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Risk and protective factors in the relationship between peer victimization and internalizing disorders

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RISK AND PROTECTIVE FACTORS IN THE RELATIONSHIP BETWEEN PEER
VICTIMIZATION AND INTERNALIZING DISORDERS

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ABSTRACT

The purpose of this investigation was to examine the experience of peer victimization through the lens of an integrative model of individual (gender, ethnicity, grade level) and social (receipt of prosocial support from peers, peer victimization) risk and protective factors in terms of association with psychopathology. The examination was conducted in a rural sample of elementary school children of multiple ethnicities. Results suggest that both overt and relational forms of peer victimization predicted social anxiety, depression, OCD, GAD, panic, and separation anxiety and loneliness symptoms with moderate effect sizes. No differences in either overt or relational victimization were found among ethnic groups; however, Caucasian children reported significantly more prosocial support from peers than African Americans and children of other ethnic groups. Differences in levels of reported victimization were found among the children of different grade levels. Prosocial support moderated the relationship between overt victimization and emotional distress, but not significant effects for relational victimization, and grade level moderated the relationships between overt victimization and distress such that the relationship was somewhat stronger for older children than younger children.

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CHAPTER I

INTRODUCTION

Peer relationships in childhood and adolescence are a vital part of development and contribute substantially to children's current and future psychosocial well-being. Unfortunately, many children experience aggression on the part of peers at some point during the school years. Also called bullying and harassment, peer victimization involves repeated intentional acts intended to cause physical, emotional, or relational harm by other children, most typically in the school environment (Crick & Grotpeter, 1996; Olweus, 1993). Once thought of as a normal and inevitable aspect of childhood, peer victimization has gained attention among parents and educators as having detrimental influence on the well-being of children and teens who are frequently bullied. A substantial number of children are chronically victimized and research has demonstrated that that such repeated harassment is consistently linked to a variety of difficulties in psychosocial adjustment including depression, social anxiety, and loneliness.

Early work in the area of victimization/bullying focused on direct forms of aggression such as physical and verbal assaults and confrontation; however, more recent literature generally includes both overt and relational forms of victimization (e.g. Putallaz et al., 2007). Overt aggression includes physical violence such as hitting, insults, and threats, while relational aggression includes behavior such as socially excluding others, negative gossip, and otherwise harming interpersonal relationships (Crick & Grotpeter, 1996; Crick & Bigbee, 1998). Frequency of overt and relational aggression are linked to adjustment difficulties, and among adolescent samples, exposure to both forms is related to more difficulty than exposure to one or

the other (Storch & Ledley, 2005; Storch & Masia, 2001). Repeated exposure to maltreatment by peers may lead to heightened social worry, fear of negative appraisal, social avoidance, and isolation (Storch & Ledley, 2005).

While many children who are victimized develop psychological distress, others are more resilient. The relations among victimization and internalizing problems are multifaceted and complex. A number of demographic, personal, and psychosocial variables including gender and prosocial support from peers have been identified as potential moderators in the victimization-distress relationships. Ethnicity may also play a role, but much less is known about the prevalence and expression of these relationships among minority youth, or whether protective factors among the general population are also protective factors for minorities. It is also possible that certain socio-contextual factors, such as ethnic composition of the school a child attends, may influence how peer victimization affects a child's emotional well-being.

The purpose of this paper is to review the literature on victimization and its relationship to internalizing symptoms with a particular focus on African American children. Following a description of peer victimization and epidemiology, a review of consequences and negative associations of peer victimization will be presented. Protective factors which appear to moderate these relationships will be described followed by a discussion of the possible role of ethnic minority status in prevalence, consequences, and protective factors of victimization. A review and discussion of the potential for ethnic composition as a potentially influential variable will also be presented.

Prevalence of Peer Victimization

The exact incidence of peer victimization is unknown as rates vary considerably across studies according to age of the sample, assessment techniques and definitional criteria for thresholds for significant victimization. Among a nationwide survey of over 15,500 public and private school students in sixth through tenth grades, about 17% of youth reported moderate or frequent (two or more times per month) victimization by peers (Nansel et al., 2001). The prevalence of victimization among younger children is less clear; a survey of 3,500 third through fifth graders attending an urban public school district showed that approximately six percent of children reported being victimized "always" based on one item asking how often the child is hurt by others (never; sometimes; or always) (Glew, Fan, Katon, Rivara, & Kernic, 2005). Occasional victimization appears to be a more frequent experience; among a large sample of fourth through twelfth grade children 55-80% of respondents indicated experiencing at least one instance of victimization in the last month (Sawyer, Bradshaw, & O'Brennan, 2008). Dulmus et al. (2004) reported that in their U.S. sample of third through eighth graders, 82.3% of the youngsters had been bullied at least once in the previous three months. Thus it appears that most children are recipients of peer aggression at least occasionally, and for a substantial number of children it is a regular occurrence.

