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The Impact of Aggression Subtypes and Friendship Quality on Child Symptoms of Depression

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Abstract Although aggressive behavior and poor friendship quality have both been linked to child depressive symptoms (Card and Little 2006; Panak and Garber 1992; Oldenberg and Kerns 1997), little to no research has examined how the combined form and function subtypes of aggression (i.e., proactive-overt, reactive-overt, proactive-relational, and reactive-relational) are related to depressive symptoms. Further, it is unclear if these subtypes are associated with depressive symptoms when also accounting for the variance associated with friendship quality or whether friendship quality interacts with the aggression subtypes to impact child depressive symptoms. The purpose of the current study was to examine the link between aggression subtypes, friendship quality, and child depressive symptoms. The sample included 89 children (56 % male; 74 % Caucasian) who were between 9 and 12 years of age (M=10.4 years, SD=1.1) and their caregivers. Child reports of depressive symptoms and ratings of friendship quality with a best friend as well as caregiver reports of children's aggressive behaviors were obtained during separate interviews. Correlation analyses indicated that reactive-overt, reactive-relational, and proactive-relational forms of aggression were positively associated while friendship quality was negatively associated with child depressive symptoms; however, regression analyses revealed that only reactive-overt aggression and friendship quality were uniquely associated with depressive symptoms. Friendship quality did not moderate the association between any subtype of aggression and depression. This study suggests the need to specifically target individuals who exhibit reactive-overt aggression for the prevention of depressive symptoms, regardless of their levels of friendship quality.

Keywords Aggression subtypes · Forms and functions of aggression · Depressive symptoms · Friendship quality

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Aggressive behavior and poor peer relationships have both been linked to child depressive symptoms (Card and Little 2006; Morrow et al. 2008; Oldenberg and Kerns 1997; Panak and Garber 1992). However, aggression is not a unidimensional construct; aggressive behavior can be distinguished by both its form (i.e., relational vs. overt) and function (i.e., proactive vs. reactive). While research suggests that both relational and overt aggression are linked to depressive symptoms (Crick et al. 2006; Prinstein et al. 2001; Storch et al. 2004), only reactive functions of aggression have been linked to depressive symptoms (Card and Little 2006; Fite et al. 2009). Nevertheless, no research has examined how the combined form and function subtypes of aggression (i.e., proactive-overt, reactive-overt, proactive-relational, and reactive-relational) are related to depression, and it is unclear if these aggression subtypes are associated with depressive symptoms when also accounting for the variance associated with friendship quality. Moreover, it is unknown whether the aggressive subtypes may interact with friendship quality to predict depressive symptoms, such that high quality friendships may buffer the link between aggression and depression. Thus, the aim of this study was to examine the link between aggression perpetration and depressive symptoms to determine which subtypes of aggression are associated with depressive symptoms in late childhood. Such information is needed not only to inform theoretical models of aggression and psychosocial adjustment, but also to aid in developing targeted intervention strategies. Further, this study extends prior research by assessing whether having a high quality friendship may buffer the link between aggression subtypes and depression. This will allow us to consider whether techniques to foster high quality friendships could be incorporated into interventions for aggressive children as a viable way to prevent or alleviate depressive symptoms. Finally, this study furthers previous research on aggression by focusing on the link between aggressive subtypes and depression in a late childhood sample (ages 9–12). This developmental period is particularly important since it includes both the transition from childhood to adolescence and usually the transition from elementary to middle school. Since research has suggested that both child and parenting behavior change (Fite et al. 2006) and depressive symptoms typically increase (Lakdawalla et al. 2007) during this transition, children of this age may be at particular risk for negative psychosocial adjustment. Thus, an understanding of the current age group is critical to determining how the link between aggression and depressive symptoms may affect children during this important time of transition.

