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# Relational aggression and relational inclusion in adolescents: the role of empathic concern for victims of relational aggression and perspective taking

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## ABSTRACT

This study examined the role of a) empathic concern for victims of relational aggression (ECV) and b) perspective taking (PT) in explaining self- and peer-reported relational aggression (RA) and relational inclusion (RI) in a sample of 345 adolescents. The direct association among ECV, PT and self- and peer-reported RA and RI was investigated. The moderating effect of ECV on the association between PT and RA and RI was also explored. Structural equation modelling was used, and the results showed that ECV may be important in preventing RA but less important in explaining RI among adolescents. The results further revealed that PT was positively associated with self-reported RA but not with peer-reported RA. The possibility that the two methods provide supplementary information is discussed. The main findings emphasise the importance of developing initiatives that increase adolescents' empathic concern towards RA victims.

## KEYWORDS

Relational aggression; relational inclusion; perspective taking; empathic concern towards victims of relational aggression

## Introduction

Adolescence is a time when relations with peers become highly important, contributing significantly to the formation of identity and self-worth. It is thus crucial that relations between adolescents are supportive. Unfortunately, this is not always the case. Relational aggression (RA) is defined as '*behaviours that harm others through damage (or the threat of damage) to relationships or feelings of acceptance, friendship or group inclusion*' (Crick et al. 1999, 77). Typical examples of RA include deliberately trying to persuade peers to reject or exclude the target person (Crain, Finch, and Foster 2005; Crick and Grotpeter 1995; Simmons 2002), spreading vicious rumours or lies about the target (Björkqvist, Österman, and Lagerspetz 1994; Galen and Underwood 1997; Lagerspetz, Björkqvist, and Peltonen 1988) or expressing negative attitudes about the target through nonverbal signs (Cairns et al. 1989). RA in adolescence is of great concern because it threatens the well-being of those affected by such behaviour. There is overwhelming support that both perpetrators and recipients of all types of bullying have social and emotional difficulties to some degree (Card et al. 2008).

Research findings regarding gender differences in RA in general are mixed (Underwood 2003). However, gender differences in RA favouring girls increase at adolescence (e.g., Smith, Rose, and Schwartz-Mette 2010).

This study aims to contribute to the understanding of factors that could prevent RA. Rather than RA, it is desirable that adolescents develop values and beliefs that help them influence others' relationships in prosocial ways. Prosocial behaviour is a broad term that is defined as 'voluntary

behaviour intended to benefit another' (Eisenberg, Fabes, and Spinrad 2006). In general, girls have been found to be more responsive, empathetic and prosocial than boys (Eisenberg, Fabes, and Spinrad 2006).

Although prosocial behaviour in general has been studied a great deal, intentional acts to include victimised or rejected peers and attempts to improve (rather than damage) relationships have scarcely been explored in the literature. In this study, relational inclusion (RI) is defined as a subtype of prosocial behaviour as *intentional prosocial behaviour that strengthens victimised peers' relationships and feelings of acceptance and group inclusion*.

What initiatives can be developed to increase adolescents' ability to actively include their peers instead of excluding them during this crucial period of cognitive and moral development?

Psychological resources play an important role in determining how adolescents manage their social interactions with peers in a considerate way. In particular, empathy is a resource that is assumed to prevent aggression and foster helping behaviour among peers (Eisenberg, Eggum, and Di Giunta 2010). However, researchers increasingly recognise that empathy is a multidimensional concept that involves cognitive (e.g., perspective taking, PT) and affective (e.g., affective empathy and empathic concern) components that can carry different implications for aggression and prosocial behaviour (Caravita, Di Blasio, and Salmivalli 2009, 2010; Espelage, Mebane, and Adams 2004; Jolliffe and Farrington 2006, 2011).

PT (e.g., cognitive empathy) is often treated as part of the concept of empathy. PT is the ability to imagine another's experience. Adolescents with well-developed PT skills may be more likely to possess attitudes that support prosocial behaviours than adolescents with less developed PT skills (Eisenberg et al. 1999; Selman 2003), which may explain why PT has been seen as a natural component of empathy. However, recent research indicates that understanding the perspective and emotions of others does not always lead to caring about others' emotions. Indeed, some researchers have found that PT skills can be linked to aggressive behaviours (Caravita, Di Blasio, and Salmivalli 2009; Hawley 2003; Sutton, Smith, and Swettenham 1999), including RA (Batanova and Loukas 2011). Previous research suggests that social manipulation requires the ability to understand another person's perspective and interpret the available emotional and social cues (e.g., Batanova and Loukas 2011). If PT is associated with aggressive behaviour as well as prosocial behaviour, there is reason to ask whether or not the purely cognitive component (PT) should be seen more as a neutral component that may be used for different purposes instead of as part of the concept of empathy (Caruso, Epley, and Bazerman 2006; Staub 1987).