Some have suggested that victimization tends to increase in late elementary and middle school years and decline in the high school years, but data supporting this claim are relatively limited (Sawyer, Bradshaw, & O'Brennan, 2008). Due to differences in reporting methods and threshold for classification of victims across studies, it is difficult to compare the prevalence rates among elementary and secondary school aged children. In the Nansel et al. (2001) study, victimization tended to decrease from middle school to high school and was more prevalent

among boys than girls (2001). Some investigations have shown a higher prevalence among younger children, while others have found fluctuations across grade levels (Whitney & Smith, 1993; Hanish & Guerra, 2000). Griffin-Smith and Gross (2006) found no differences in prevalence between students in grades five, six and ten. Importantly, data examining the trajectory of victimization across the elementary school years are lacking.

Comparisons across gender show that boys tend to experience higher overall rates of victimization, with an especially pronounced difference in rates of overt or physical victimization (Nansel et.al, 2001; Storch, Brassard, & Masia-Warner, 2003; Griffin-Smith & Gross, 2006). Girls are more likely to report relational than overt victimization, but assessment of differences in relational victimization between genders have been inconsistent, with some investigations reporting no gender differences and others reporting a trend for girls to be more relationally victimized than boys (Storch, Brassard, & Masia-Warner, 2003; Crick & Grotpeter, 1996; Grils & Ollendick, 2002; Griffin-Smith & Gross, 2006). A consistent finding is that girls tend to report receiving and providing more prosocial support from and to peers (Storch, Brassard, & Masia-Warner, 2003).

As noted above, estimates of the prevalence of peer victimization vary due to differences in reporting methods and frequency thresholds distinguishing chronic vs. isolated victimization. Self-report instruments are typically either definition-based or behavior-based. Definition-based measures first define bullying or victimization and ask respondents how often they have been bullied, whereas behavior-based measures present a list of aggressive acts and ask how often the respondent has experienced each behavior. Studies employing the definition-based measures often define frequent victimization as occurring at least two or three times per month or use a frequency cutoff such as "sometimes" to classify victims vs. non-victims. For behavior-based

measures a summary score is computed for all items and/or for subscales of different types of victimization (i.e. overt vs. relational), and these summary scores are often used as a continuous variable in correlational studies. Other investigators employ a cutoff score to differentiate victims vs. non-victims (Furlong et al., 2009; Sawyer, Bradshaw, & O'Brennan, 2008; Crick & Grotpeter, 1996). Thus, threshold criteria for classifying children as "victims" versus "non-victims" differ across studies. Despite these differences, it is clear that most youth are victimized at some point and while victimization is a transitory experience for some, it is a chronic and frequent problem for many.

Consequences of Peer Victimization

The potential for social and psychological consequences resulting from peer victimization has gained the attention and concern of educators, parents, clinicians, and researchers. Over the past several decades, scores of investigations have been conducted to determine whether victims of peer aggression experience greater levels of psychological distress (i.e. depression, social anxiety) or social problems (loneliness, social withdrawal) than those who are not victimized.

Hawker and Boulton (2000) conducted a meta-analytic review of cross-sectional studies conducted between 1978 and 1997 in order to assess the magnitude of empirical evidence across studies correlating victimization and psychological distress indices. Over 5,000 participants across 23 studies were included in the analysis. Mean effect sizes were calculated for correlations between victimization and social anxiety, generalized anxiety, global and social self-worth, loneliness, and depression. Results showed that victimization was positively correlated with generalized anxiety ($r = .25$), social anxiety ($r = .25$) loneliness ($r = .32$), and depression ($r = .45$). Higher levels of peer victimization were inversely related to global and social self-worth ($r = -.39$ and $-.35$, respectively). These effect sizes were somewhat smaller (although still

statistically significant) when different informants were used to report victimization and distress. The authors concluded that results demonstrate substantial support for the notion that victims demonstrate tendencies toward maladjustment. They also suggested that future studies should address the limitations of early investigations including measurement of victimization and cross-cultural variability, and should focus on unanswered questions concerning risk factors and intervention strategies.

Early research in the areas of bullying or victimization operationally defined peer victimization as direct receipt of verbally and physically assaultive behaviors, such as hitting, name-calling, and threatening. However, it has been shown that aggressors use relational forms of aggression as well, including spreading rumors and intentionally excluding some children from activities. The introduction of relational victimization as a separate form of victimization was met with corresponding shift in focus of research attention to include relational and overt forms of victimization as separate variables in understanding the potential ramifications of peer aggression (Crick and Grotpeter, 1996; Storch et al., 2003; Owens et al., 2000).

Crick and Grotpeter (1996) conducted one of the early studies assessing associations among relational and overt victimization and psychological adjustment. A sample of third through sixth grade children was administered self-report measures of overt and relational victimization, depression, loneliness, and asked to provide demographic information. Interviews with peers were conducted in order to assess sociometric status. Results showed that victims tended to experience one form of aggression or the other but not both. Sociometrically rejected children were victimized more frequently than average and popular children. Assessment of gender differences showed that boys were overtly victimized more frequently than girls, but no differences were found for relational victimization. Overt and relational victimization were

positively related to depression and loneliness. The investigators concluded that relational forms of aggression and victimization are unique from overt forms and that they have equal impact on emotional distress.