1 Aggression Subtypes

Although extensive research has been conducted on the link between aggression and poor psychosocial adjustment (Coie and Dodge 1998; Coie et al. 1990; Crick et al. 2006; Putallaz et al. 2007), the importance of distinguishing subtypes of aggression in research has recently been recognized (Little et al. 2003). Specifically, aggressive behaviors have been classified by the form of aggression (i.e., overt and relational aggression), which describes the type of aggressive act, as well as by the function of aggression (i.e., proactive or reactive), which explains the motivations behind an aggressive act (Little et al. 2003). The forms of aggression differ in that overt aggression involves verbal threats and physical acts that are intended to intimidate

or harm another individual, whereas relational aggression involves manipulation that is intended to damage or threaten an individual's relationships, reputation, self-esteem, or social status (Crick 1996; Crick and Grotpeter 1995; Ostrov et al. 2006). In terms of function, aggression can be either proactive, involving deliberate, self-serving behaviors aimed at obtaining particular goals, or reactive, involving angry or emotionally dysregulated behaviors that occur in response to perceived frustrations or offenses (Card and Little 2006; Little et al. 2003). Although all four subtypes of aggression are linked with psychosocial maladjustment, research has suggested that aggressive children face different maladaptive outcomes, depending on which subtypes of aggression they typically exhibit (Crick et al. 2006; Putallaz et al. 2007).

2 Aggression and Internalizing Distress

Internalizing problems (such as depression and anxiety) are a significant concern for aggressive youth as both overt and relational forms of aggression have been positively associated with internalizing symptoms (Crick and Grotpeter 1995; Prinstein et al. 2001; Storch et al. 2004). However, overtly aggressive youth are typically classified as more externalizing and relationally aggressive children are typically classified as more internalizing (Crick 1997). This has been further substantiated by a meta-analytic review of 148 studies that has suggested that direct (overt) aggression is most strongly linked with emotional dysregulation and low peer acceptance and indirect aggression is more strongly and uniquely associated with internalizing problems among children and adolescents (Card et al. 2008). Card et al. (2008) have suggested that the association between indirect aggression and internalizing symptoms may be due to the fact that children who suffer from internalizing distress may use aggressive methods that are more covert and less confrontational. Despite previous work, it is still uncertain as to which form of aggression is most strongly linked with depressive symptoms in late childhood. Although overt aggression has been found to be associated with teacher and child reports of child depressive symptoms among fourth grade girls (Putallaz et al. 2007), other work involving the current age group has suggested that relational aggression is associated with depressive symptoms when the variance shared with overt aggression is controlled (Crick and Grotpeter 1995). Since depressive symptoms and aggressive behaviors frequently co-occur and children with conduct problems who also experience depressed mood have been found to be at the greatest risk for adjustment problems (Capaldi 1991; Fanti and Henrich 2010; Garber et al. 1991), further research examining the link between forms of aggression and depressive symptoms is warranted. This is especially important given that research suggests that the relation between aggression and depressive symptoms is bidirectional (Aronen and Soininen 2000; Panak and Garber 1992; Capaldi 1991). In contrast, research on the functions of aggression has suggested that reactive aggression is more strongly linked with child internalizing symptoms than proactive aggression (Card and Little 2006; Fite et al. 2009). Specifically, in comparison to proactive aggression, reactive aggression is associated with emotion dysregulation patterns, including depressive symptoms, sleep disorder problems, somatization, and personality disorders (Dodge et al. 1997). Additionally, whereas proactively aggressive youth typically expect positive outcomes to follow

aggressive acts, reactively aggressive children report experiencing more sadness as a result of social situations, demonstrating further that reactively aggressive youth likely suffer from problems with emotional regulation (Dodge et al. 1997). Since reactively aggressive youth may struggle with emotion regulation problems and are more likely to be rejected by peers than those who are proactively aggressive (Dodge et al. 1997), depressive symptoms may be a significant concern for children who exhibit this function of aggression.

Although numerous studies have been focused on the association between either the forms or the functions of aggression and depressive symptoms, little to no research exists on how the four subtypes of aggression may be differentially linked to depressive symptoms. The current study advances previous work by examining the association between the subtypes of aggression and depressive symptoms in a late childhood sample.

3 The Role of Friendship

The development of friendships is an important task during childhood and having friends is typically associated with numerous beneficial qualities including well-being and positive psychosocial functioning (Hartup and Stevens 1997). In fact, the psychosocial benefits of having friendships have been documented throughout the lifespan (Hartup and Stevens 1997). After all, friendships often include many benefits such as social support, intimacy, help and guidance, affection, nurturance, and companionship (Parker and Asher 1993). One important function of children's friendships is to serve as a protective factor against negative experiences, relational and overt victimization, and poor adjustment (Hodges et al. 1999; Schmidt and Bagwell 2007).

