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Abstract

Previous studies have demonstrated that several contextual factors influence the relationship between aggression and peer victimization in early adolescence, including gender of the same-sex peer group and gender composition of the school. The current study replicated and expanded on this research by examining the moderating influences of gender of the same-sex peer group, same-sex peer group norms, and classroom gender composition in a sample of early adolescents from Barranquilla, Colombia. Multilevel modeling analyses indicated that both relational and physical aggression were positive predictors of peer victimization. Relationally aggressive girls were at a lower risk for victimization while physically aggressive girls were at a higher risk. Relational aggression was a weaker predictor in classes with a larger proportion of girls. Additionally, relational aggression was a weaker predictor in same-sex peer groups with a greater prevalence of relational aggression. These findings provide further evidence of multiple forms of contextual influence on social behavior. Practical implications for these findings are also provided.

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Development does not occur in a vacuum, but rather in a complex system of interrelated environmental contexts. As proposed by Bronfenbrenner's (1977) contextual model of development, there are multiple levels of context that can potentially interact with one another and with the individual in the process of development. According to this model, the individual is inextricably embedded in these interconnected levels of context; therefore, processes at any one level can only be fully understood through analysis of the influence of environmental factors at all levels (Bronfenbrenner, 1977, 1986). Consistent with this model, it has been noted that peer relationships are affected by many levels of context, beyond individual or dyadic processes, and often vary as a function of group context (Rubin, Bukowski, & Parker, 2006). Moreover, according to the contextualist perspective, peer relationships are greatly affected by values and prevalence of practices within a culture (Chen, French, & Schneider, 2006), perhaps especially social norms and norm-related perceptions (e.g. Hinde, 1987). Such norms and social expectations guide individual behavior and interpersonal interactions, such as expressions of conflict and establishing standards for social acceptance and rejection. Because of the importance of contextual influences on peer interactions, the current study aimed to assess how classroom, gender-based norms and classroom gender ratios influence the relationship between aggression and peer victimization among adolescents from Barranquilla, Colombia.

Peer victimization and aggression

One form of peer interaction with particularly negative consequences is peer victimization. It occurs when a child is the target of harm from their peers (e.g. Graham & Juvonen, 1998), and has been found to be related to several negative outcomes such as poor academic performance and school attendance (Rueger & Jenkins, 2013), increased cigarette, alcohol, and substance use, and increased delinquent behavior (Sullivan, Farrell, & Kliewe, 2006). Other consequences include internalizing symptoms (Hodges, Boivin, Vitaro, & Bukowski, 1999) including increased depressive symptoms (Bilsky et al., 2013; Reuger & Jenkins, 2013) and general negative affect (Dill, Vernberg, Fonagy, Twemlow, & Gamm, 2004; McLaughlin, Hatzenbueler, & Hilt, 2009). Peer victimization has also been found to be related to externalizing behaviors such as aggression (e.g. Adams, Bartlett, & Bukowski, 2010; Ostrov, 2010; Ostrov & Godleski, 2013; Sullivan et al, 2006). The development of internalizing and externalizing behaviors following peer victimization may have further consequences; not only may they be the result of peer victimization, but they may serve to reinforce it. It has been proposed, and supported by previous

research, that internalizing behaviors may signal that children are weak or will not defend themselves, therefore making them appear as easy targets. On the other hand, children who develop externalizing behaviors may irritate or provoke other children, thereby also making themselves targets for victimization (Card & Hodges, 2008; Hodges et al., 1999).

The relationship between aggression and peer victimization may be more thoroughly understood by differentiating between types of aggression. While many forms of aggression have been distinguished (i.e. indirect/direct, covert/overt), the current study differentiated between physical aggression, acts or threats of acts to do physical harm, and relational aggression, acts or threats of acts to harm relationships, social status, or social acceptance. There is evidence to suggest that these differing expressions of aggressive behavior are rooted in their unique underlying motivations such that physical aggression may stem from the motivation to assert dominance, whereas relational aggression targets a fundamental need for social affiliation (Block, 1983; Crick & Grotpeter, 1995).