Results of numerous other studies have consistently demonstrated that both overt and relational peer victimization are associated with social anxiety, loneliness, and depressive symptoms (Owens et. al, 2000; Storch & Masia-Warner, 2004; Crick and Bigbee, 1998; Crick & Ladd, 1993). Overall, effect sizes tend to be moderate, demonstrating fairly strong associations between victimization and internalizing problems. Boys tend to report greater levels of overt victimization, and some studies have shown that girls report higher rates of relational victimization while others report no gender differences. While some studies suggest poorer outcomes for relationally victimized youths, others have shown an interactive effect for those who are victims of overt and relational aggression (Prinstein et. al, 2001).

Empirical evidence that youth who are frequently victimized are also more likely to suffer psychological distress is abundantly clear. Victimization has been hypothetically proposed as both a cause and as a consequence of psychological distress. It has also been suggested that there may be an interactive effect between the two. However, cross-sectional studies alone are unable to address this issue. In order to explore causal directions in these relationships, longitudinal and prospective studies have investigated the changes in victimization and internalizing problems over time.

Siegal, La-Greca, and Harrison (2009) conducted a prospective investigation to examine the predictive relationship between social anxiety and peer victimization over a two-month period. Participants were tenth through twelfth graders attending a suburban public high school. The sample was primarily of Hispanic ethnicity. Adolescents completed self-report measures of

relational, overt, and reputational victimization and a measure of social anxiety in November and January of the same school year. Social anxiety and all three forms of peer victimization were strongly correlated at both times of measurement. After controlling for social anxiety at the first assessment, relational victimization predicted an increase in social anxiety over time for girls but not for boys. Social anxiety also significantly predicted an increase in relational victimization at the second assessment for boys and girls. Investigators reasoned that findings support a bi-directional causal relationship between relational victimization and social anxiety and that this relationship may be somewhat stronger for girls than for boys.

In order to investigate the relationships between overt and relational forms of victimization and different aspects of social anxiety over time, Storch, Masia Warner, Crisp, and Klein (2005) conducted a prospective study of these relations among a mid-sized sample of adolescents attending an urban school. Participants completed a measure of victimization experiences including subscales for relational and overt victimization and two social anxiety questionnaires which included subscale scores for social phobia, general social anxiety, and social avoidance. The measures were first administered when the adolescents were in the ninth grade and a follow-up assessment was conducted one year later. Relational victimization scores at the first assessment predicted an increase in social phobia symptoms the following year, but did not predict changes in general social anxiety symptoms or social avoidance. Overt victimization was not predictive of any measure of social anxiety symptoms over time. None of the dimensions of social anxiety symptoms at the first assessment were predictive of peer victimization at follow-up. However, for boys, escalation of social anxiety and social phobia symptoms over time was associated with increased peer victimization over time. The authors

suggested that relational victimization is related to an escalation of specific symptoms of social phobia but not general symptoms of social distress.

A similar study was conducted with a sample Scottish adolescents in order to understand the direction of associations between peer victimization and depression. Participants completed self-report measures for victimization and depression at age 13 with a follow-up assessment conducted when the adolescents were approximately 15 years of age. Results showed that some teens moved from victim to non-victim status or vice versa across the two-year period, but that victimization and depression tended to be fairly stable overall. Victimization and depression were positively correlated at both assessments. Structural equation modeling conducted for the first assessment showed that the path from victimization to depression was stronger than the path from depression to victimization. For the second assessment, the path from depression to victimization was stronger than the opposite pathway for boys but not girls. The authors asserted that while victimization certainly appears to be a source of psychological distress, depression also may increase susceptibility to peer aggression (Sweeting, Young, West, & Der, 2006).

As previously noted, victimization by peers seems to be an impermanent experience for some children, while others are targeted throughout their school years. It has been suggested that an enduring pattern of victimization may be more strongly related to internalizing problems than transitory experiences. It is also plausible that as children move from victim to non-victim status, consequent internalizing problems may also recede. Similarly, if children become victimized more frequently by peers at some point, they may also experience an increase in psychological distress as a result.

In order to better understand the relationships between chronic and transient victimization and adjustment difficulties over time, Kochenderfer-Ladd and Wardrop (2001) investigated the

trajectories of victimization, loneliness, and social satisfaction across the first four years of public schooling. Three hundred eighty eight children were interviewed individually in the fall and spring of their kindergarten year and again in the spring of their first, second, and third grade years. Victimization was assessed with four items asking the child to rate how often they experienced various forms of victimization. Measures of loneliness and social satisfaction were also administered. Groups were formed for comparison based on the duration of victimization status (i.e. victim or non-victim at various assessment points) and change in victimization status across assessment intervals. Most (60%) of the children were classified as victims at some point, and 4-14% could be considered chronically victimized. Chronic victims showed a growth curve of increasing social dissatisfaction and loneliness over time. Children who were originally classified as non-victims, but later emerged as victims, also displayed a corresponding increase in social dissatisfaction and loneliness. For those who were originally classified as victims and later classified as non-victims, some showed improvements in loneliness and social satisfaction, while others did not. The authors concluded that both chronic and emergent patterns of victimization were strongly related to changes in adjustment over time, while change from victim to non-victim status does not necessarily improve a trajectory of distress.