Although children's friendships often offer many positive benefits, the friendships of aggressive youth may differ from those of other children since aggressive youth often have deficits in social skills and may also have reduced opportunities to form reciprocal relationships with others (Bagwell and Schmidt 2011). Additionally, aggressive behavior may also influence the characteristics and qualities of a given friendship (Bagwell and Schmidt 2011) as the friendships of aggressive youth are associated with both costs and benefits (Hawley et al. 2007). For instance, in comparison to nonaggressive youth, relationally aggressive children report having friendships that are characterized by higher levels of intimacy, exclusivity, and relational aggression (Grotpeter and Crick 1996). In contrast, overtly aggressive youth differ from nonaggressive youth in that they report lower levels of intimacy within the friendship and they place more importance on engaging in aggressive acts towards others with their friends (Grotpeter and Crick 1996). Friendships of proactively and reactively aggressive youth have also revealed distinct characteristics. Specifically, among 10 to 12-year-old boys, research has suggested that initially, proactive aggression is associated with higher levels of support, greater satisfaction, and less conflict. For reactively aggressive youth, friendships are initially associated with less satisfaction and more conflict (Poulin and Boivin 1999). However, over the course of a school year, proactive aggression was associated with increases in conflict and reactive aggression was associated with decreases in conflict, suggesting that longitudinally, reactive aggression may not negatively impact the quality of

friendships (Poulin and Boivin 1999). Given that particular aggressive behaviors may influence friendship characteristics and aggression subtypes may also impact friendships through not only the selection of similar aggressive friends but also through the and the adoption of aggressive behavior from friends (Sijtsema et al. 2010), further research is needed to determine whether aggressive youth's friendships may provide the same benefits as those of nonaggressive children. This is particularly important since friendships can contribute to or detract from mental health depending on the quality and characteristics of the relationship (Berndt 2002; Hartup 1996; Hartup and Stevens 1997).

Since friendship quality, rather than simply having a friend or a particular number of friends, is considered to be a better predictor of psychosocial adjustment (Hartup and Stevens 1997), we utilized children's ratings of friendship quality with a best friend to assess the moderating role of friendship on the link between aggression and depression. Taking into account the quality of friendships for aggressive children is essential given that aggressive children often struggle socially and are typically more disliked and rejected by their peers than nonaggressive children (Cillessen and Mayeux 2004; Crick 1996; Crick and Grotpeter 1995; Putallaz et al. 2007). Thus, the current paper expands upon the aggression and friendship literature to determine whether a close friendship may protect perpetrators of aggression from negative psychosocial outcomes, specifically depressive symptoms.

4 Current Study

In sum, the primary aim of this study was to determine which subtypes of aggression are associated with depressive symptoms in children. Since comparisons of the functions of aggression have suggested that reactive aggression is most strongly linked with depressive symptoms (Card and Little 2006; Fite et al. 2009), we expected that reactive-overt and reactive-relational subtypes of aggression would be positively associated with children's self-reported depressive symptoms and these aggression subtypes would be associated with depressive symptoms even when also accounting for the variance associated with friendship quality. Additionally, this study expands prior work by examining whether a high quality best friendship can buffer the relationship between aggression perpetration and depressive symptoms. Since high quality friendships have been shown to protect against internalizing distress for rejected and victimized children (Hodges et al. 1999; Schmidt and Bagwell 2007), we predicted that high quality friendships would moderate the relation between the aggression subtypes and depressive symptoms in that high quality friendships would buffer the link between aggression and depressive symptoms.

5 Method

5.1 Participants

Participants were recruited through advertisements distributed throughout the community. The sample included 89 children (56 % male) who were between 9 and

12 years of age (M=10.4 years, SD=1.1). Caregivers participated in a phone screen to ensure the child and participating family members did not meet any of the exclusionary criteria (i.e., child developmental delays or learning disabilities and non-English speaking families).

The sample is racially representative of the medium-sized, Southeastern city from which participants were recruited. The majority of children were Caucasian (74 %), while 20.5 % were African American, and 5.5 % were biracial or of "other" racial/ethnic group. Median family income was $50,000 (range=$5,600 to $240,000), and approximately 27 % of the sample received public assistance. The majority of caregiver respondents were mothers (85 %).