Peer norms and aggression

Because contextual factors shape peer interactions (Chen et al., 2006; Rubin et al., 2006), examining group norms, which provide important standards for evaluating and responding to behavior, may generate significant insight into the dynamics of peer relationships (Chen et al., 2006; Hinde, 1987; Miller & Prentice, 1994). The prevalence of certain practices within a group reflects a type of group norm, often referred to as a descriptive norm (Cialdini, Kallgren, & Reno, 1991) which can affect peer interactions (Bronfenbrenner, 1977). The frequency or normativeness of behavior among peer groups serves as a guideline for appropriate behavior (Berkowtiz, 2003; Cialdini et al, 1991; Miller & Prentice, 1994; Shaw, 1981). Past research has supported that children who are exposed to environments in which aggression is prevalent or normative tend to act aggressively in suit (Henry, Guerra, Huesmann, Tolan, VanAcker, & Eron, 2000; Kuppens, Grietens, Omghena, Michiels, & Subramanian, 2008; Nipedal, Nesdale, & Killen, 2010; Thomas, Bierman, & The Conduct Problems Prevention Research Group, 2006), reflecting the perception that such behavior is acceptable.

The extent to which students act consistently with these norms can have serious consequences for children's social status and belonging (Chen et al., 2006; Wright, Giammarino, & Parad, 1986). According to the misfit effect of the person-group similarity model (Wright et al., 1986), children who are different from the group, or whose behavior is not consistent with peer norms, are often less popular, more likely to be rejected or victimized, and have lower social status (Velasquez, Santo, Saldarriaga, & Bukowski, 2010). For example, in an investigation of the person-group similarity model, Wright et al. (1986) found that children's popularity status is related to the normativeness of aggression in a group, such that aggressive children were likely to be considered unpopular in groups with low prevalence of aggression. In this way, aggression norms among peers shape not only the degree to

which aggressive behavior is considered acceptable, but also the way in which it affects children's social status. That is, the likelihood of being rejected from or victimized by a group may reflect the degree to which children's behavior deviates from peer norms (Boivin, Dodge,& Coie, 1995; Henry et al., 2000; Wright et al., 1986). This study, however, serves to go beyond the use of peer group descriptive norms of behavior to explain contextual variability by considering the contextual influence of classroom gender composition as well.

Aggression norms in same-sex peer groups

Maccoby (1998) suggested that boys and girls grow up in different environments, or *cultures*, with different social expectations and behaviors. Therefore, specific social norms, or gender norms, are likely to selectively guide the behaviors and social interactions of same-sex classroom groups of boys and girls. It is reasonable, then, to assume that gender differences in the prevalence of certain types of aggression will affect the degree to which the behavior is accepted and enacted.

Research finds consistent evidence that physical aggression is more normative in boys than in girls (Archer, 2004; Björkqvist, Lagerspetz, & Kaukiainen, 1992; Crick & Grotpeter, 1995; Delveaux & Daniels, 2000; Lansford et al., 2012; Ostrov & Crick, 2007) and that boys tend to use physical aggression more than relational aggression (Ostrov & Godleski, 2013; Putallaz et al., 2007). Conversely, it has been found that girls tend to engage in more relational than physical aggression (Putallaz et al., 2007). However, conflicting results have been found regarding mean-level gender differences in relational aggression. Some research has supported that girls exhibit more relational aggression than do boys (Crick & Grotpeter, 1995; Kuppens et al., 2008; Ostrov & Crick, 2007), while other research has found no significant gender differences (Delveaux & Daniels, 2000; Lansford et al., 2012).

The prevalence of different types of aggression by gender is likely responsible for the creation of gender norms of aggression in same-sex classroom peer groups. Consistent with the misfit effect and the person-group similarity model (Wright, Giammarino, & Parad, 1986), it seems reasonable to expect that physical aggression in boys, due to higher prevalence will be an accepted norm among boys, and therefore, boys who exhibit relational aggression may be at risk for victimization. Conversely, it also seems that, though the effect is smaller, the greater prevalence of relational aggression in girls may lead to the development of an accepted norm of relational aggression, and therefore girls who exhibit physical aggression may be more likely to targets of peer victimization. These patterns have been identified in previous research (Velasquez et al., 2010). We expand on these findings by exploring the role of classroom sex ratio as a factor in shaping group norms of aggressive behavior.