Reijntjes, Kamphius, Prinzie, and Telch (2010) conducted a meta-analysis of longitudinal studies in order to provide a more comprehensive quantification of the direction of the relationship between peer victimization and internalizing problems. The study included longitudinal and prospective studies which measured victimization and any form of internalizing symptoms at two or more points in time with a resulting 18 studies and nearly 14, 000 participants. Mean effect sizes across studies were computed for the prediction of distress at the second measurement by peer victimization at time one after controlling for distress at time one,

and the prediction of victimization at time two by distress at time one after controlling for distress at time one. Results were that peer victimization was a significant predictor of internalizing symptoms over time ($r = .18$) Internalizing symptoms also predicted peer victimization over time ($r = .08$) The authors concluded that distress and victimization have a bi-directional influence on one another over time. The authors also suggested that future studies focus on the effects of moderator variables over time, such as having close friends.

The preponderance of studies investigating the psychological consequences and correlates of peer victimization have focused on loneliness, social anxiety, and depression as these problems have the most intuitive and theoretical support for outcomes associated with social rejection and trauma. Externalizing behaviors have been studied as well, with results showing support for problems in this area for victimized children (e.g. Prinstein, Boergers, & Vernberg, 2001). The few studies conducted which included generalized anxiety symptoms have shown less robust but significant associations with victimization (Hawker & Boulton, 2000). It seems plausible that while peer victimization may be most strongly related to symptoms associated with social avoidance and withdrawal, it may also be related to multiple forms of pathology. Traumatic experiences in childhood have been associated with multiple types of outcomes in general. Thus it seems warranted to explore relationships among multiple forms of pathology in order to better understand the range of consequences of victimization and to be able to address these issues where needed. Preliminary evidence suggests that peer victimization may indeed be related to multiple internalizing syndromes.

Storch et. al (2006) examined rates of peer victimization and correlations with psychological symptoms among a sample of youth diagnosed with obsessive-compulsive disorder (OCD). Participants were clinically referred adolescents with OCD, a group of

adolescents with Type I diabetes, and a control group of healthy youth. The OCD group was administered measures of peer victimization, depression, loneliness, and obsessive compulsive symptoms, while the other two groups completed a measure of peer victimization only. Additionally, parents rated internalizing and externalizing symptoms and a clinician administered a scale of OCD symptomology for the OCD group. The youth with OCD reported higher rates of peer victimization than either of the comparison groups. Among the OCD group, peer victimization was related to all measures of pathology including clinician rated OCD severity. Results also showed that the relationships between OCD severity and depression and parent rated internalizing and externalizing problems was fully mediated by peer victimization. Peer victimization was a partial mediator for the relationship between OCD symptom severity and loneliness. The authors concluded that while causal relationships cannot be determined from data provided, understanding the contribution of peer relationships to OCD and comorbid conditions may help facilitate treatment for youth with OCD. While this study suggests that peer victimization is related to OCD symptom severity among youth already diagnosed with OCD, causal inferences cannot be drawn in terms of understanding whether peer victimization was influential in the development of OCD symptoms initially, whether peer victimization exacerbates symptoms of pathology which already exist, or whether children with severe OCD symptoms make easy targets for aggressors. Exploring these relationships among a non-clinical sample of children would help with further understanding.

While internalizing symptoms outside the range of those already discussed have largely been left unexplored among child samples, a few studies conducted among adult samples have investigated the associations between retrospective accounts of victimization from childhood and current symptoms of pathology. For example, McCabe et al (2010) recruited a clinical sample of

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adults diagnosed with social anxiety disorder, OCD, and panic disorder in order to explore the relationships among these and other symptoms of pathology and childhood teasing. Participants completed measures of retrospective teasing, social anxiety, depression, stress (generalized anxiety) and general functioning. Group comparisons showed that those diagnosed with social anxiety disorder (social phobia) reported higher levels of childhood teasing than those with OCD or Panic Disorder. For all participants, teasing scores were positively related to severity of symptoms of depression, generalized anxiety, social anxiety, and impairment in functioning. Teasing scores accounted for the greatest variance in social anxiety scores. The authors concluded that results provide supporting evidence that victimization in childhood can have long-lasting effects, particularly with anxiety disorders.