5.2 Procedures

Children and caregivers were invited to the laboratory to participate in interviews lasting approximately one and a half hours. Upon arrival at the laboratory, the study's purpose and procedures were explained and both caregiver consent and child assent for participation was obtained. Caregivers and children were interviewed separately to ensure confidentiality of responding. All questions were read aloud by the interviewers and responses were entered directly into the computer by the interviewer using Medialab software. Families were compensated $45 for their time and study participation and children received a prize. The university's Institutional Review Board approved this study.

5.3 Measures

Aggression Subtypes Caregiver reports of child relational and overt aggression were assessed using subscales of Little et al.'s (2003) aggression questionnaire designed to assess the forms and functions of aggression. Four subscales, 6-items each, of this measure were included to assess for proactive-overt (e.g., "My child often starts fights to get what he/she wants"), reactive-overt (e.g., "When my child is hurt by someone he/she often fights back"), proactive-relational (e.g., "My child often tells his/her friends to stop liking someone to get what he/she wants"), and reactive-relational (e.g., "If others upset or hurt my child, he/she often tells their friends to stop liking them") forms of aggression. These four combined form-function aggression subscales have been adapted and used in previous work by Ostrov and Crick (2007) and have been found to be reliable. Further, although this measure was originally designed for use with child reports, previous work has adapted and validated this measure for use with caregiver reports (Fite et al. 2011). Caregivers responded using a 5-point scale (1=never to 5=almost always). Mean scores were computed and used for analyses. The internal consistencies for the proactive-overt, reactive-overt, proactive-relational, and reactive-relational subscales were good (α=.91, α=.84, α=.89, and α=.87 respectively).

Depressive Symptoms Children completed the 27-item Child Depression Inventory (Kovacs 1992) to assess the extent to which depressive symptoms were experienced during the previous two weeks. The CDI is used to measure behavioral, cognitive, and affective symptoms of depression and is comprised of five domains, which indicate levels of anhedonia, negative self-esteem, negative mood, interpersonal

difficulties, and ineffectiveness. For each item, the child is asked to indicate which of three responses best describes him/her. Each item includes a response that indicates an absence of symptoms (scored 0), mild symptoms (scored 1), and definite symptoms (scored 2). For example, items include responses such as: "I do most things OK" (0), "I do many things wrong" (1), or "I do everything wrong" (2). For analyses, all items were averaged for a total score. Internal consistency was good (α=.86).

Friendship Quality Children completed a 12-item abbreviated version of the Friendship Quality Questionnaire (Parker and Asher 1993) to assess levels of friendship quality with a best friend. The measure consists of items describing six domains (help and guidance, companionship and recreation, validation and caring, conflict resolution, conflict and betrayal, and intimate exchange) and includes items such as "My best friend and I tell each other our secrets." Children responded using a 5-point scale (1=not at all true to 5=really true). Mean scores were computed and used for analyses. The internal consistency in our sample was adequate (α=.66).

6 Results

6.1 Descriptive Statistics

Means, standard deviations, and correlations for all study variables can be found in Table 1. Consistent with expectation, reactive-overt aggression and reactive-relational aggression were positively associated with depressive symptoms. However, unexpectedly, proactive-relational aggression was also positively associated with depressive symptoms. Friendship quality was positively associated with gender, demonstrating that girls reported higher levels of relationship quality in their friendships than did boys. Age was positively associated with proactive-overt aggression, such that older children exhibited higher levels of this form of aggression in

Table 1 Correlations, means, and standard deviations

Variable	1	2	3	4	5	6	7	8
1. Age	–							
2. Gender	−.08	–						
3. Depressive symptoms	−.07	−.03	–					
4. Friendship quality	.06	.25*	−.25*	–				
5. Reactive-Overt	.18	−.16	.27*	−.03	–			
6. Proactive-Overt	.22*	−.02	.12	.03	.72***	–		
7. Reactive-Relational	.03	.16	.25*	.00	.66***	.60***	–	
8. Proactive-Relational	.08	.08	.24*	−.01	.61***	.72***	.82***	–
M	10.44	1.44	.20	3.50	1.80	1.29	1.71	1.35
SD	1.14	.50	.20	.44	.67	.53	.67	.58