Between-group contrast in classroom sex ratio

There is reason to believe that the gender ratio within a classroom may affect the relationship between peer victimization and aggression through by influencing the

strength of gender norms. According to the between-group contrast theory, groups may try to strengthen their differentiation from other groups when an out-group is present (Harris, 1995). Because peers of the opposite sex are considered an out-group in early adolescence (Maccoby, 1998; Underwood, 2007), between-group contrast may occur between same-sex classroom peer groups, such that same-sex groups attempt to emphasize their differentiation from the opposite-sex group (the out-group) by reinforcing the norms and stereotypes of the same-sex group (the in-group; Harris, 1995). This effect may operate with norms of aggression, whereby groups reinforce the norms of aggression common to their same-sex group, such as relational aggression in girls. This may, in turn, reinforce the relationship between non-normative aggression, such as physical aggression in girls, and peer victimization. It is therefore reasonable to expect that in classrooms with a high ratio of girls to boys, the normativeness of relational aggression and non-normativeness of physical aggression in girls will be stronger. Because of the greater disparity in aggression norms, the relationship between physical aggression and peer victimization will then be stronger. This dynamic may also be expected to occur in classrooms with low girl to boy ratios, such that the greater difference between the normativeness of relational aggression and physical aggression will underlie a stronger relationship between relational aggression and peer victimization in girls. In support of between-group contrast effects on the relationship between forms of aggression and peer victimization, Velasquez et al. (2010) found that the association between physical aggression and peer victimization was stronger among all-girls school girls compared to missed-sex school girls.

Cultural context

It is widely recognized that just as social norms influence the evaluation of and reaction to social behaviors such as aggression, so do aspects of the cultural context, including values, practices, and culture-specific social norms (Chang, 2004; Chen et al., 2006). Indeed, according to Bronfenbrenner's contextual model (1977), such cultural influences permeate all other levels of environmental influence on development. Despite acknowledging how social behaviors and dynamics are likely to differ as a function of cultural context, research on peer interactions has disproportionately been conducted among samples from Western societies and inappropriately generalized to other populations (Chen et al., 2006; Henrich, Heine, & Norenzayan, 2010); it must be considered that the populations in these Western societies share many unique characteristics which differentiate them from populations in other parts of the world. Specifically, Henrich et al. (2010) typify these Western populations as White, Educated, Industrialized, Rich, Democratic (WEIRD) societies. Due to these traits, concepts developed among samples from WEIRD societies cannot be assumed to accurately represents psychosocial processes among other, non-WEIRD, populations. This study seeks to address this problem of over-generalization by investigating the misfit effect and between-group contrast theory in a non-WEIRD sample of adolescents from Brarranquilla, Colombia.

The current study

As emphasized by Bronfenbrenner's (1977) model of development, the complex dynamics of peer-relationships are best understood when attention is given to the contextual factors that influence them. Therefore, the purpose of the current study was to replicate and expand on previous research that has explored the contextual influences of gender of the same-sex peer group and school gender composition on the relationships between relational and physical aggression and peer victimization (Velasquez et al., 2010). Specifically, this study aimed to assess the impact of gender norms in two ways, by first exploring the associations between these variables as a function of social norms for boys and girls and second in relation to classroom gender ratios.

It was expected that boys would engage in more physical aggression than girls and that girls would engage in more relational aggression than boys. Moreover, due to the expected gender differences in the normativeness of types of aggression, it was hypothesized that gender would moderate the relationship between each type of aggression and peer victimization. It was expected that the relationship between relational aggression and peer victimization would be stronger for boys, whereas the relationship between physical aggression and peer victimization would be stronger for girls. Furthermore, the association between physical aggression and peer victimization was expected to be stronger when the ratio of girls to boys in the classroom was higher, while the association between relational aggression and peer victimization was expected to be stronger when the ratio of girls to boys in the classroom was lower. Consistent with the misfit effect, the normativeness of each type of aggression (relational and physical) in the classroom was expected to impact the relationship between peer victimization and the two types of aggression, such that there would be a stronger relationship between relational aggression and peer victimization in classrooms in which the prevalence of relational aggression is lower. Similarly, we expected that there would be a greater association between physical aggression and peer victimization among classrooms in which the prevalence of physical aggression is lower.