Empathic concern is other-oriented and involves feeling *for* another person (feeling sorry for, distressed for, concerned for, etc.). It has been defined as '*other-oriented emotion elicited by and congruent with the perceived welfare of someone in need*' (Batson 1998; Batson et al. 1991). Empathic concern and the principle of care are often identified as important determinants of helping behaviour. Eisenberg, Eggum, and Di Giunta (2010) and Batson (1998) and Batson et al. (1991) reviewed the large body of research showing that an emotional reaction of concern, sympathy, or compassion for the needs of others leads individuals to help others in need. Batanova and Loukas (2011) found in a study that empathic concern prevents RA. However, previous research indicated that empathic concern is modulated by the degree of affiliation and is extended preferentially towards in-group members and less often towards unaffiliated others (Echols and Correll 2012). Adolescent empathic concern in specific contexts has largely remained unexplored and thus should be addressed.

The distinction between empathic concern and PT may be of great importance. Initiatives that foster the development of cognitive abilities to take another person's perspective are often assumed to, by themselves, decrease aggressive behaviour and foster helping behaviour. This assumption probably does not always hold true. A few studies indicate that PT cannot predict helping behaviour without the mediation of empathic concern (Eisenberg, Zhou, and Koller 2001; Van der Graaff et al. 2018).

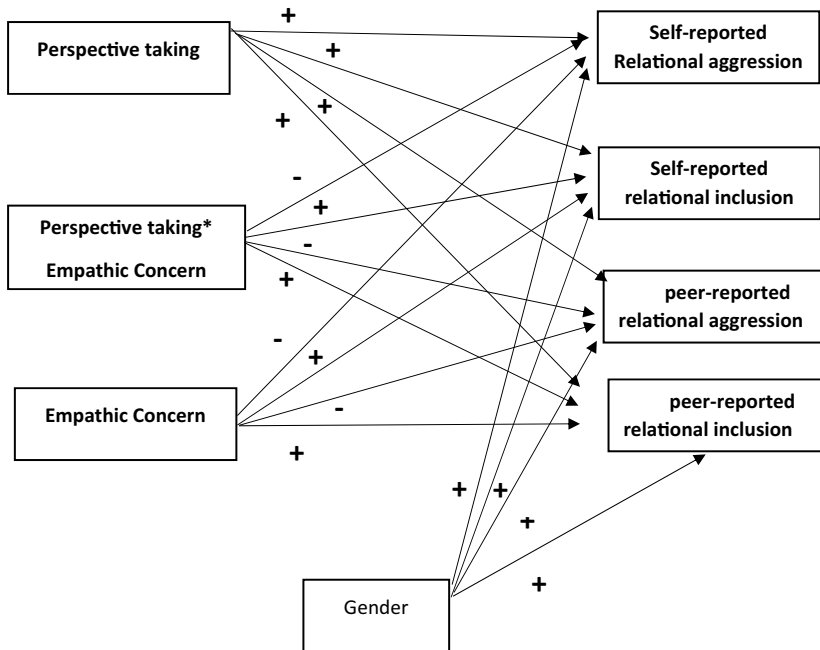


Figure 1. Illustrates the theoretical model of the hypothesised associations.

More studies are needed to treat the concepts of PT skills and empathic concern as separate concepts. In addition, measures of empathic concern need to be context specific, as different contexts may yield a variety of group biases that can affect adolescents' helping behaviour.

### The current study

Driven by the theory that PT is a neutral tool that people may use for positive as well as negative social behaviour (e.g., Caruso, Epley, and Bazerman 2006; Staub 1987), this study hypothesised that PT is positively associated with both RA and RI. On the basis of previous research showing that empathic concern predicts helping behaviour (e.g., Eisenberg, Eggum, and Di Giunta 2010; Eisenberg and Miller 1987), empathic concern for victims of RA (ECV) is assumed to be negatively associated with RA and positively associated with RI. On the basis of studies indicating that empathic concern moderates the relation between PT and RA (Eisenberg, Zhou, and Koller 2001; Van der Graaff et al. 2018), the level of ECV is assumed to influence the association between PT and RA and RI. A high level of ECV is expected to increase the positive association between PT and RI and increase the negative association between PT and RA.

Gender differences are not an important topic in this study, but because most research indicates that adolescent girls are more relationally aggressive (Card et al. 2008) and more prosocial (Eisenberg, Fabes, and Spinrad 2006), gender differences were controlled in the dependent variables. Girls were expected to score higher on RA and RI than boys. The hypothesised associations are presented in Figure 1.