M mean, *SD* standard deviation, *p<0.05, **p<.01, ***p<.001; scale for CDI 0–2, FQQ 1–5, aggression subtypes 1–5

comparison to younger children. As expected, high levels of friendship quality were associated with low levels of depressive symptoms. Finally, the four subtypes of aggression were positively associated with each other, and these associations ranged from moderate to strong (*r*s>.60)

6.2 Regression Analyses

To examine unique effects, depression was regressed on friendship quality and the covariates of age and gender. Age and gender were included as covariates in the model, as age and gender differences in depression as well as aggression have been found in previous work (Crick and Grotpeter 1995; Hankin et al. 2008; Kistner et al. 2010). This model did not significantly predict child reports of depression, $F(85)=1.98$, $p=.12$, $R^2=.07$. Note however, as expected friendship quality was uniquely negatively associated with depressive symptoms, B=−.11, $p=.02$. Next, the four aggression subtypes (i.e., proactive-overt, reactive-overt, proactive-relational, and reactive-relational) were simultaneously added to the model. The aggression subtypes significantly contributed to the prediction of depression over friendship quality, age, and gender, $F(81)=2.52$, $p=.02$, $R^2=.18$, indicating that the four aggression subtypes contribute significantly to the variance in children's reported CDI scores. As seen in Table 2, the only aggression subtype uniquely associated with depressive symptoms was reactive-overt aggression. To examine whether friendship quality moderated the association between depression and aggression subtypes, interactions between the aggression subtypes and friendship quality were then added to the regression model one at a time in order to limit the number of parameters included in the model for power reasons (Aiken and West 1991); however, no significant interactions emerged (*p*s>.31). Note that all variables were standardized prior to analyses to aid in interpretation of results.

7 Discussion

The purpose of the current study was to determine which of the four aggression subtypes were linked with child reports of depressive symptoms, which has not been previously evaluated. Further, this investigation expanded prior research by

Table 2 Multiple regression analysis

	Depressive symptoms $R^2=.18$	
	Estimate	Standard error
Reactive-Overt	.10*	.05
Proactive-Overt	−.10	.07
Reactive-Relational	−.01	.06
Proactive-Relational	.08	.07
Friendship quality	−.11*	.05
Age	−.01	.02
Gender	.02	.04

*$p<0.05$

determining whether high levels of friendship quality with a best friend moderated the association between aggression perpetration and depressive symptoms. Additionally, our sample is comprised of children in late childhood, which marks the transition to both middle school and adolescence. Thus, this study also expands previous work by describing new findings about the link between the forms and functions of aggression and depressive symptomatology during this important developmental period. Results indicated reactive-overt aggression was most strongly linked with child reports of depressive symptoms. Friendship quality was also uniquely and negatively associated with depressive symptoms. Finally, an examination of the aggression subtype by friendship quality interactions revealed that friendship quality did not buffer the link between any aggression subtype and child depressive symptoms. These findings and their implications are discussed below.

Consistent with expectation, reactive-overt and reactive-relational aggression were associated with depressive symptoms when examining correlations. This supports previous research linking reactive aggression and internalizing problems in both community samples and in a child inpatient sample (Card and Little 2006; Fite et al. 2009; Morrow et al. 2008). However, unexpectedly, proactive-relational aggression was also positively associated with depressive symptoms. Previous research (e.g., Crick and Grotpeter 1995) has demonstrated that relational aggression perpetration in childhood is associated with higher levels of depression in comparison to nonrelationally aggressive peers. The present study supports this link and further suggests that relational aggression may be associated with depressive symptoms, regardless of the motivation behind the aggressive act and whether the relationally aggressive behavior is proactive or reactive in nature. Since girls exhibit proportionally more relationally aggressive behavior than do boys (Putallaz et al. 2007), girls who are aggressive may be especially at risk for problems with depressive symptoms.