Methods

Participants

Participants were recruited from elementary schools in Barranquilla, Colombia. The total number of participants who took part in data collection was 1187, however 364 participants were excluded from data analysis because they were members of a class of only girls (nine classes) or because the class size was too small for analysis (one class). Therefore, data was analysed for 823 participants. The distribution of girls ($n = 417$; 50.70%) and boys ($n = 406$; 49.30%) was relatively even. Of the 372 participants' for whom age data was available, the range was from seven to 17 years of age ($M = 10.42$, $SD = 1.64$). The distribution of grades was as follows: 33 students were in third grade (4.00%), 258 students were in fourth grade

(31.30%), 310 students were in fifth grade (37.70%), 132 students were in sixth grade (16.00%), and 90 students were in seventh grade (10.90%).

Procedures

The questionnaire packet was designed to be completed in a group administration fashion during a one-hour class session. Children participating in the study completed a Spanish version of a questionnaire originally designed to be administered in English. The original English version was given to psychologists from Colombia, who assessed their meaning and relevance for Colombian children. The questionnaires were translated into Spanish by translators working in the fields of education and psychology, and then back-translated into English by a separate group of individuals to ensure that the meaning of items was retained in the translation.

Measures

Peer assessments. Physical aggression, relational aggression, and peer victimization were assessed by unlimited same-sex peer nominations using the Revised Class Play checklist (RCP; Masten, Morrison, & Pellegrini, 1985). Participants were asked to indicate all students from their class roster that fit each description of characteristics or behaviors. Although this measure contains several subscales (e.g. social withdrawal, perceived popularity, academic competence), only three were used in the current study: Physical aggression, relational aggression, and peer victimization. Physical aggression was measured by two items: 'someone who hurts others physically' and 'someone who gets into physical fights'. The internal consistency reliability of this subscale was excellent ($\alpha = 0.91$). Three items were used to measure relational aggression: 'someone who says bad things behind other people's backs in order to hurt them', 'someone who when he/she gets mad tries to get even by keeping the person from being in their group of friends', and 'someone who when he/she gets mad at a person ignores them or stops talking to them'. This subscale demonstrated good internal consistency ($\alpha = 0.85$). Peer victimization was assessed with three items: 'others do mean things to them', 'others try to hurt them', and 'someone who gets picked on'. This subscale also had good internal consistency ($\alpha = 0.85$). For all three subscales, scores represent the mean number of nominations for each child, with higher scores indicating a greater number of nominations.

Raw nominations were corrected for the size of the same-sex peer group, classroom and order on the class list. Corrected values were obtained by regressing the size of the same-sex peer group, classroom size and order on the list for each class separately following the steps outlined by Velasquez, Bukowski & Saldarriaga (2012), extracting the unstandardized regression residuals. On average, same-sex peer group size explained 10.08% of the variance (from 4.30% to 17.70%) while classroom size explained an additional 0.50% of the variance (from 0.00% to

1.70%) and lastly order explained an additional 0.93% of the variance (from 0.30% to 1.80%).

Norms of aggression. Norms of aggression were computed by taking the mean level of each type of aggression for the same-sex peer group, as measured by the RCP items. Therefore, same-sex peer group norms reflect the mean level of each type of aggression in the same-sex peer group. High scores indicate a greater prevalence of aggression in the group.

Classroom gender composition. The classroom gender composition was calculated from the ratio of girls to boys in a classroom. Therefore, a higher ratio indicates more girls in the class. The classroom ratio of girls to boys ranged from 0.22 to 0.68 ($M = 0.51$, SD $= 0.11$).

Analytic Strategy. Multilevel modeling conducted with HLM ver. 7.00 (Bryk & Raudenbush, 1992) was used to assess whether between group variations in the association between types of aggression and victimization could be attributed to same-sex peer group norms for aggression. In this analysis, the effect of both types of aggression (centered at their grand mean) on victimization was calculated at the individual level (Level 1 model). After modelling the associations at the individual level, the gender and gender ratio, same-sex group mean in each type of aggression (centered at their grand mean) were used as between-group moderators of the individual slopes while controlling for the effect of these variables on victimization overall (i.e. the intercept).