It appears that peer victimization is most strongly related to social anxiety, depression, and loneliness, even in the long term, but other disorders seem to be implicated as well. While retrospective studies such as the one reviewed above provide insight into long-term relationships between victimization and internalizing disorders, it is not clear whether peer victimization is related to concurrent manifestation of symptoms of multiple anxiety disorders. A limitation of retrospective studies is that memories of traumatic events may be distorted to match current levels of distress; in other words, adults with anxiety disorders may report more victimization than is warranted as a result of their current emotional state. Exploration of the relationship between peer victimization and symptoms of anxiety disorders in children would be beneficial in understanding the scope of emotional distress correlates of victimization.

Summary of Consequences of Peer Victimization

Victimization is consistently related to several adjustment variables including loneliness, social anxiety, and depression. Moreover, victimization has been demonstrated to be a predictor

of future psychological distress and is predicted by psychological distress within longitudinal and prospective studies, indicating that victimization and distress likely exacerbate one another over time. Limited evidence suggests that victimization may also be related to other psychological disorders including generalized anxiety disorder, obsessive-compulsive disorder and panic disorder. Studies that have measured the correlation between victimization and generalized anxiety are much less common than those measuring social anxiety and other adjustment variables, and those measuring other internalizing disorders are virtually non-existent (Hawker & Boulton, 2000).

Protective Factors

As descried above, peer victimization is related to a number of poor outcomes for social and emotional adjustment. However, many children who are bullied do not develop significant psychological distress. Therefore, it is imperative that research also work to identify relevant risk and protective factors that may serve as safeguards against the negative effects of victimization. Research in resilience indicates that personal qualities and external resources can ameliorate risk for negative outcomes and in their absence, exacerbate potential for the same outcomes. A strong sense of support and care from family and community is argued to be the most important protective factor against psychological disorders. Having close friendships is a variable that has been postulated as a potential protective factor against internalizing symptomology associated with peer victimization. Friendships in childhood have the benefit of offering companionship, intimacy, and emotional support (Sullivan, 1953). They also provide an avenue for practicing relevant social skills and exploring new areas of interest (Deater-Deckard, 2001). Children with

close friends are less likely to be lonely (Nangle, Erdley, Newman, Mason, & Carpenter, 2003). As such, having positive peer relations plays a critical role in development.

One study investigated the protective effects of having a mutual best friend and the quality of that friendship on both the frequency of peer victimization and its negative correlates over a one-year period. Fourth and fifth graders in Canada completed self-report measures of loneliness and reported on peers' overt victimization. Additionally, each child nominated their three best friends in order to establish which children were mutual close friends and completed a measure of friendship qualities. Teachers completed measures for the children's internalizing and externalizing behavior problems. Measures were completed during the spring semesters of two consecutive school years. Results showed that children without a mutual best friend experienced an increase in victimization over time, but having a best friend predicted an overall decrease in victimization. Friendship qualities including security, companionship, and conflict did not predict changes in victimization, but children who reported having a friend who provided a high level of protection did not show an increase in victimization over time. Additionally, internalizing and externalizing behavior problems and victimization were mutually predictive of one another over time for children without a best friend, but the relationship was diminished by the presence of mutual friendship. The authors concluded that for the overt forms of victimization measured, the presence of a friend offered protection from further victimization which thereby reduced behavior problems over time (Hodges, Boivin, Vitaro, & Bukowski, 1999).

A more recent study which also examined the protective role of quality friendship in victimization and internalizing disorders similarly found that while low friendship quality was related to both frequency of victimization and internalizing symptoms, friendship quality did not

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moderate the relationship between victimization and internalizing symptoms (Bollmer, Milich, Harris, & Maras, 2005). Each of these studies included physical and verbal forms of peer victimization, but did not examine the role of friendship or friendship quality in relational victimization. They also did not examine the possibility of differing effects of friendship for boys and girls. Girls have higher rates of depression and anxiety symptoms than boys, and may internalize peer aggression more so than boys, putting them at greater risk for resulting distress (Grills and Ollendick, 2002). Conversely, boys report more distress associated with overt forms of victimization than do girls, while relational victimization has been suggested as having a stronger association with internalizing symptoms in general (Siegal, La-Greca, & Harrison, 2009; Storch, Masia-Warner, Crisp, & Klein, 2005). Thus, it may be that gender differences exist in moderating the relationship between victimization and internalizing problems.

In addition to providing protection from further victimization and attenuating effects of victimization, friendship may provide a buffer against other risk factors for victimization, such as presence of internalizing disorders, and potentially reduce the risk for concurrent psychosocial problems associated with internalizing symptoms. One investigation examined the potential for close friendships in moderating the association among social anxiety and loneliness, self-efficacy, and peer victimization. Participants were sixth and seventh graders from the northeastern United States. Teachers completed ratings for social skills for each child. Peer nominations were obtained for friendships and victimization. The children completed self-report measures of social anxiety, social self-efficacy, loneliness, and victimization in addition to nominating their close friends. Results showed that having more close friendships diminished the association between social anxiety and loneliness and self-reported victimization while having few close friends was related to greater loneliness and victimization. The results were more

robust for children with high levels of social anxiety. Analysis of the effects of gender showed that the attenuating effects of friendship were somewhat stronger for boys than for girls. The relationship between peer victimization and social anxiety disappeared for boys with close friendships. The presence of secondary friendships significantly moderated the relationship between social anxiety and low social self-efficacy. The authors suggested that having close friends allows children with high levels of social anxiety to enjoy the benefits of social interaction without the inhibition typically associated with peer interactions and that close friends may provide protection against victimization. They suggest that interventions aimed at increasing friendship among youth with social anxiety should be explored (Erath, Flanagan, Bierman, & Tu 2010).