One potential reason for the link between both functions of relational aggression and depressive symptoms is that since both functions of relational aggression are more covert than overt aggression, children who suffer from internalizing distress may be more likely to utilize relational aggression since it is less confrontational (Card et al. 2008). Furthermore, since relationally aggressive behavior typically is premeditated, another potential reason for the link between both relational subtypes of aggression and depression is that relationally aggressive children may spend a lot of time analyzing and ruminating about interactions with others. Since rumination can lead individuals to dwell on negative affect and problems, rumination is associated with depressive episodes (Nolen-Hoeksema 1991). Thus, relationally aggressive children who ruminate about their interactions may be at an increased risk for developing problems with depression; however, longitudinal research is necessary to establish whether rumination may mediate the link between relational aggression and depression.

Note, however, that the only aggression subtype uniquely associated with depressive symptoms was reactive-overt aggression, suggesting that reactive-overt aggression is the aggression subtype most strongly linked to depressive symptoms. Since the association between the combined forms and functions of aggression and depression has not been examined previously, the unique link between reactive-overt aggression and depression contributes new information to the theoretical

understanding of aggressive behaviors and depressive symptoms. Further, this information could potentially inform the development of targeted interventions as it suggests that reactive-overt aggression is the behavior that should be targeted for the prevention of depressive symptoms among aggressive youth. By focusing on youth who exhibit reactive-overt aggression, interventions for aggression and depression can be made more cost-effective and efficient than school or community-wide interventions. Additionally, friendship quality was significantly related to depressive symptoms; however, the impact of reactive-overt aggression and friendship quality on depressive symptoms was independent. Thus, this study also suggests that the association between reactive-overt aggression and depressive symptoms is independent of the level of friendship quality experienced.

One potential reason for the link between reactive-overt aggression and depressive symptoms is that whereas proactive aggression is utilized to obtain a desired goal, reactive-overt aggression involves aggressive behavior that is perpetrated in response to an act that is perceived to be intentional or threatening (Fite and Colder 2007). Therefore, despite the intention behind other children's actions, children who respond with reactive-overt aggression may perceive purposeful intent in the interpersonal situations that make them angry or upset, potentially leading to internalizing distress. Further, children who perpetrate reactive-overt aggression may be at risk for developing depressive symptoms because they typically struggle socially and exhibit social skills deficits (Day et al. 1992) and are negatively evaluated by their peers (Prinstein and Cillessen 2003). Since children who engage in reactive-overt aggression may be at an increased risk for depression in comparison with their peers, it is imperative that these aggressive children are targeted in interventions designed to prevent and treat depressive symptoms.

Examination of the reactive-overt aggression subtype by friendship quality interaction revealed that friendship quality did not moderate the association between aggression and depressive symptoms. Findings suggest that children who engage in reactive-overt aggression may be at an increased risk for depression, regardless of whether they have a high quality best friendship. Interestingly, this suggests that whereas close friendships have been shown to buffer the association between peer victimization and internalizing distress (Schmidt and Bagwell 2007), close friendships may not protect children who use reactive-overt aggression from depressive symptoms. Future research needs to examine other protective factors (e.g., parental relationship quality, extracurricular activities) that could be enhanced to both decrease aggressive behaviors and prevent reactive-overt aggressors from developing internalizing problems during this important developmental period.

7.1 Limitations and Conclusions

The current study suggests important implications regarding the association between subtypes of aggression and child depressive symptoms; however, the results should be interpreted in light of several limitations. First, since the study involved cross-sectional data, caution should be taken when drawing conclusions regarding causal direction of effects. Additionally, although the power in this study was sufficient for detecting medium to large effects (Aiken and West 1991), the sample size was relatively small (n=89), potentially limiting our ability to detect small effects.

Although it is not clear from a clinical perspective how useful identifying small effects may be, larger samples should be used in future research to ensure that small interaction effects are not missed. A larger sample size would be beneficial because it would also allow researchers to account for other factors, such as gender, that may contribute to differential aggressive and psychological outcomes. Thus, a future direction of this work would be to examine gender differences in the link between aggression, depression, and friendship quality. Note, however, that gender differences in depression do not emerge until adolescence (Lakdawalla et al. 2007). Regardless, it would be helpful to examine aggression subtypes and gender in older samples to determine whether gender is associated with differential outcomes.

