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PEER PROCESSES IN BULLYING AND VICTIMIZATION: AN OBSERVATIONAL STUDY

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Abstract

The purpose of this study was to conduct naturalistic observations of peer involvement in bullying. Using video cameras and remote microphones, children were filmed when they were out playing at recess. The results indicated that peers were involved in some capacity in 85% of the bullying episodes. Peers intervened in 11% of the bullying episodes and the majority of interveners were male. Global ratings indicated that peers were significantly more respectful and friendly to the bullies than victims. The results of the study are discussed with references to social learning conditions that contribute to peers' involvement in bullying.

Bullying is a form of aggressive interaction in which a more dominant individual (the bully) repeatedly exhibits aggressive behaviour intended to cause distress to a less dominant individual (the victim) (Olweus, 1991; Smith & Thompson, 1991). Although bullying unfolds as a dyadic interaction between the bully and the victim, it must be understood within the broader social context in which it occurs. The primacy of the group context for bullying was captured by the term "mobbing" used originally by Heinemann (1969) and Pikas (1976) from Sweden. This term implies that bullying is the product of collective, rather than individual, behaviours. In spite of early recognition of the involvement of the peer group in bullying, much of the research has focused on individual bullies and victims. As with any form of aggression, bullying cannot be understood by a limited consideration of individual characteristics, but must be examined from the ecological perspective of the person in context (Cairns & Cairns, 1991). To date, research on bullying has also been limited

by a reliance on questionnaire methodologies. In the present research, we conducted naturalistic observations of bullying episodes to examine the roles of peers and the potential processes within the peer group as they impact on bullying.

Children report that bullying occurs most frequently at school—a social context with relatively stable social groups in which victims are constantly exposed to bullies (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996). In the school context, peers are also exposed to the repeated interactions between a bully and a victim. Data from self-report questionnaires suggest that most students would shun bullying and actively support the victim. A vast majority (88%) of elementary school students indicated that watching bullying is somewhat or very unpleasant (Pepler, Craig, Ziegler, & Charach, 1993). The majority of students (70-80%) reported that they would not join in bullying someone whom they disliked (Pepler et al., 1993; Whitney & Smith, 1993). Almost half the students report that they would intervene to assist the victim and stop bullying (Pepler et al., 1993; Whitney & Smith, 1993). Taken together, these self-report data suggest that peers would seldom behave in a manner to exacerbate bullying, but rather that they would support the victim. Children's attitudes and self-reports should be interpreted cautiously, however, as they do not necessarily represent the children's actual behaviour in bullying situations (Salmivalli et al., 1996). Social desirability may operate in these self-reports to obscure the extent to which peers align with the bully and promote bullying interactions. Boivin and Vitaro (1995) have emphasized the need for direct observation in studying aggression in order to clarify the peer patterns and processes of aggressive children. To date, there are no observational studies examining peer processes in bullying.

Our examination of peer processes in bullying has been guided by Olweus' (1987) identification of four processes within the peer group that may exacerbate bully/victim interactions: (1) a social contagion effect, (2) a weakening of control or sanctions against aggressive tendencies, (3) diffusion of responsibility, and (4) peer reputations. The first two processes, which derive from social learning theory and have observable behavioural indicators, comprised the focus for the observations of peers in bullying episodes. The social contagion effect emerges as a function of reinforcement, modelling, and emotional contagion. A weakening of control against bullying can be observed as others join in the aggression. Finally, our observations captured peer interventions as a potential process to counteract bullying. These peer processes are expanded and reviewed below as they relate to bullying interactions within the peer group.

Peer Processes In Bullying

In bullying episodes, reinforcement generally accrues for the bullies. First, the act of bullying is self-reinforcing if bullies triumph over their victims and experience the sense of power and control in achieving dominance. Secondly, bullies may be directly reinforced by their peers. If peers simply stand by and watch, they provide the reinforcer of an audience for bullies' dominance displays. Peers may take a more active role in reinforcing bullies if they align with the bullies, encourage them, or defer to them. If peers observe bullying episodes without intervening on the victims' behalf, bullies may interpret this inaction as tacit approval for their aggressive behaviours. In addition, Ribgy and Slee (1991) found that peers have a lack of empathy for victim. These results together indicate that peers may inadvertently reinforce the bully.