### Materials and methods

#### Sample and procedure

Only a subset of the population was involved in this study. The target sample consisted of 15 classes across three secondary schools in the Stavanger area of Norway (with normal school characteristics),

with 379 eighth grade students (average age = 14 years; 200 girls and 179 boys). Active parental consent was obtained, and all students were informed that their participation was voluntary. Thirty-four students (14 girls and 20 boys) did not want to participate in the study or had parents who did not consent. The final sample of 345 students (186 girls and 159 boys) represented 91% of all potential participants. Prior to data collection, 16 fourteen-year-olds (8 girls and 8 boys) participated in a discussion group. A questionnaire administered to this group determined their interpretation of the meanings of each question, and the students understood the wordings and content well. Data were collected during school hours, with all school participants completing the questionnaire at the same time. The participants sealed the questionnaire booklets in an envelope prior to returning them to the teacher.

### *Self- and peer reports*

In this study, the students reported on their own relationally inclusive and aggressive behaviour as well as that of their peers. Tackett and Ostrov (2010) argue that it is important to understand the utility offered by different informants and methods as well as potential biases that may limit the validity of reports from a given source.

Peer reporting is a very common method used to assess RA, based on opinions that have been established over time, by many different people's observations. This approach increases the validity of the data. However, peers may be motivated to show the target in a favourable light, especially if they are close friends. People also have a tendency to emphasise the dispositions of others over situational factors in explaining behaviour (e.g., Ross and Nisbett 1991). In addition, people do not have access to another person's thoughts, feelings and motives, which is a weakness.

Self-reports of RA have also been found to be valid and reliable (Fite et al. 2008; Little et al. 2003). No one else has more information access than oneself (Paulhus and Vazire 2007). However, self-reports leave much room for response bias, such as socially desirable responding (Paulhus 1991) and 'extreme responding' (Paulhus and Vazire 2007).

The correlations between self- and peer-report data on aggression are often not strong (Juliano, Werner, and Cassidy 2006; McNeilly-Choque et al. 1996) and may provide supplementary information about the phenomenon rather than capturing the same concept (Juvonen, Nishina, and Graham 2001). A study by Clemans (2010) investigated potential differences in the psychosocial correlates of self- and peer-identified early adolescents engaging in direct and indirect aggression. The study found that indirect aggressors reported by their peers were more socially visible than self-identified indirect aggressors. Therefore, to give a more full picture of the phenomenon, both self- and peer-reported methods were used to assess RA and RI in this study.

### *Measures*

Confirmatory factor analysis in Mplus validated all constructs. See the [Appendix A](#) for information about the item wording.

As mentioned earlier, gender differences in the associations studied are not important in this study, but because early adolescent girls and boys interact with same-sex peers more frequently than with opposite-sex peers (Mehta and Strough 2010), boys were asked only about other boys, and girls were asked only about other girls in their class or group. Therefore, measurement invariance between genders had to be established. In addition, gender differences in the dependent variables were controlled.

To measure **relational aggression**, 6 self-report items and 4 peer-report items derived from the theoretical framework often used to measure RA (Björkqvist, Lagerspetz, and Kaukiainen 1992; Björkqvist, Österman, and Lagerspetz 1994; Crick and Grotpeter 1995) were used. The items included both overt (e.g., nasty looks) and covert (e.g., rumour spreading) forms of RA (see the [Appendix A](#)).

Seven self-report items and four peer-report items were used to assess **relational inclusion**. All items were designed for this study and based on the RA items. However, they measured the opposite of RA, namely, positive intentional behaviours (e.g., 'How often during the last month have you tried to make other girls (boys) include a certain girl (boy) who is excluded from the peer group?') (for the full list of items, see the [Appendix A](#)).

For self-reported RA and RI, the participants indicated how often they had behaved towards same-sex classmates in the ways that each item described over the last month using a scale that ranged from 1 (not at all) to 4 (almost every day).

In the peer reports, a class roster allowed each participant to nominate an unlimited number of same-sex classmates who fit each item. The nominations for RA varied from 0 to 8 and from 0 to 9 for RI across classrooms for both boys and girls. Nominations received by each adolescent were added and divided by the number of same-sex classmates doing the evaluation.

To assess **perspective taking**, four items from the Feshbach (1975) Scale of cognitive empathy were used. The items reflect emotional PT (e.g., 'I can sense when somebody I am with is getting irritated, even if he/she doesn't say so' (for a full description of the items, see the [Appendix A](#)). The participants responded on a scale from 1 (I don't agree at all) to 4 (I completely agree).

Four items created for this study were used to assess **empathic concern for peers who are targets of RA** (e.g., 'When someone tries to make others dislike a person, I feel sorry for the person'). The participants responded to the items on a scale ranging from 1 (I don't agree at all) to 4 (I completely agree).

