous others and friends as we found no association between classroom peer rejection and changes in sharing behavior with anonymous others or friends. Especially the non-significant link with anonymous others was inconsistent with findings from Malti et al. (2012) who showed decreased sharing behavior with anonymous peers over time for children who did not perceive themselves as accepted by their peers. A possible explanation for both the non-significant association between peer rejection and sharing with friends and anonymous others may be that we provided children with two defined and one undefined recipient, whereas Malti et al. (2012) only provided the single anonymous peer as a recipient. Possibly, providing two defined and one undefined peer next to each other influenced sharing behavior with an anonymous peer. This is further affirmed by the low stability found in the current study for sharing behavior with an anonymous other. In addition, Malti et al. (2012) studied self-perceived peer acceptance, while in the current study we examined the effects of classroom peer rejection. Current findings extend prior work by showing that peer rejection did not result in a general increase nor decrease in sharing behavior, but that changes in sharing behavior depend on the child's relationship with a peer.

The overall results of this study seem to suggest that children who experience classroom peer rejection will share less with peers that are unlikely to provide recourses to reconnect, and that this is not compensated by an increase in sharing with peers who can provide social recourses like friends. Reconnection with friends can be important for rejected children as these friends may provide a supportive context, function as allies against rejecters, or buffer against the negative outcomes of peer rejection (Hodges et al., 1999; Williams, 2007). Three possible explanations may account for our findings regarding sharing behavior with friends. First, friendships of rejected children are often more conflictual and may, therefore, be less supportive (Parker & Asher, 1993; Salmivalli & Isaacs, 2005; Sebanc, 2003). As a consequence, rejected children may seek support in other social contexts, for example from parents or siblings (East & Rook, 1992) or compensate for the negative feelings caused by rejection by resorting to other sources of comfort, such as eating or watching television (Derrick, Gabriel, Hugenberg, 2009; Troisi & Gabriel, 2011).

Second, it may be that rejected children, already at this young age have learned that their sharing behavior, even toward friends, is no longer effective in providing opportunities for reconnection or recourses of protection. In the current study, we assessed children in grades 2 – 4 at baseline. It is, therefore, possible that these

children were already rejected for a prolonged period. Previous studies have shown that peer rejection emerges swiftly following the transition to formal schooling, and becomes stable quickly thereafter (Gooren, van Lier, Stegge, Terwogt, Koot, 2011; Ladd, 2006). The duration of peer rejection may affect rejected children's trust in whether friends may provide reconnection or protection thereby ceasing to invest in friends. Support for this can be found in studies showing associations between early life stress and lower levels of interpersonal trust (Pitula, Wenner, Gunnar, Thomas, 2017) and associations between peer rejection and beliefs about the trustworthiness of a rejected child's peers (Salmivalli & Isaacs, 2005).

Third, the psychosocial stress associated with peer rejection may affect long-term decision-making, resulting in more reflexive decisions that are focused on short-term gains, as has been shown in adults and adolescents (Baumeister, DeWall, Ciarocco, Twenge, 2005; Fields, Leraas, Collins, Reynolds, 2009; Starcke & Brand, 2012; Stenseng, Belsky, Skalicka, Wichstrom, 2014; Vinkers et al., 2013; Williams, 2007). Our results that show that sharing behavior with disliked peers decreased seem to support these findings. Thus, these three possible explanations are likely to coexist in the same child and together may result in less sharing with disliked peers and no investments in potential allies.

Some limitations of the present study should be acknowledged. First, the schools in the current study were situated in central and eastern parts of The Netherlands and were thus not drawn randomly. Therefore, our sample may not represent a general Dutch population. However, the percentage of children with a Dutch background in our sample was only slightly lower (76.1%) than the percentage of people with a Dutch background in the national population (78.8%) (Statistics Netherlands, 2017). It is therefore unlikely that our sample differs from the general population. Second, during the Dictator Game we asked children to think about someone they considered a friend and a disliked peer. We did not ask nor check whether children were actually considering a friend or disliked peer during the allocation of coins. However, for reasons of feasibility and to allow children to also think of a friend outside the classroom context, we did not assign recipients based on individual answers on the peer nominations as was done in a previous study (Güro lu et al., 2014). However, the mean levels of sharing behavior with different recipients concur with the mean levels of sharing behavior found in the study by Güro lu et al. (2014). This suggests that the children in our study were able to consider different peers during the Dictator Game. Last, sharing behavior was used as one measure of prosocial behavior, as it may be used strategically in interpersonal relationships (Berndt, 2002; Fehr et al., 2002; Hay, 1994; Laursen & Hartup, 2002; Paulus & Moore, 2017). It is possible, though, that other subtypes of prosocial behavior, such as helping or cooperation may unveil different behavioral patterns toward these different peers. Future studies may focus

on how these different subtypes of prosocial behavior are affected by peer rejection.

Overall, the results of the present study suggest that peer rejection affects sharing behavior with peers over time, depending on the child's relationship with a peer. The found pattern of sharing behavior following peer rejection may be maladaptive as increases in prosocial behavior for children who are low preferred among peers have been shown to reduce the risk of the development of aggressive and depressive symptoms (He et al., 2018). As peer rejection is a process that may occur in all classrooms, teachers and social workers should thus be aware of the consequences of peer rejection on children's behavior and may motivate rejected children to increase their sharing behavior. Although our results showed changes in sharing behavior as a function of peer rejection, this study cannot provide conclusions on *why* rejected children change their sharing behavior. Future studies may try to elucidate socio-cognitive processes (e.g., interpersonal trust) and possible neural correlates that underlie these behaviors to gain more insight into the complex dynamics by which peer rejection influences behavior which may lead to maladjustment later in life.