Modelling is a social learning process that may incite peers to actively join in bullying episodes. Peers are more likely to imitate bullies' behaviours if they have a positive attitude toward the bullies and/or if the bullies are reinforced or successful in their aggressive behaviour (cf. Bandura, 1973). If peers positively evaluate bullies, the bullies and their aggressive behaviours will serve as models for other children. Depending on the circumstances, those children who are standing by observing the bullies may be inclined to join in the bullying episode by modelling the bullies' behaviors toward the victim.

Emotional arousal and contagion may contribute to the social contagion processes within the peer group. Bullies likely derive some sense of satisfaction and pleasure from their attacks on victims. Children on our questionnaires suggested that bullies often bully "just for the fun of it" (Pepler et al., 1993). Although a majority of children indicate that it is unpleasant to watch bullying, peers may become caught up in the arousal associated with bullying and derive some form of pleasure from the dominance display. The emotional processes within the peer group surrounding bullying may be similar to those which heighten arousal during a professional boxing match or when a fight breaks out in hockey games. As the arousal spreads through the peer group, children may focus less on the distress of the victim and become more inclined to take an active role in bullying.

Through these social contagion processes in bullying interactions, both the bullies and children who form the audience may weaken in their resolve to be non-aggressive. Given that adults are generally not privy to bullying episodes, it is unlikely that bullies will receive consistent punishment for their actions (Olweus, 1991). The lack of punishment signals tacit approval of bullying and serves as additional reinforcement for bullies. The lack of punishment together with the positive reinforcement that bullies receive may spur them on to more acts of aggression. Similarly, the apparent victory of bullies over their victims

can serve to weaken peers' inhibitions for aggressive behaviour and increase the likelihood of their joining in the aggression. Repeated exposure to bullying may desensitize peers and contribute to the weakening of their regulation of aggressive behaviours and the increased likelihood of their involvement in bullying interactions.

Intervention by peers in support of victims may operate to defuse and terminate bullying interactions. In our survey research, 45% of elementary school children reported that peers almost always try to intervene to stop bullying (Pepler et al., 1993). In a British survey, almost half of the children indicated that they would try to help the victim (Whitney & Smith, 1993). These self-report data may overestimate the likelihood of intervention because both questionnaire and observational data indicate that only children with a high social status intervene on the behalf of victims (Ginsberg & Miller, 1981; Salmivalli et al., 1996). Salmivalli and her colleagues (1996) suggest that the link between high status and intervention may relate to the prosocial nature of popular children and/or to their confidence in standing up to the bully. Given the risk of retaliation, it seems unlikely that peers would intervene as frequently as half the time to support the victim in a bullying interaction.

There appear to be several processes within the peer group which could operate to draw children into a bullying interaction. Salmivalli and her colleagues (1996) note that even if the majority of peers do not participate actively in the bullying, their behaviours may support the initiation and continuation of bullying interactions. In the present research, we observed the roles of peers during naturalistic bullying episodes. Based on the theoretical and empirical formulations presented above, we expected the following patterns of peer behaviors in bullying episodes. Peers will be present and involved in the majority of bullying interactions and that the following social learning conditions will operate: reinforcement, model, emotional contagion, weakening of sanctions, and intervention. The results of this study will facilitate the development of effective anti-bullying programs and interventions.

Method

The present research was an extension of an ongoing research program on the peer relations of aggressive and nonaggressive children (Pepler, Craig, & Roberts, 1995). As part of this research, children were videotaped on the playgrounds of two schools during the winter and spring semesters.

Subjects

Children in this study were observed either bullying or being victimized on tapes of playground interaction gathered in the original study of 6- to 12-year-old children. In the original sample, there were 41 teacher-nominated aggressive children (30 boys, 11 girls) and 41 teacher-nominated socially competent children matched for age, gender, and ethnic group. The children were from low- to middle-income families and varied with respect to ethnicity (43% Caucasian, 25% African descent, and 32% mixed or other ethnicity). For the present study, two samples of subjects were drawn: an enriched sample and an opportunity sample. The enriched sample included all children targeted in the original study who were observed in a bullying episode during 52 hours of playground observations. From the original sample, 83% of the aggressive children and 81% of the non-aggressive children were observed in at least one bullying episode. There were 68 children (49 males, 19 females) in the enriched sample. The opportunity sample included children who were observed interacting with the target children from the original study in at least 1 bullying episode. There were 96 children (52 males, 44 females) in the opportunity sample. Within the enriched and opportunity samples combined, 21% of the children were observed as bullies ($n = 34$), 33% as victims ($n = 55$), and 46% as bully/victims ($n = 75$).