Results

There were significant gender differences in levels of peer victimization and physical aggression (Figure 1). Levels of peer victimization differed by gender, $F_{(1, 821)} = 38.13$, $p < 0.001$, $R^2 = 0.04$, such that greater levels of peer victimization were reported for boys, $b = -0.72$, $t_{(821)} = -6.18$, $p < 0.001$. In addition, there were gender differences in levels of physical aggression, $F_{(1, 821)} = 129.38$, $p < 0.001$, $R^2 = 0.14$, such that greater levels of physical aggression were reported for boys, $b = -1.59$, $t_{(821)} = -11.37$, $p < 0.001$. There was no significant gender difference for levels of relational aggression, $F_{(1, 821)} = 2.68$, $p = 0.102$, $R^2 < 0.001$. See Table 1 for correlations among relational aggression, physical aggression, and peer victimization for boys and girls.

Multilevel modeling analyses began with the assessment of a between-subjects 'unconditional model' for individuals peer nominations of victimization that included only the dependent variable so that we could compute the proportion of variability at the individual level and between same-sex peer groups (the intra-class correlation). The intra-class correlation revealed that a large portion of the variance in peer victimization was at the individual level (88.27%) with the remaining variability being at the same-sex peer group level (11.73%). Nevertheless, null
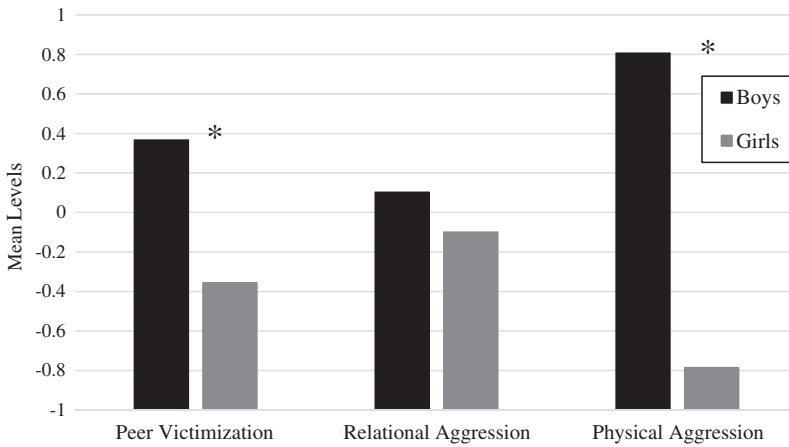
Figure 1. Mean levels of peer victimization, relational aggression, and physical aggression for boys and girls.
*$p < 0.05$.

Table 1. Correlations between peer victimization, relational aggression, and physical aggression separately for boys and girls.

	Peer victimization	Relational aggression	Physical aggression
Peer victimization	–	0.13*	0.31*
Relational aggression	0.40*	–	0.55*
Physical aggression	0.38*	0.73*	–

Note. Correlations for boys are presented below the diagonal; correlations for girls are presented above the diagonal.
*$p < .05$.

hypothesis testing indicated that there was significant amount of between group variability ($\chi^2_{(57)} = 176.73$, $p < 0.05$).

Hypothesis testing began by first entering relational aggression as a correlate of peer victimization. When entered into the model, relational aggression significantly positively predicted peer victimization ($b = 0.19$, $t_{(57)} = 3.42$, $p < 0.05$). The addition of relational aggression led to a proportional reduction in prediction error (PRPE) of 14.31%, reflecting a significant improvement to the model ($\Delta\chi^2_{(4)} = 92.20$, $p < 0.05$). Next, physical aggression was included in the model, it also significantly positively predicted peer victimization ($b = 0.23$, $t_{(57)} = 5.85$, $p < 0.05$). However, with the addition of physical aggression, relational aggression was no longer a significant predictor. Adding physical aggression also significantly improved the model ($\chi^2_{(3)} = 29.56$, $p < 0.05$) and led to a further reduction in prediction error of 1.59%. There was noticeably more (specifically 3.37 times more) variability in the association between

peer victimization and relational aggression (variance component $= 0.036$) compared to physical aggression (variance component $= 0.011$). Tests of variability in the associations between relational and physical aggression with peer victimization were not significant ($\chi^2_{(57)} = 63.92$ and 65.94 respectively, $p > 0.05$) nevertheless hypothesis testing continued considering that it expected that these would vary in the population (Kline, 2013).