Preliminary evidence suggests that having close friendships may indeed buffer the negative effects of victimization and protect against future victimization. They may also provide a safeguard for vulnerable youth with internalizing problems from victimization and increased internalizing problems. However, investigations thus far have been limited to primarily Caucasian samples and have provided inconsistent results. The Erath et al. (2010) study demonstrated benefits of having close friends against loneliness in children with high levels of social anxiety; it is possible that friendship may protect against a variety of distress symptoms associated with peer victimization including depression, generalized anxiety, and social anxiety.

In addition to support available from close friendships, more general social support within the school context may also serve as a source of security and protect against the distress associated with victimization. Storch, Brassard, and Masia-Warner (2003) investigated the associations among relational and overt forms of victimization, loneliness, social anxiety, and prosocial behaviors from peers. Adolescent participants at a private high school completed

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measures of social experiences including overt and relational victimization and prosocial behavior from peers. Measures of adjustment included loneliness and social anxiety including subscales for physiological symptoms of anxiety, social avoidance, and fear of negative evaluation. Results showed that while there were no gender differences in rates of relational aggression, boys reported more frequent overt victimization and less overall prosocial behavior from peers than did girls. For both boys and girls, relational and overt victimization were positively correlated with physiological anxiety symptoms ($r = .46$ and $.24$), social avoidance ($r =.46$ and $.17$), fear of negative evaluation ($r=.60$ and $.25$), and loneliness ($r = .58$ and $.41$). Victims of relational aggression and both overt and relational aggression displayed higher levels of distress than did overt victims. Additionally, relational victimization was uniquely associated with social anxiety variables after controlling for overt victimization for boys and girls. There was no interactive effect of overt and relational victimization on adjustment variables. Prosocial behaviors from peers moderated the relationships between overt and relational victimization and loneliness but not social anxiety variables. The authors suggested that relational victimization may be more significant in understanding the role of peer relationships in loneliness and social anxiety. They also suggested that while causal relationships cannot be determined, prosocial support from peers may play a protective role against psychological distress in victimized adolescents.

Thus far, evidence exists that having a mutual close friend may buffer some of the negative effects of victimization, and more general social support in the peer context also appears to have a protective effect. It would be informative to explore the degree of overlap these variables share; in other words, do children who report receiving general social support from peers necessarily have one or more close friends? Exploring whether having a close friend or

having high levels of peer social support in general are unique moderators of the victimization-internalizing symptom relationship could guide future intervention efforts. Additionally, some evidence suggests the moderating effects of prosocial support may be different for boys and girls and relational and overt forms of victimization, but clarifying whether this is in fact the case could focus intervention efforts for boys and girls as needed. Finally, although some investigations have made efforts to include diverse samples, the potential for friends and social support to alleviate some of the mal effects of victimization across ethnic groups and sub-cultures has not been widely explored but could provide valuable information in understanding the peer context for minority children.

Peer Victimization Prevalence, Consequences, and Protective Factors in African American youth

Prevalence

While studies examining the prevalence and consequences associated with peer victimization, the majority of these have included predominantly Caucasian samples from suburban and urban schools. Ethnicity is gaining attention as a potential protective or risk factor for peer victimization as differences amongst ethnic groups are observed in a variety of related domains such as economic status, exposure to stressful life events, and prevalence and expression of psychological disorders (Wight, Aneshensel, Botticello, & Sepulveda, 2005). African American youth are at an elevated risk for violent victimization within the community setting and are rated by teachers and peers as more aggressive than are Caucasian youth (Putallaz et al., 2007). However, it is yet to be determined whether greater exposure to violence within the community setting translates to greater peer victimization at school.

A few studies have directly compared the prevalence of victimization among Caucasian and African American youth. In a nationwide study by Nansel et al. (2001), African American adolescents reported being bullied less often than Caucasian youth with a one-item definition based measure of bullying. Putallaz et al. (2007) found that among 4th grade girls, teachers rated African American girls as more likely to be aggressive and to be victimized, but self-reports demonstrated no differences between ethnic groups. Seals and Young (2003) assessed victimization and bullying behaviors among 7th and 8th graders in rural Mississippi via two self –report items and found no differences between African Americans and Caucasians in this age group and region.