The schools that these children were selected from were in a large, urban city in a middle class area. The schools had approximately 300 students in kindergarten to grade six.

Observation Procedure, Categories, and Ratings

To observe children's interactions, a video camera was set up in a classroom overlooking the playground. During filming, each target child wore a small remote microphone and pocket-sized transmitter. The remote microphone picked up not only the target's speech, but also that of others around him/her. All children who wore the microphones were aware that they were being filmed. They were instructed to play as they normally would during lunch and recess. For an in-depth description of the methodology, see Pepler and Craig (1995). Children were observed in the fall and spring of a school year. The average duration of time observed were 20.8 minutes ($SD = 4.8$) and 32.2 ($SD = 12.4$), in the fall and spring respectively.

Observers, blind to group membership, identified bullying episodes and coded peer factors, (definitions of the coding categories are provided in Table 1). Observers also completed a 62-item global rating scale after coding each bullying episode. These global ratings provided a qualitative assessment of the

Table 1
Coding Definitions

Code	Definition
Bullying	A person is being bullied when he or she is repeatedly exposed to negative physical or verbal behaviours with the intent to harm. Bullying implies an imbalance in the strength relations of individuals involved. Bullying can be carried out by a single person or a group.
Bully	An individual who inflicts direct or the indirect acts of bullying. The bully(ies) is the individual who is clearly the perpetrator in the bullying episode.
Victim	An individual who is repeatedly exposed to the negative actions of the bully. It is possible to have more than one victim per episode.
Bully-victim	An individual who has a dual role: a bully and a victim. In one episode he/she is bullied and in another he/she is victimized.
Active peers	Children who join in bullying by either physically or verbally abusing the victim. These children join in but, do not take a leadership role.
Peer Onlookers	Peers who are not engaged in the bullying activity but are actively watching the interaction between the bully and the victim.
Peers in joint	Peers who are present during the bullying but are involved only to the extent they are participating in a concurrent activity with either the victim or the bully.
Peer interveners	Peers who attempts to help the victim either by verbally or physically terminating the bullying. The peer may or may not be successful in his/her attempt. There are two types of peer intervention. An appropriate intervention occurs when the attempt to terminate the bullying is prosocial manners. An inappropriate intervention occurs when the attempt to end the interaction is socially inappropriate (i.e., verbally or physically aggressive).

nature and the peer processes in bullying. The ratings evaluated the behaviour of the peers towards the bully and the victim, as well as the peer processes. Observers rated the following dimensions on a 7-point Likert scale (ranging from *always* to *never*): how respectful and friendly the peers were to the bully(ies) and the victim(s); how much pleasure the peer group took in the bullying episode; and how reinforcing the peers were in the bullying episodes. The alpha coefficient for this scale was high, .94.

Reliabilities for the identification of episodes, the contextual variables, the playground locations and the Global Rating Measure were calculated with percent agreement with Scott's (1965) correction. Bullying episodes were identified by two female observers with 90% interrater reliability. One male and two female observers coded the contextual variables. The agreement for the peer variables ranged from 87-100% and the average agreement for the location of the initiation of bully/victim episodes was 89%. The overall agreement for the Global Rating Measure was 87%, ranging from, 56% to 100%.

Results

Initial analyses were conducted to examine for school and seasonal differences. Since there were no significant differences, the results are reported collapsing over these variables. Results are divided into each of the social learning conditions of reinforcement, modelling, emotional contagion, and intervention. Finally, sex differences in peer participation in bullying episodes are discussed.

Reinforcement of Bullying by the Peer Group. Peers were observed to be involved in some capacity in 85% of the bullying episodes. The roles of peers in bullying episodes included: being actively involved (i.e., being physically or verbally abusive to the victim), observing the aggressive interaction, being involved in the same activity as the bully prior to the episode, or intervening to terminate the interaction. The presence of peers may serve to reinforce the bully. Peers provided reinforcement to the bully by watching the interaction or by playing a game with the bully or victim and not intervening in the bullying interaction. In 37% of the episodes peers observed the bully-victim interaction and in 63% of the episodes peers were involved in the same game or activity as the bully or the victim.