To compare the result for boys and girls a dummy variable was created (girl = 1 and boys = 2).

## Data analysis

The statistical data analyses included descriptive statistics, Cronbach's alpha (Cronbach 1951), CFA, and structural modelling (SEM). The analyses were conducted with the statistical software packages IBM SPSS version 20 [IBM Corp (2012) SPSS for Windows, Rel. 20.0.0 Chicago: IBM SPSS Inc.] and Mplus 5.2 (Muthén and Muthén 1998-2010). To handle missing data, the full information maximum likelihood (FIML) procedure applied by default in Mplus 5.2 (Olinsky, Chen, and Harlow 2003) was used. Because some items in the study were skewed, MLR (maximum likelihood robust) estimates were performed using standard errors and a chi-square test statistic robust to non-normality. The Satorra-Bentler scaled (mean-adjusted) chi-square test was used to approximate better chi-squares under non-normality (Satorra and Bentler 2010). Goodness of fit was evaluated according to Browne's and Cudeck's recommendations (Browne and Cudeck 1993) using the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA) and the standardised root mean square residual (SRMR). CFI and TLI values above .90 are considered acceptable, but values higher than .95 are considered indicative of a good fit. SPMR values less than .08 are generally considered a good fit, as are RMSEA values below .05, though values between .05 and .08 are acceptable.

First, the measurement models of self- and peer-reported RA and RI, PT and empathic concern towards victims of RA were estimated and evaluated separately. Jöreskog and Sörbom (1993) recommended this procedure to address factorial problems prior to the analysis in SPSS and the analysis of structural relationships. The initial analysis in SPSS examined descriptive statistics before the hypothesised associations in the model were tested using structural equation modelling.

## Results

### Measurement models

CFA was applied to investigate construct validity for all models, and the results demonstrated a good model fit for self-reported RA, CFI = .99, TLI = .99, RMSEA = .001, SRMR = .03. The reliability of the

scale was acceptable ( $\alpha = .70$ ). For peer-reported RA, the model fit was also good,  $CFI = .99$ ,  $TLI = .99$ ,  $RMSEA = .03$ ,  $SRMR = .01$ . Moreover, the reliability of the scale was very good ( $\alpha = .88$ ).

To achieve a good fit for the RI model, it was necessary to correlate the error terms of two items (see the [Appendix A](#), RI 1 and RI 6). This approach was considered acceptable because these items, in addition to assessing an individual's own direct attempts to include others, also assessed their attempts to involve others in the effort to include a fellow student. After the modification, the model fit was acceptable,  $CFI = .97$ ,  $TLI = .95$ ,  $RMSEA = .07$ ,  $SRMR = .03$ . The items had good internal consistency ( $\alpha = .84$ ).

CFA was conducted for peer-reported RI and demonstrated a good model fit,  $CFI = .99$ ,  $TLI = .98$ ,  $RMSEA = .06$ ,  $SRMR = .01$ . The reliability of the scale was also good ( $\alpha = .79$ ).

The CFA model for PT demonstrated an excellent model fit,  $CFI = 1.00$ ,  $TLI = 1.00$ ,  $RMSEA = .00$ ,  $SRMR = .02$ . The reliability of the scale was  $\alpha = .68$ .

The CFA for ECV revealed an unacceptable RMSEA. The modification indices in Mplus suggested a correlation between two of the item residuals. Conducting SEM with and without the correlation revealed no substantial differences in the other parameters studied, and the correlation between the item residuals seemed reasonable. The model fit was good,  $CFI = .99$ ,  $TLI = .99$ ,  $RMSEA = .05$ ,  $SRMR = .01$ . In addition, the items had good internal consistency ( $\alpha = .83$ ).

Finally, the CFA model was tested with all of the latent variables as correlated constructs. The model fit was good,  $\chi^2(388) = 506.42$ ,  $CFI = .96$ ,  $TLI = .96$ ,  $RMSEA = .03$ ,  $SRMR = .05$ . The factor loadings of the indicators for each construct ranged from .47 to .94.

### Descriptive statistics

The means and standard deviations of all constructs are shown in [Table 1](#).

A CFA model was tested with all of the latent variables as correlated constructs, and these correlations are presented in [Table 2](#).

The variables in [Table 2](#) were correlated in the theoretically expected ways. In line with results from previous research (Juliano, Werner, and Cassidy 2006), self- and peer-reported RA as well as self- and peer-reported RI had a medium to strong correlation. PT and ECV are overlapping constructs and thus should correlate positively, which they did. PT did not correlate significantly with RA, indicating that PT in itself is not important for explaining RA. PT correlated positively with RI, supporting earlier findings and theory showing that a person must be able to anticipate what another person will think and feel in order to help the person. Additionally, in line with previous research, ECV correlated negatively with RA and positively with RI.