Next, we began testing for differences as a function of the same-sex peer group by first looking at gender differences overall then as a function of the gender ratio. First, the gender of the peer group was added as a moderator of these relationships (Figure 2). Gender moderated both slopes, such that girls who engaged in relational aggression were at a lower risk for peer victimization, $b = -0.23$, $t_{(56)} = 2.59$, $p < 0.05$, while girls who engaged in physical aggression were at a higher risk for peer victimization, $b = 0.24$, $t_{(56)} = 3.07$, $p < 0.05$ (Figure 2). The addition of gender reduced prediction error in the slopes (PRPE $= 4.58\%$) and significantly improved the model ($\Delta\chi^2_{(1)} = 7.25$, $p < 0.05$).

We then tested a model using the class gender ratio as a moderator; one significant effect emerged (Figure 3). Specifically, the association between relational aggression and peer victimization was moderated by the gender ratio in the class ($b = -0.82$, $t_{(55)} = 2.88$, $p < 0.05$). To explain, the positive association between relational aggression and peer victimization was weaker among classes with a larger proportion of girls compared to boys. The addition of classroom gender ratio reduced prediction error in the relational aggression slope (PRPE $= 14.97\%$) and significantly improved the model ($\Delta\chi^2_{(1)} = 4.24$, $p < 0.05$).
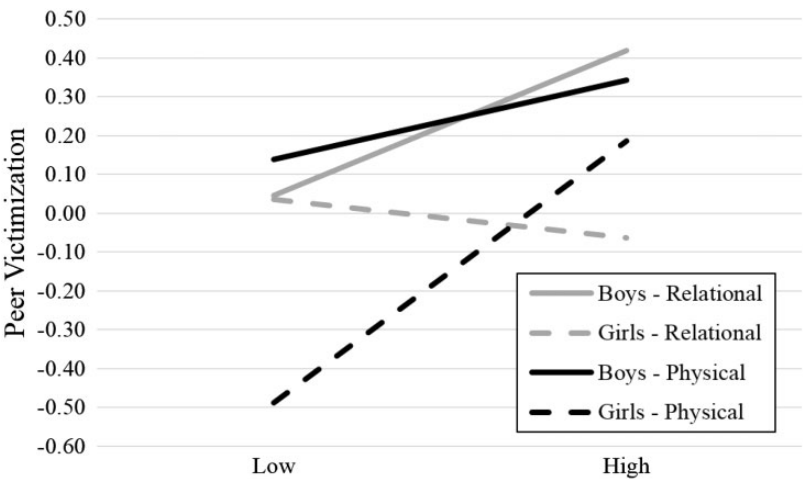

Figure 2. The associations between relational and physical aggression with peer victimization as a function of the sex of the peer group.
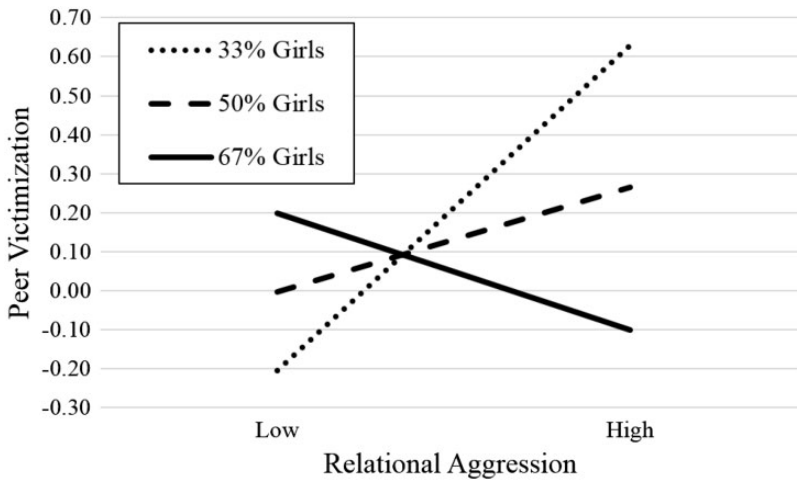
Figure 3. The moderating effect of classroom gender ratio on the relationship between relational aggression and peer victimization.