Global ratings also support the reinforcement by peers of the bully. For example, in 81% of the episodes, the peers were coded as reinforcing the bullying. In addition, peers were coded as being significantly more respectful to bullies (74% of the episodes) than victims (23% of the episodes), $z = -2.73$,

$p < .05$. Peers also were coded as being significantly more friendly to bullies (57% of the episodes) than to victims (31% of the episodes), $z = 6.43, p < .001$. These ratings indicate peers tended to side with the bully and therefore may have influenced the balance of power in favour of the bully in the interaction.

Modelling of Bullying by the Peer Group. Peers modelled the bully behaviour by becoming active participants in the bullying interaction. Peers were active participants in 48% of the bullying episodes. In addition, the global ratings indicated that in 30% of the episodes peers were coded as taking pleasure in the bullying, as neutral in 46% of the episodes, and as uncomfortable in 24% of the episodes. Thus, peers tended to model the physically and verbally aggressive behaviours of the bully. This willingness to join in the bullying episode may also indicate a weakening of social sanctions against bullying.

Emotional Contagion Effect. The global ratings provide some evidence of an emotional contagion effect. For example, peers were viewed as taking pleasure in the bullying in 30% of the episodes, as neutral in 46% of the episodes, and as uncomfortable in only 24% of the episodes.

Intervention by the Peer Group. Peers were observed intervening in 11% of the bullying episodes. Of the episodes in which they were present (85% of the episodes), they only intervened in 13%. Peers intervened significantly less often in a socially appropriate manner than in a socially inappropriate manner, ($z = 2.48, p < .05$), 7.4% and 3.5% of the episodes, respectively. Interestingly, in contrast, school staff intervened in 4% of the observed bullying episodes. Staff were visible within the camera frame during an additional 13% of episodes, hence they intervened in approximately a quarter of the episodes in which they were proximal. A z-test of proportions indicated that peers intervened more frequently than adults, ($z = 3.96, p < .01$), 13% vs. 4% of episodes, respectively. However, adults when present were almost twice as likely to intervene in bullying episodes, (23% vs. 13%). The majority of peers who intervened were male. In 84% of the episodes with a socially appropriate peer intervention, the intervener was male. Similarly, in 65% of the episodes with an inappropriate peer intervention, the intervener was male. However, due to the limited number of episodes in which peers intervened, it was not possible to test for gender differences in the frequency of peer intervention in bullying.

It should be noted that there was substantial variability in the number of peers involved in bullying episodes. This variability is not reflected in the above percentages because, the percentages reported for each category (peer active, peer observer, peer in joint, peer intervener) indicate that at least one

peer, but perhaps several peers, participated in the identified manner. For example, in two-thirds of the episodes in which peers were actively involved, there was only one peer; however, in 2% of the episodes there were six onlookers. The number of peers participating in a joint activity with the bully ranged from one (35% of the episodes) to eighteen (1% of the episodes). In 58% of the episodes, only one peer was onlooking; however, in 2% of the episodes there were six peers.

Peer Role Participation by Sex. Chi-square analyses were performed to assess the relationship between sex and peer roles. There was an association between male and female participation and peer roles in bullying, $\chi^2(4, N = 301) = 11.4, p < .001$. In 55% of the episodes where peers were actively involved, the peers were male, in 37% they were female, and in 8% of the episodes there were both male and female. For peers in joint activity, 55% of the episodes involved males, 23% involved females, and in 22% there were both males and females. Finally, more males were onlookers to (62%) bullying than females (23%), while in 15% of the episodes, the onlookers were both males and females. In general, male peers tended to be more involved in bullying episodes than female peers.

Discussion

This study provides a description of peer involvement in bullying on the playground. Peers were observed in a variety of roles in 85% of bullying episodes. Peer participation in bullying ranged from intervening, observing, and active involvement to being in proximity by playing the same game as the bully or victim. The extent of peer involvement during bullying episodes implies that a large number of children are involved in and potentially are affected by these episodes. Their presence and influence may be critical in instigating, maintaining, and exacerbating bullying and can be explained by the social learning conditions of reinforcement, modelling, emotional contagion, and intervention.