Additionally, this study utilized a community-recruited sample with low mean levels of outcome variables. Thus, the homogenous sample may have limited the associations that were detected in the current study, particularly since depressive symptoms and aggression are more prevalent in at-risk and clinical samples. However, the associations that were found (i.e., between reactive-overt aggression and depressive symptoms) may be even stronger in a clinical sample where aggression occurs at higher rates. Therefore, from a preventative standpoint, the associations that we found have great implications for preventing symptoms in the community. If this information is incorporated into targeted interventions, such interventions may prevent symptoms in community samples from worsening into clinically significant problems. Despite the important implications regarding the lack of a buffering effect for aggression and depressive symptoms in a community sample, it may be useful for future researchers to examine whether close friendships may play a more important role in the link between aggression and depression for children with clinically significant symptoms. Further, additional work should also examine other developmental periods since the association between aggression and psychosocial outcomes varies with age (Cillessen and Mayeux 2004). Since peer relationships become increasingly important during adolescence (Buhrmester and Furman 1987; Larson and Richards 1991), further research should investigate whether friendship quality may be a buffer against depression after children reach adolescence.

Despite these limitations, a major strength of this study is that it utilized child and parent reports of children's psychosocial adjustment. Specifically, child reports of depressive symptoms may be preferable to parent reports since children have been found to be reliable reporters of their own depressive symptoms (Michael and Merrell 1998) and since agreement between parent and child reports of internalizing distress is typically low (De Los Reyes and Kazdin 2005; Kemper et al. 2003). Additionally, previous research has demonstrated that the psychometric properties of caregiver reports of aggression behaviors during late childhood is good, even when distinguishing aggressive subtypes (Lochman and Wells 2002). Regardless, it should be noted that caregivers may not be aware of all of children's behaviors and future work should incorporate both child and caregiver reports of aggression in order to determine whether reports from both types of informants is equally informative.

This study should be viewed as a preliminary study suggesting that the link between the subtypes of aggression and depression in childhood warrants further study. Specifically, our finding that reactive-overt aggression is the subtype most strongly linked with depression indicates that it is imperative to continue to distinguish the subtypes of aggression in the prediction of psychosocial outcomes in

children, rather than simply focusing on the distinction between forms or functions of aggression. Without consideration for the type of aggression as well as the motivation behind the act, it may be difficult to take into account the full context in which aggressive behavior occurs; yet, these factors may alter the link between aggression and psychosocial outcomes. Further, since level of friendship quality did not buffer the link between aggression and depressive symptoms, findings suggest the need to target individuals who exhibit reactive overt aggression for the prevention of depressive symptoms, regardless of their levels of friendship quality. Future research should seek to determine whether there are other factors that may buffer the association between reactive-overt aggression and depression. If protective factors can be identified, then this information could be used in interventions to help minimize internalizing distress among aggressive youth.

Finally, the current study suggests that youth who exhibit reactive-overt aggression should be targeted for interventions that decrease both aggressive behaviors and depressive symptoms. Due to the bidirectional effects of aggression and depression (Aronen and Soininen 2000; Panak and Garber 1992; Capaldi 1991), it is possible that decreasing depressive symptoms may lead to a reduction in aggressive behavior and vice versa. Future research should seek to determine whether it is most effective to target aggressive behaviors, depression, or both in preventing negative outcomes associated with reactive-overt aggression. Currently, it is unknown whether skills learned from existing cognitive behavioral therapies for depression in childhood, may simultaneously address both depressive symptoms and reactive-overt aggression. For example, in the Coping with Depression course, techniques are taught to decrease negative and irrational thoughts (Lewinsohn et al. 1990). Such techniques for depression may potentially help youth who engage in reactive-overt aggression by teaching them to challenge the negative attributions they make regarding other children's actions. Additionally, activity schedules are commonly used in treatment for depression because they allow individuals to structure their day to be more productive and pleasurable. Children who exhibit reactive-overt aggression may benefit from similar schedules since it provides a structured daily routine, which may decrease vigilance and decrease the likelihood of overreacting to frustrating unforeseen circumstances. Since children with comorbid aggression and internalizing problems often face worse outcomes than their pure externalizing or internalizing peers (Fanti and Henrich 2010), it will be essential to identify successful techniques that can be incorporated into targeted interventions aimed at alleviating depressive symptoms while also decreasing aggressive behaviors.

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