It is possible that discrepant results of studies examining prevalence differences are the result of differences in assessment methods. Sawyer, Bradshaw, and O'Brennan (2008) conducted a survey of 24, 000 fourth through twelfth graders in an urban school district in order to compare the prevalence of reported victimization as a function of both ethnicity and reporting method used. Participants reported their grade level and ethnicity and completed definition based and behavior-based measures of victimization. Frequency of victimization was compared between assessment method, and ethnicity while stratifying for gender and school level (elementary, middle, and high school). Comparisons revealed that odds of reporting frequent victimization varied according to the reporting method used such that youth were overall more likely to report at least one form of bullying via the behavior based measure than with the definition based measure. When examining age, gender and ethnic differences using the definition based measure, no differences were found amongst ethnicities or between gender for fourth and fifth graders, whereas middle school African American youth had decreased odds of being victimized than other ethnic groups. African American High school girls (but not boys)

also reported less frequent victimization than youth of other ethnicities. However, using the behavioral based measure, African American fourth and fifth graders reported more frequent victimization than other ethnicities, while no differences were found among ethnic groups in the middle and high school age ranges. Overall comparison of the two measures showed that African American youth who reported being victimized with the behavior based measure were less likely to report being "bullied" via the definition-based measure. The authors suggested that the definition-based measure may underestimate victimization in African American youth because they may be less likely to see themselves as being bullied due to stigmatization. They also suggest that there may be developmental differences in the way children respond to the two measures.

Hence, while some studies have investigated differences in victimization prevalence among Caucasian and African American children, it remains unclear whether or not differences exist, and may depend on other demographic factors such as age and gender in addition to reporting methods employed. For example, Hanish & Guerra (2000) found differences in trajectory of victimization rates across the elementary school years among African American and Caucasian children. While victimization increased from first to second grade for both groups, victimization decreased for African American fourth graders and remained stable for Caucasian children across second through fourth grades. Thus, overall, the prevalence of victimization among elementary school children and the stability of victimization over time remain unclear. Additionally, most studies of peer victimization thus far have included participants from urban and suburban schools; given the higher rates of violence within urban settings, these findings may not extend to children in rural areas.

Consequences

Children in disadvantaged communities are especially vulnerable to experiencing or witnessing violence and crime; African American children and other ethnic minorities are disproportionately represented in such communities as a result of sociocultural factors, placing them at especially high risk for violent victimization within the community. African American children have been shown to have a significantly higher lifetime prevalence of Posttraumatic Stress disorder, a finding that is not surprising given greater possibility for exposure to violence and traumatic events. Studies in the depression literature show that greater exposure to negative life events is strongly predictive of depression and that experiencing stressful life events multiplies the risk for depressive symptoms. Given that African American children are more likely to be exposed to traumatic life events, being victimized by peers may significantly increase the risk of pathology and may be more strongly associated with symptoms than in Caucasian children. Investigations of ethnic differences in rates of depressive symptoms generally show higher levels of depressive symptoms among African American youth than Caucasians, with an especially pronounced difference among boys (Kistner, David, & White, 2003; Kistner, David-Ferdon, Lopez, & Dunkel, 2007). The few studies that have examined ethnic differences in African American and Caucasian children for other anxiety disorders have been inconsistent (Last & Perrin, 1993, Walton, Johnson, & Algina, 1999; Ferrell, Beidel, & Turner, 2004).

In order to explore whether peer victimization is related to internalizing symptoms amongst minority children as previously found among majority samples, Storch et al. (2002) recruited a small sample of African American and Hispanic children ages 8-13 from an urban charter school. Participants completed measures of peer victimization, social anxiety, depression,

and loneliness. Results revealed that overt victimization was significantly correlated with social-evaluative anxiety, social avoidance, and symptoms of depression, but was not related to loneliness. Relational victimization was not related to any of the dependent measures. These findings are in direct contrast with those of other investigations which have shown overt and relational forms of victimization to be strongly associated with distress symptoms and a stronger relationship between relational victimization and distress. The authors suggested that discrepant results may have been a function of inadequate sample size or that relational aggression may have different effects based on ethnicity and SES such that it is not as powerful a predictor of distress among minority youth as is overt victimization.

In order to clarify results from the previous investigation, a follow-up study was conducted with a slightly larger sample (n=190) of fifth and sixth grade Hispanic and African American children. The sample was predominantly Hispanic. This study included the measures described in the previous study and also included a measure of receipt of prosocial acts from peers. For boys and girls, overt victimization was positively correlated with social avoidance and fear of negative evaluation, loneliness, and depressive symptoms. Relational aggression was associated with fear of negative evaluation and social avoidance and with depressive symptoms among girls but not boys. Prosocial behavior moderated the relationship between relational victimization and loneliness, but not the other dependent variables (Storch, Nock, Masia-Warner, & Barlas, 2003). While these studies are a step toward understanding the association as peer victimization and distress symptoms among minority youth, the findings cannot be generalized to African American children as the sample included large percentages of Hispanic children.