### Structural equation modelling

After the fit of the modelling of specific measures was ensured, SEM was conducted in two steps (Klein and Moosbrugger 2000). First, a structural model, Model 0, was estimated without the latent interaction term to study the direct effects in the model. Model 0 had a good fit with the data,  $CFI = .96$ ,  $TLI = .95$ ,  $RMSEA = .03$ ,  $SRMR = .05$ .

As hypothesised, PT was significantly and positively associated with self-reported RA ( $\beta = .25$ ,  $p = .01$ ) as well as self-reported RI (RI) ( $\beta = .29$ ,  $p = .00$ ). However, the result was not verified for peer-

**Table 1.** Descriptive Statistics. Characteristics of the whole sample (N = 339).

Self-reported RA 6 items		Peer-reported RA 4 items		Self-reported RI 7 items		Peer-reported RI 4 items		PT 4 items		ECV 4 items	
M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
1.22	.31	.57	.91	1.98	.53	1.67	.110	3.23	.52	3.03	.71

RA = Relational aggression; RI = Relational inclusion; PT = Perspective taking; ECV = Empathic concern for victims of relational aggression.

**Table 2.** Correlations between the latent variables in the sample.

N = 339	PT	ECV	Self-reported RA	Peer-reported RA	Self-reported RI	Peer-reported RI
PT		.44**	.10	-.00	.35**	.14*
ECV			-.30**	-.18**	.32**	.19**
Self-reported RA				.42**	.15	.06
Peer-reported RA					.13*	-.03
Self-reported RI						.32**

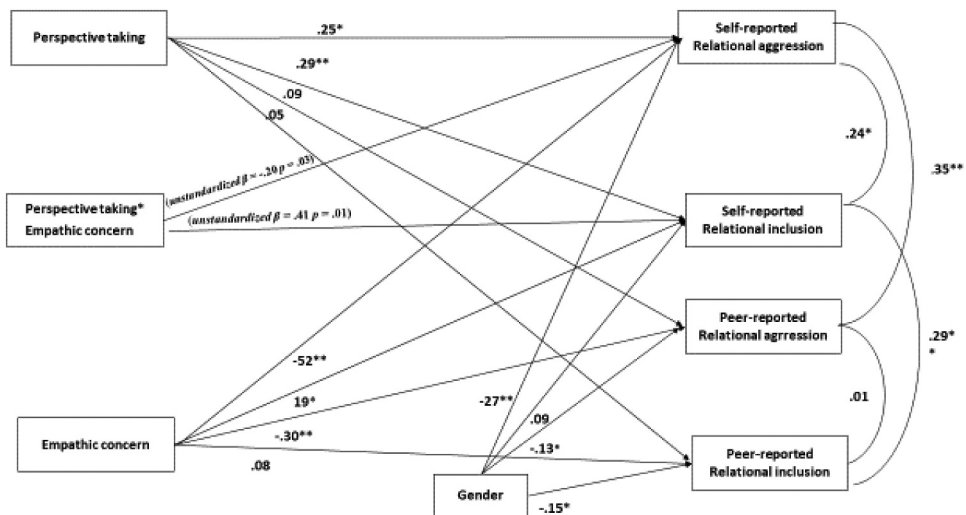
RA = relational aggression; RI = Relational inclusion; PT = Perspective taking; ECV = Empathic concern for victims of relational aggression; \*  $p < .05$  \*\*  $p < .01$ .

reported data. PT was weakly positive but not significantly associated with peer-reported RA ( $\beta = .09$   $p = .27$ ) and peer-reported RI ( $\beta = .05$   $p = .50$ ). The hypothesis that ECV is negatively associated with RA was confirmed for self-reported RA ( $\beta = -.52$   $p = .00$ ) as well as for peer-reported RA ( $\beta = -.30$   $p = .00$ ). As assumed, ECV was positively and significantly associated with self-reported RI ( $\beta = .19$   $p = .01$ ) and weakly positive but not significantly associated with peer-reported RI ( $\beta = .08$   $p = .28$ ).

A new model (Model1) that included the interaction term PT \*EVC was employed. Self- and peer-reported RA and RI were regressed on PT, EVC and the interaction term PT\*ECV while controlling for gender. Mplus 5.2 does not give standardised estimates or model fit indices when interactions are included in the model. Therefore a log-likelihood ratio test (Satorra and Bentler 2010) was used to determine whether Model 0 (which did not include the interaction) had a better or worse model fit than Model 1 (the alternative model, where the interaction was estimated). Model 1 exhibited a significantly improved fit relative to that of the simpler Model 0 ( $\Delta\chi^2 19.83(2)$   $p = .00$ ), showing that Model 1 also fit the data well.