Current knowledge of aggression in children is based primarily on studies in which the individual child is the unit of analysis (Pepler & Rubin, 1991). The same is true for research on bullying and victimization. The results of this study clearly indicate that bullying is an interpersonal activity which arises within the context of at least one other person. In fact, bullying frequently arises within the context of a group of peers. In this way, bullying can be characterized as collective in nature and based on social relations within a group (Salmivalli et al., 1996). Research on aggression has recently begun to examine the dyadic contextual influences on aggression. For example, Dodge, Price, Coie, and Christopoulos (1990) observed different types of dyads and

found that the type of partner determined the quality of play. Therefore, peer group characteristics may play an influential role in the expression of bullying within the group.

Olweus (1991) suggested four peer mechanisms which may serve to initiate, maintain, and exacerbate bullying on the school ground. The results from the present study provide some preliminary evidence to support the following peer processes in bullying: reinforcement, modelling, emotional contagion, and a weakening of control or sanctions against aggressive tendencies.

The two processes involved in the social contagion effect are reinforcement and modelling. In the majority of the episodes peers were viewed as reinforcing the bullying, despite the fact that they were coded as taking pleasure in only 30% of the episodes. This discrepancy suggests that peers are reluctant players during bullying episodes. In the Toronto survey, ninety percent of children reported it was disturbing to watch bullying (Ziegler, Charach, & Pepler, 1996) and the majority of students report that they would not join in bullying (Whitney & Smith, 1993), yet observations in the present study indicated that they participated in the majority of the episodes. As suggested by other researchers (Salmivalli et al., 1996), children's attitudes do not directly correspond with their behaviours. The reinforcement provided by the peer attention and involvement may serve to maintain the power of the bully over the victim, as well as the power of the bully within the peer group.

In addition, peers may model the negative behaviours of the bully toward the victim. For example, global ratings indicated that the peer group was less respectful and friendly to the victim than the bully. The peer group may be modelling the bullies' behaviours. The differential attention to bullies by the peer group may further reinforce bullies for their power assertion, as well as confirm for victims that they are deserving of the attack. These results suggest that the victim becomes scapegoated by the peer group. The peer group's disrespect for victims suggests that empathy for the victim needs to be developed in the peer group.

Support for the modelling process can also be seen in the result that peers actively took part in the bullying episode in 48% of the episodes. Active peer involvement was conceptualized as individuals who participated in the bullying episode but did not initiate or show leadership in the interaction. Peers could be modelling the physically and verbally aggressive behaviour of the bully. Observing the aggression may have heightened their aggressive tendencies and consequently increased their likelihood of participating in the interaction (Bandura, 1973). Indirectly, their participation may also support the peer

process of diffusion of responsibility. The peers in these episodes may not have felt responsible for their acts, since they did not initiate the interaction.

Thus, the processes of reinforcement and modelling work in both directions in bullying interactions. The bully is reinforced by the peers' presence and their attitudes towards the victim. This reinforcement may serve to maintain or even exacerbate the aggressive interaction between the bully and the victim. Similarly, the peers are influenced by the bully's behaviours. They may join in the bullying interaction and model the bully's abusive behaviour after viewing the bully being reinforced by triumphing over the victim. In addition, observing the bullying may heighten their aggressive tendencies. The peer group and the bully reinforce each other.

Although to a minor degree, peers also tried to stop bullying on the playground. In fact, peers intervened in significantly more episodes than adults (11% of episodes versus 4%). The higher rate of intervention by peers than adults may partially be a function of their presence during bullying: Peers were present in the majority of bullying episodes. When intervention was examined as a function of time present, peers are less likely than adults to intervene. The problem, however, is that bullying seldom occurs in the presence of adults. Peer intervention is relatively infrequent given the high level of peer participation in bullying episodes. There are several possible explanations for the lack of intervention by peers. Peers may not consider the behaviour disturbing or warranting intervention, although 90% of children in the Toronto study report that bullying is disturbing to watch (Ziegler et al., 1996). Still further, peers may be afraid of reprisals from other students (i.e., they may be the next victim). Laboratory research on aggression in groups indicates that when the group sides with the victim, the level of post-aggression conflict rises (Coie, Dodge, & Kupersmidt, 1990). If the same is true in bullying, siding with the victim may escalate an episode. Over time, the effect would be that peers will be increasingly less likely to intervene.