Next, same-sex peer group norms mean levels of both relational and physical aggression were added to model as main effects on victimization and moderators of the individual level associations. Two effects emerged. Peer victimization nominations were higher among groups high in physical aggression ($b = 0.33$, $t_{(54)} = 4.44$, $p < 0.05$) reducing prediction error ($PRPE = 51.33\%$) and improving the intercept model ($\Delta\chi^2_{(1)} = 4.71$, $p < 0.05$). More interesting, the effect of individual relational aggression was weaker among groups high in relational aggression ($b = -0.10$, $t_{(53)} = 2.37$, $p < 0.05$; Figure 4) also reducing prediction error ($PRPE = 32.88\%$) though just shy of significantly improving the modeling of the relational aggression slope ($\Delta\chi^2_{(1)} = 3.58$, $p = 0.06$).

Discussion

The current study aimed to replicate and expand on the findings of Velasquez et al. (2010). We examined the association between individual relational and physical aggression with peer victimization. Next, the gender and gender ratio of the peer group were added as moderators of the individual level associations. Lastly, the same-sex peer group means were added as additional moderators above and beyond the effects of gender and the gender ratios. Overall, the findings from this study replicated those of Velasquez et al. (2010) and expanded on them by showing that classroom gender ratios explained variability in the individual associations between aggression and peer victimization.

As has been previously demonstrated (e.g. Ostrov & Godleski, 2013), both relational and physical aggression were positively associated with peer victimization. This is consistent with the suggestion that aggressive children may provoke
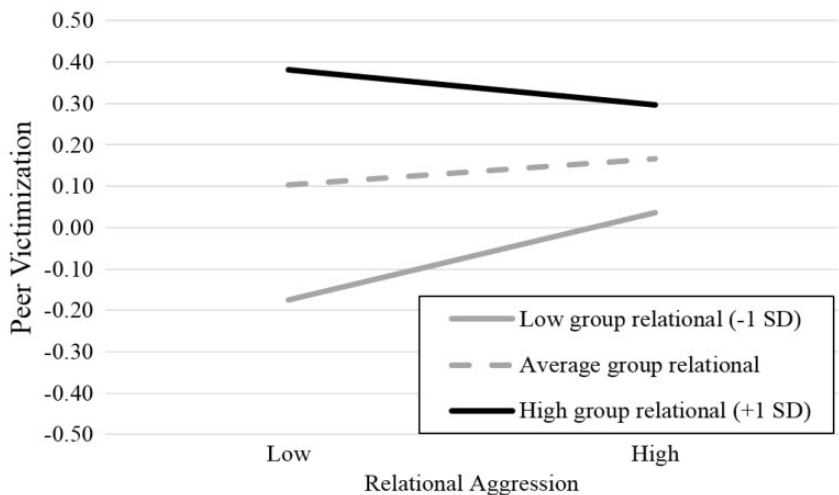
Figure 4. The association between relational aggression and peer victimization as a function of the same-sex peer group means of relational aggression.

their peers, and therefore may become targets themselves (Card & Hodges, 2008; Hodges et al., 1999). It should be noted, however, that after physical aggression was added to the model, relational aggression fell away as a predictor of peer victimization. This indicates that physical aggression is a stronger predictor of peer victimization than is relational aggression and that relational aggression does not have a unique effect on peer victimization above and beyond physical aggression. However, because some previous research has found that relational aggression is associated with relational victimization even when controlling for physical aggression, future research should distinguish between types of peer victimization (Ostrov & Godleski, 2013).

The current study also replicated the moderating effect of gender of the peer group on the relationship between each type of aggression and peer victimization as in Velasquez et al. (2010), such that the relationship between physical aggression and peer victimization was stronger for girls, while the relationship between relational aggression and peer victimization was weaker for girls. These findings are consistent with the misfit effect proposed by the person-group similarity model (Wright et al., 1986) in which behavior that violates group norms is associated with negative consequences for social status and acceptance and is a risk factor for negative peer interactions. Therefore, in the current study, the misfit effect was supported because the relationship between the non-normative type of aggression (physical aggression for girls) was more strongly related to peer victimization, while the normative type of aggression (relational aggression for girls) was more weakly related to peer victimization. Also in support of the misfit effect, the results of the current study indicated that the relationship between relational aggression and peer

victimization was weaker among same-sex peer groups in which relational aggression is prevalent. Put another way, because relational aggression is consistent with the norm of the peer group, it is likely to be more acceptable and therefore is less of a risk factor for peer victimization.