Differences in unstandardised estimates with and without the interaction term was tested and showed no important differences in the estimates.

There was a significant association between the interaction term (ECV \*PT) and self-reported RA (unstandardised  $\beta = -.20$   $p = .03$ ) and self-reported RI (unstandardised  $\beta = .41$   $p = .01$ ), as hypothesised. However, a similar result was not found for peer-reported data, which exhibited no significant interaction.



**Figure 2.** Shows the direct associations studied. \*  $p < .05$  \*\*  $p < .01$ . The difference in level in favour of girls in comparison to boys is marked with a minus in Figure 2. show standardised estimates for all association except for the association between the interaction PT\*ECV and self-and peer reported RA and RI.



To interpret the significant interaction effects found in self-reported data, a dummy variable was created to examine the estimated strength of the association between the predictor variable and the criterion variable at two main levels of the moderator variable (ECV): scores below the mean represented low ECV, and scores above the mean represented high ECV. The model fit was acceptable, CFI = .90, TLI = .90, RMSEA = .04, SRMR = .07. The follow-up analyses revealed, as hypothesised, that a high level of ECV predicted no association ( $\beta = .02$   $p = .86$ ) between PT and self-reported RA, while a low level of ECV predicted a positive association ( $\beta = .28$   $p = .01$ ) between PT and self-reported RA. A high level of ECV predicted a positive association between PT and self-reported RI ( $\beta = .39$   $p = .00$ ). For students with low level of ECV no significant association between PT and RI was found ( $\beta = .16$   $p = .13$ ).

Both self- and peer reports in this study show that girls engage in more RA than boys (self-reported RA ( $\beta = -.26$   $p = .00$ ) and peer-reported RA ( $\beta = -.13$   $p = .03$ ). Peers also consider girls to be more relationally inclusive towards other girls, in comparison to boys relational inclusion towards other boys ( $\beta = -.15$   $p = .01$ ). There was no significant gender difference in self-reported RI.

## Discussion

RA is a negative behaviour among adolescents that is a well-known concept. RI provides an interesting contrast to RA, representing positive manipulative behaviour to help victims of RA in one's social context. In this study, the role of PT and ECV in explaining self- and peer-reported RA and RI was explored.

### *The preventive role of empathic concern towards victims of relational aggression*

This study shows that ECV may be an important factor preventing RA among peers. The direct negative association between ECV and RA was relatively strong for self-reported RA and medium to strong for peer-reported RA, indicating that when people truly feel concern and pity for victims of RA, they do not take part in actions that exclude their peers. This finding was as hypothesised and in line with previous evidence identifying empathic concern as a factor that prevents RA (Batanova and Loukas 2011).

### *The role of empathic concern in relationally inclusive behaviour*

Only a small positive but still statistically significant association between ECV and self-reported RI was found. Moreover, the association between ECV and peer-reported RI was non-significant. All in all, the results suggest that even though empathic concern may motivate some adolescents to take actions to include victimised peers or make them feel more accepted, the findings from this study do suggest that ECV is not an important factor motivating RI among adolescents in general. This result is not in line with previous evidence identifying empathic concern as an important determinant of helping behaviour (Batson et al. 1991; Eisenberg and Miller 1987). However, this study focuses on the association between empathic concern and helping behaviour related to a specific situation. Trying to do something active to influence others to include victimised peers may be perceived as challenging or even threatening. When a person considers helping another, the personal benefits and costs for each potential response may be weighed. To show respect for or invite a victim of RA may entail personal risk if relationally aggressive peers with high status are against it. If adolescents think that their attempts to include victimised peers are unlikely to lead to inclusion and that they may also end up being excluded themselves, then they may decide not to intervene. This idea is supported by previous results showing that defenders need to feel confident and empowered to defend victims of bullying (Caravita, Di Blasio, and Salmivalli 2009).

It is also possible that peers do not feel much empathic concern for peers outside their own group of friends and therefore do not give such support (Echols and Correll 2012).

### ***The role of perspective taking in relationally aggressive and relationally inclusive behaviour***

The hypothesis that PT ability may increase both relationally inclusive behaviour and relationally aggressive behaviour received equivocal support in this study, as the results from self- and peer-reported data were inconsistent. Self-reported data supported the hypothesis that PT was significantly and positively associated with both self-reported RI and RA, but no association between PT and peer-reported RI and RA was found. All in all, the results strengthen the view that the ability to *understand* others' feelings does not always prevent RA and that PT skills may be used by some adolescents to exclude others from the group (Caravita, Di Blasio, and Salmivalli 2009; Hawley 2003).

### ***Does the level of empathic concern change the relationship between perspective taking and a) relationally aggressive and b) relationally inclusive behaviour?***

The results were ambiguous concerning whether the level of ECV influenced the relationship of PT with a) RA and b) RI. Self-reported data supported a moderating role of ECV, whereas peer-reported data did not.