There were significant sex differences in the peer roles observed in bullying. In general, boys were more likely to be observed as actively involved in bullying, participating in a joint game with the bully and observing the bullying than girls. Salmivalli et al. (1996) found that boys were more actively involved in the bullying process than girls in the roles of reinforcer and assistant. Boys are more attracted to aggressive interactions than girls (Serbin, Marchessault, McAffer, Peters, & Schwartzman, 1993). Male peers may find bullying episodes more stimulating and arousing than female peers. Consequently, male bullies may receive more reinforcement and encouragement from their peers for their bullying behaviour. For males, bullying may be more likely to occur if there are other individuals watching or present. It is also

possible that male peers are drawn to bullying behaviours once they are under way. We are currently conducting sequential analyses to examine this issue.

A second explanation for this sex difference is that males are more likely than females to engage in rough-and-tumble play (Smith & Boulton, 1990). Aggressive behaviour, such as bullying, is more likely to occur when children are engaged in active rough-and-tumble play than when they engage in parallel or cooperative play (Dodge et al., 1990). Rough-and-tumble play may escalate into aggression due to the misinterpretation of another's action (Smith & Boulton, 1990). Males are more likely than females to engage in a form of play that may lead to bullying and they are more attracted to aggressive interactions. Our findings indicate that males are also more likely to be present during bullying episodes.

Salmivalli et al. (1996) suggest that physically aggression is a common and expected way of interacting for boys, as well as a means for creating a social order. Research on aggression in boys play groups has indicated that high levels of pre-aggression conflict were associated with both a greater likelihood that the group would encourage aggression and that the members of the group would take sides (DeRosier, Cillessen, Coie, & Dodge, 1994). "Side-taking" in a group may provide a means for groups to vicariously, and more safely, act out tension and hostility towards a victim, particularly one who is not liked. For boys, involvement in bullying may be necessary to establish dominance and social status in the peer group.

On the other hand, girls are more likely to act in a prosocial, empathic, and caring manner (Eagly, 1987). Female bullying may be qualitatively different than male bullying, in that females may be more likely to bully when peers are not present. For females, bullying may be a one-on-one relational experience rather than a group experience. This result parallels the research on girls' friendships. For example, Pepler et al. (1993) found that girls were more likely than boys to spend time with one peer whereas, boys were more likely to spend time in a group. For males and females there may be different aspects of the group context that influence the onset of bullying and the way to which it is responded. DeRoiser et al. (1994) found that the dyadic interaction quality (e.g., cohesion) determined whether the group responded to aggression, but other group qualities (i.e., the level of the group's conflict, the playful competitiveness prior to the episode) determined the nature of the response.

The sex differences in peer participation in bullying requires future research. It may be important to examine the level of activity prior to the bullying episode, the affective quality of the group's atmosphere, and the type of group activity. Examining the quality of the interaction before and after the

bullying incident will provide this type of information. Future research needs to examine the bidirectional processes within the peer group to determine the ways in which peers influence bullying and the ways in which peers, themselves, are affected by witnessing these aggressive episodes.

In summary, the involvement of the peer group in bullying problems is substantial. Whether peers are observing or actively participating, the peer group is likely to be aware of bullying episodes. Of significant importance is the finding that peers likely serve to reinforce and maintain the high frequency of these episodes by attending, deferring, complimenting, and failing to intervene. There is an apparent inconsistency in peers' involvement in bullying. On global ratings, peers are observed to have reinforced the bully. On the other hand, when children are questioned the vast majority report it is unpleasant to watch bullying (Ziegler, Charach, & Pepler, 1996). Clearly, there needs to be more convergence of attitudes and actions of the peer group. This convergence is an important task in our intervention efforts.

The attitude of the peer group and the acceptance of this level violence on the playground contributes to the continuation of bullying. Intervention programs need to involve the peer group and change the attitudes, behaviours and norms around bullying. One way of achieving this goal is to build on children's expressions of discomfort in watching bullying. The peer group needs to recognize the problem of bullying and their potential contributions to the problem and develop a repertoire of strategies for intervening themselves or seeking adult assistance to stop bullying. Developing an attitude in the peer group which condemns violence and those who engage in violence will contribute to decreasing the number of incidents of bullying on the playground. In addition, the peer group need to be taught to identify with the victim. The present research suggests that the peer group context is important in maintaining and promoting bullying and victimization on the playground. We are currently examining the role of the peer group from a dynamic systems perspective in order to explain how seemingly unrelated and uncoordinated behaviours of children in a group can coalesce and become increasingly organized around the singular goal of bullying. We are also examining the role of emotion in bullying in order to further explore the role of emotional contagion in bullying interactions. The peer context, activities, cohesiveness, and relations may be critical factors in understanding bullying and victimization and in informing our future intervention strategies.