Also as hypothesized, the relationship between relational aggression and peer victimization was moderated by the classroom gender ratio, such that the effect was weaker in classrooms with a high ratio of girls to boys. This finding supports the between-groups contrast theory (Harris, 1995) in that the norm of relational aggression is strengthened in classes with a high ratio of girls (again, predicated on the assumption that relational aggression is the norm for girls), and therefore relational aggression does not violate the norm.

However, the variables did little to explain same-sex peer group differences in the association between physical aggression and peer victimization. One explanation may be that there was less variability in the effect of physical aggression in this sample, such that the consequences of physical aggression are more uniform. This was reflected in the output of the final level 1 model with physical aggression having a less than one-third of the variance compared to relational aggression. One explanation for this may be that the visibility of physical aggression in contrast to the less apparent relational aggression is such that the associations are more homogeneous.

Limitations

We only had two items to measure physical aggression. Given that the effects of physical aggression were less varied than for relational aggression, using more items would allow us to elucidate this issue. Moreover, additional items would allow us to clarify whether there are differences in the associations based on direct compared to indirect physical aggression. On another note, the current study used solely a Colombian sample. Though the current sample is perhaps more reflective of the general adolescent population found in studies using samples from North America (Henrich et al., 2010), the findings of this study should be replicated.

One additional issue that a future study might address would be through the use of all-boy and all-girl classrooms. All-boy and all-girl classes would not only expand the range of the classroom gender ratios but would also further clarify the nature of the gender differences. Nevertheless, the community based sample provided natural variability in the gender ratio of the classroom. Finally, exploring other forms of aggression that weren't measured in the current study (including verbal aggression and cyber-aggression) would further clarify the influences of norms at the same-sex peer group level. Finally, a further study should also explore the distinction between proactive and reactive aggression.

Implications

The findings from the current study demonstrate that the effects of physical and relational aggression are complex. Factors such as gender, the ratio of girls in the

class, and same-sex peer group norms all play a role in the association between aggression and peer victimization. These findings may lead to interesting applications for interventions to address peer victimization. Barring addressing aggression levels among early adolescents directly, the findings of the current study suggest that aggressive children may be placed in certain classes at the start of the school year to minimize the consequences of their aggressive behavior.

The findings also provide direct implications to practicing school psychologists. Specifically, based on these results, school psychologists should select and implement interventions that target *both* physical and relational aggression, but recognize that physical aggression might need to be addressed closely and carefully, given that it was the stronger predictor of peer victimization in our sample. In addition, school psychologists should work to identify students who engage in either form of aggression so they may address problematic behaviors to prevent victimization from occurring. Although speculative, we would suggest that school psychologists should make efforts to identify potential targets of peer victimization to empower them with social skills and strategies other than the use of aggression to minimize potential negative long-term impacts. Lastly, school psychologists should consult with administrators and teachers about ensuring classrooms are balanced by gender and behavior to minimize the impact of aggressive behavior on victimization by balancing the group norms of each gender.

Finally, we also believe that these findings apply to children outside of the Colombian context. First, there is an established need for research using non-WEIRD samples (Henrich et al., 2010). We have also replicated the findings from another Colombian sample (Velasquez et al., 2010), but also results that have been found in North America as well (e.g. Ostrov & Godleski, 2013), thus providing solid evidence to demonstrate that aggression is associated with peer victimization across cultures. For example, this effect has also been demonstrated in Chinese (e.g. Tom, Schwartz, Chang, Farver, & Xu, 2010) and Italian (Tomada & Schneider, 1997) samples. It is our belief that the current study helps establish the universality of the contribution of aggressive behavior to peer victimization and makes the case for the need for interventions to address problematic aggressive behaviors and to provide support for victims across cultural boundaries.

Conclusions

The current study aimed to assess how classroom and gender-based norms and classroom gender ratios influence the relationship between aggression and peer victimization illustrating the importance of contextual influences on peer interactions. These findings bolster the argument that development occurs in a complex system of interrelated environmental contexts (Bronfenbrenner, 1977). Though the current study has pinpointed some of the factors that explain differences in how peer victimization is associated with aggressive behavior, further research is needed to disentangle gender differences from same-sex peer group effects.

Declaration of Conflicting Interests

Funding

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