The results from self-reported data are in accordance with previous research suggesting that the affective component of empathy may in part determine adolescents' social behaviour (Batanova and Loukas 2011; Caravita, Di Blasio, and Salmivalli 2009; Jolliffe and Farrington 2006). This result probably reflects the fact that if someone truly feels sorry for a victimised peer and is concerned about the person's well-being, this person is unlikely to use PT skills to cause that person even more pain. In contrast, if a person does not care much about the well-being of excluded peers, the person may be more concerned about the possible rewards and costs the situation holds for himself or herself. RA may benefit adolescents' own social goals and increase their status within a group (Cillessen and Mayeux 2004; Heilbron and Prinstein 2008). Taking part in RA may also help individuals avoid punishment from relationally aggressive leaders (Pronk and Zimmer-Gembeck 2010). In other words, low levels of ECV may lead to an egocentric use of PT skills that may include negative and aggressive social interaction.

However, peer reports did not support the results from self-reported data.

### ***Self- and peer reports may provide complementary information about relational aggression and relational inclusion***

The different results for self- and peer reporting may have different explanations. One possibility is that the differences observed are caused by social desirability bias in self- or peer-reported data (Tackett and Ostrov 2010). However, it is possible that the different assessments provide supplementary information (Juvonen, Nishina, and Graham 2001). The fact that both self- and peer-reported RA and self- and peer-reported RI had only a medium to strong correlation ( $r = .40$  and  $r = .32$ , respectively) shows that self- and peer reports at least partly identify different adolescents as relationally aggressive and relationally inclusive. In line with the research of Clemans (2010) it is possible that students more often identify behaviour of socially visible peers. Discrete attempts to include victims of RA or to be relationally aggressive may be unnoticed by peers and therefore reported only in self-report data. For example, peers may talk to or invite an excluded peer after school without anyone else knowing. It is also possible to give a person positive nonverbal signs or comments to make them feel more included in a discrete way when others are not paying attention. In addition, even if a person talks nicely about an excluded peer sometimes (e.g., 'She is not so bad' or 'He can sometimes be nice'), peers may fail to recognise when relationally inclusive intentions underlie the behaviour. Peers may also fail to report relationally aggressive peers that have PT skills. In pre-adolescence and adolescence, at least 20–30% of students encourage bullying, acting as assistants or reinforcing it (Salmivalli and Voeten 2004). Many adolescents may know that they themselves take part in

activities such as gossip and talking behind people's backs, so they may report their own aggression; however, their peers may not think of them as the aggressive ones because what they do is less visible to others. Peers may also report RA for some adolescents who do not identify it in themselves.

Even though social desirability may cause some biases in self-reported data, self-reporting can also identify some of the less visible RA behaviour in adolescents that their peers do not detect. People know exactly what they think, how they feel and what their motives are and may report accordingly.

If relationally aggressive adolescents in different roles have different group characteristics, then self- and peer reports may give some complementary information about the phenomenon.

### **Strength and limitations**

Using sophisticated structural path modelling is a strength of the study. Using both self- and peer reports to assess RA and RI also strengthens this study because the two sources tap into adolescents' knowledge about their own relational aggressiveness/inclusiveness and the observed RA/RI seen in their classmates.

However, there are some important limitations as well.

One limitation of the study is that both self- and peer-report data may be biased. Second, the students reported only about same-sex peer relationships. Even though adolescent girls and boys interact with same-sex peers more frequently than opposite-sex peers (Mehta and Strough 2010) and different relationship styles are formed within same-sex male than within female peer groups (Maccoby 1998), additional studies should also consider the context of opposite-sex relationships. In this age group, members of the opposite sex become increasingly important.

Third, only cross-sectional data were used, and conclusions about the direction of the effects thus cannot be drawn. Even if the theoretical hypotheses are based on previous research and knowledge about the studied variables, the direction of the effects can be confirmed only by conducting longitudinal studies or experiments.

### **Conclusions and further direction**

In this study, a clear negative association between RA and empathic concern was observed in both self- and peer-reported analyses. This result emphasises that ECV is an important factor that can prevent RA and may also influence some adolescents with good PT skills to avoid engaging in RA. The study supports previous research showing that pure PT skills may be insufficient in counter-acting relationally aggressive behaviour (Batanova and Loukas 2011; Caravita, Di Blasio, and Salmivalli 2009; Jolliffe and Farrington 2006), while initiatives to foster empathic concern, especially towards victims of RA, are likely to be a necessary component of interventions to prevent RA. Initiatives to develop empathic concern should be directed at both the individual and group levels. RA is a group phenomenon occurring in a social context in which students play different roles. Different situations may trigger different aspects of the cognitive and emotional system, leading to variability in behaviour (e.g., Mischel and Shoda 1995).