References

- Bandura, A. (1973). *Aggression: A social learning analysis*. Englewood Cliffs, NJ: Prentice Hall.

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- Boivin, M. & Vitaro, F. (1995). The impact of peer relationships on aggression in childhood: Inhibition through coercion or promotion through peer support? In J. McCord (Ed.), *Coercion and punishment in long-term perspectives* (pp. 213-228). New York: Cambridge University Press.
- Cairns, R. & Cairns, L. (1991). Social cognition and social networks: A developmental perspective. In D. Pepler and K. Rubin (Eds.), *The treatment of childhood aggression* (pp. 249-278). Hillsdale, NJ.
- Coie, J. D., Dodge, K. A., & Kupersmidt, J. B. (1990). Peer group behavior and social status. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 208-221). New York: Cambridge University Press.
- DeRosier, M., Cillessen, A., Coie, J.D., & Dodge, K.A. (1994). Group context and children's aggressive behavior. *Child Development*, 65, 1069-1079.
- Dodge, K.A., Price, J.M., Coie, J.D., & Christopoulos, C. (1990). On the development of aggressive dyadic relationships in boys' peer groups. *Human Development*, 33, 260-270.
- Eagly, A. (1987). *Sex differences in social behavior: A social role interpretation*. Hillsdale, NJ: Erlbaum.
- Ginsburg, H. & Miller, S. (1981). Altruism in children: A naturalistic study of reciprocation and an examination of the relationship between social dominance and aid giving behavior. *Ethology and Sociobiology*, 2, 75-83.
- Heinemann, P. (1969). *Apartheid*. Liberal Debatt no.2.
- Olweus, D. (1991). Bully/victim problems among school children: Some basic facts and effects of a school based intervention Program. In D. Pepler & K. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 411-448). Hillsdale, NJ: Erlbaum.
- Pepler, D. J. & Craig, W. M. (1995). A peek behind the fence: Observations of playground interactions with video cameras and remote microphones. *Developmental Psychology*, 31, 548-553.
- Pepler, D. J., Craig, W. M., & Roberts, W. R. (1995). Aggression in the peer group: Assessing the negative socialization process. In J. McCord (Ed.), *Coercion and punishment in long-term perspectives* (pp. 213-228). New York: Cambridge University Press.
- Pepler, D. J., Craig, W. M., Ziegler, S., & Charach, A. (1993). A school-based antibullying intervention: Preliminary evaluation. In D. Tattum (Ed.), *Understanding and managing bullying* (pp.76-91). Heinemann Books.
- Pepler, D. J. & Rubin, K. (1991). *The development and treatment of childhood aggression*. Hillsdale, NJ: Erlbaum.
- Pikas. (1976). *Sa stoppar vi mobbning*. Stockholm: Prisma.
- Rigby, K., & Slee, P. (1991). Bullying among Australian school children: Reported behavior and attitudes towards victims. *Journal of Social Psychology*, 131, 615-627.
- Salmivalli, C., Lagerspetz, K., Bjorkqvist, K., Osterman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relation to

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- social status within the group. *Aggressive Behavior*, 22, 1-15.
- Scott, W. A. (1965). Reliability of content analysis: The case of the nominal scale coding. *Public Quarterly*, 19, 321-325.
- Serbin, L. A., Marchessault, K., McAffer, V., Peters, P., & Schwartzman, A. E. (1993). Patterns of social behavior on the playground in 9-11-year-old girls and boys: Relation to teacher perceptions and to peer ratings of aggression, withdrawal and likability. In C.Hart (Ed.), *Children on the playground* (pp. 162-183). New York: SUNY Press.
- Smith, P. K., & Boulton, M. (1990). Rough and tumble play, aggression and dominance: Perception and behaviours in children's encounters. *Human Development*, 33, 271-282.
- Smith, P. K., & Thompson, D. (1991). *Practical approaches to bullying*. Great Britain: David Foulton Publishers.
- Whitney, I. & Smith, P.K. (1993). A survey of the nature and extent of bullying in junior/middle and secondary schools. *Educational Research*, 35, 3-25.
- Ziegler, S., Charach, A., & Pepler, D. (1996). *Bullying at school*. Manuscript submitted for publication.

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