This study highlights the possibility that self- and peer reports can in part provide supplementary information about RA and RI. In future research, it may therefore be important to include both self- and peer reports when studying RA and RI. Future research should also fully explore gender differences in the relationships studied.

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## Appendix A.

### Self-reported Relational Aggression

*Six relational aggression items were used in the confirmatory factor analysis. The students were asked to mark a cross in the category that best described them.*

*Categories: Never, Sometimes, Almost every week, Almost every day*

In the last month, how often have you ...:

- (RA1) Tried to make other girls (boys) not like a certain girl (boy) by spreading rumours about her (him) or by talking behind her (his) back?
- (RA2) Tried to make other girls (boys) ignore a particular girl (boy)?
- (RA3) Given an 'unfriendly glance' to a certain girl (boy) to make her (him) feel unaccepted by you?
- (RA4) Turned your back on a particular girl (boy) to reject her (him)?
- (RA 5) Not invited a particular girl (boy) to a party or an activity to reject her (him)?
- (RA 6) Rolled your eyes to show other girls (boys) that you don't accept a certain girl (boy)?

### Peer -Reported Relational aggression

*Four relational aggression items were used in the confirmatory factor analysis. Name of all same sex students in their class were listed in connection to each statement about behaviour. The students were asked to mark every girl (boy) in their class that behaved in the described way.*

In the last month, how often has this girl (boy) ...

- (RA1) tried to make other girls (boys) not like a certain girl (boy) by spreading rumours about her (him) or by talking behind her (his) back?
- (RA2) tried to make other girls (boys) ignore a particular girl (boy)?
- (RA3) tried to make other girls (boys) exclude a particular girl from participating in an activity.
- (RA4) given an ugly glance to a girl (boy) to make her (him) feel excluded.

### Self-reported Relational Inclusion

*Seven relational inclusion items were used in the confirmatory factor analysis.*

*The students were asked to mark a cross in the category that best described them.*

*Categories: Never, Sometimes, Almost every week, Almost every day*

In the last month, how often have you ...:

- (RI 1) Tried to make other girls (boys) include a certain girl (boy) that is excluded from the peer group?
- (RI 2) Talked in a friendly manner to an excluded girl (boy) to make her (him) feel accepted by you?
- (RI 3) Deliberately done something to include a girl (boy) who is excluded from the peer group?
- (RI 4) Said something nice about a particular girl (boy) to make others like her (him)?
- (RI 5) Invited an excluded girl (boy) to a party or an activity to include her (him) in the peer group?
- (RI 6) Smiled at an unpopular girl (boy) to show others that you accept her (him)?
- (RI 7) Done or said something to an unpopular girl (boy) so that she (he) would feel accepted?

### Peer – reported Relational Inclusion

*Four relational inclusion items were used in the confirmatory factor analysis. Name of all same sex students in their class were listed in connection to each statement about behaviour. The students were asked to mark every girl (boy) in their class that behaved in the described way.*

In the last month, how often has this girl (boy) ...:

(RI 1) Tried to make other girls (boys) include a certain girl (boy) that is excluded from the peer group?

(RI 2) Deliberately done something to include a girl (boy) who is excluded from the peer group?

(RI 3) Invited an excluded girl (boy) to a party or an activity to include her (him) in the peer group?

(RI 4) Done or said something to an unpopular girl (boy) so that she (he) would feel accepted?

### **Perspective taking**

*Four perspective-taking items were used in the confirmatory factor analysis.*

*The students were asked to mark a cross in the category that best represented how much they agreed or disagreed with these statements.*

*Categories: I strongly agree, I slightly agree, I slightly disagree, I strongly disagree*

(PT1) I'm able to recognise, before many other adolescents, when other people's feelings change (e.g., see that someone suddenly becomes irritated or happy).

(PT2) I am able to understand how other people react to things that I do.

(PT3) I can tell when someone I'm with is irritable even if she or he does not say anything.

(PT4) I can tell how my friends feel based on the way they behave.

### **Empathetic Concern for victims of RA**

*Four empathetic concern items were used in the confirmatory factor analysis.*

*The students were asked to mark a cross in the category that best represented how much they agreed or disagreed with these statements.*

*Categories are: I strongly agree, I slightly agree, I slightly disagree, I strongly disagree*

(ECV 1) When someone tries to make others dislike a person, I feel sorry for that person.

(ECV 2) When I see a student be excluded from the group, I feel sad.

(ECV 3) When I see another student become upset because of unkind looks and signals from others, I become sad.

(ECV 4) When someone is talked about behind his/her back, I get upset.