Preliminary suggest that friendship and general social support from peers moderates victimization-distress relationships, but no study to date has examined these variables as

potential protective factors among African American youth. The study above indicated that among a predominately Hispanic minority sample, prosocial support had protective effects against loneliness but not other variables, but further investigation would help determine whether friendship and prosocial support are protective factors among African American children and whether the effects are specific for loneliness vs. other distress symptoms.

Ethnic Minority Status and the School Context

As described above, a number of individual factors at the level of the individual seem to have an impact on the frequency of victimization and associated distress including gender, developmental level, and perhaps ethnicity, although the contribution of ethnicity is less clear and the interaction among gender, age, and ethnicity is almost entirely unexplored. Protective factors related to the school social environment, including general social support in the classroom and presence of close friendships, are also largely unexplored among African American children.

There is reason to suspect that broader social environmental factors such as ethnic diversity and ethnic composition within schools are influential in determining the risk for being victimized and perhaps the magnitude of consequences of victimization. Theory from social psychology suggests that within individualistic cultures, people maintain biases toward members of "out-groups," or those who do not fit within the majority, in order to feel closer and engaged within their own in-group (Fiske, 2004). This tendency is enhanced when people primarily interact with others from the same group. Within highly diverse schools, or those in which the ethnic composition is not dominated by any clear majority, risk for out-group bias is smaller, and opportunities to interact with others from the same ethnicity are more evenly distributed. For less ethnically integrated schools in which there is a clear majority, exclusion of the minority is more

likely. Within the literature on peer victimization, imbalance of power has been established as an antecedent of peer aggression (Olweus, 1993). Thus, it is possible that minorities within a school dominated by members of another ethnic group may be at greater risk for victimization, particularly relational victimization, and may be less likely to receive prosocial support from their peers.

Hanish and Guerra (2000) examined the socio-contextual correlates of peer victimization among a sample of elementary school children from an urban area in the Midwest. The participants were of Hispanic, African American, and Caucasian ethnicity. Children were first assessed when they were in first, second, and fourth grades were given follow-up assessments two years later. Peer victimization was measured from two peer nomination items from a longer sociometric interview and reflected physical and verbal victimization (being hit or pushed and being picked on). Demographic information including gender, grade, SES, and ethnicity was obtained from school records. The ethnic composition of each school was calculated and operationalized for each participant as the percentage of students in the school who were the same ethnicity as that participant. Comparisons between ethnic groups showed that Hispanics were victimized less frequently than African American and Caucasians. Tests for interaction between ethnicity and school ethnic composition showed that Caucasian children attending schools in which they were the ethnic minority were more likely to be rated as victimized than were Caucasians attending majority Caucasian schools. Conversely, African American children were slightly more likely to be victimized in predominantly African American schools than those attending schools in which they were the minority. Hispanic children were equally likely to be victimized whether or not they were the ethnic majority, suggesting that the value of school ethnic composition in predicting peer victimization may differ for members of different

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ethnicities. Ethnicity and school poverty level did not have a significant interactive effect, while the three-way interaction between ethnicity, school ethnic composition, and school poverty approached significance. The authors concluded that results indicate a very complex model of demographic risk factors suggesting non-linear patterns for victimization prevalence affected by ethnicity, grade, gender, school ethnic composition and multiple interactions among these factors. They suggested that individual level or family level factors likely distinguish children who attend predominantly same ethnicity vs. different-ethnicity or mixed schools and should be explored. The investigators further suggested that developing a more comprehensive and broad based model to identify the protective and risk factors associated with peer victimization is crucial to development of the most effective interventions. The results from the Hanish and Guerra (2000) study were based on measures of physical and verbal aggression from peers, but did not include relational victimization. Additionally, the schools were in urban and suburban areas where exposure to violence is high, particularly for African Americans. Thus, it is not clear whether findings would generalize to children in rural areas or to relational forms of victimization.

Preliminary investigations assessing school ethnic composition as a variable in predicting peer victimization provide some support for the notion that ethnic minorities at a particular school may be at greater risk for victimization. As stated above, it is possible that children who are the ethnic minority at their particular school receive less prosocial support from peers due to out-group bias and limited opportunities to interact and gain a sense of belonging within their own ethnic in-group. Differences in social support and friendships have yet to be explored as a function of ethnic diversity/composition but would provide insight into how children who are in the minority at their school fare socially and whether their needs for belonging are being met.

Similarly, it would be informative to examine loneliness and internalizing symptoms as a function of ethnic diversity and to determine whether the relationship between peer victimization and internalizing symptoms is moderated by school ethnic composition and minority status. It may be that being excluded by members of another ethnic group has a less devastating emotional impact as being associated with one's in-group is theoretically associated with needs for belonging; conversely, if children in schools in which they are the ethnic minority have less opportunity to establish close peer relationships, they may be more likely to experience feeling of loneliness and other symptomology as a result. For example, one study found that African American teens living in predominantly Caucasian neighborhoods displayed higher rates of depression than Caucasians and African Americans living in predominantly African American neighborhoods (Wight, Aneshensel, Botticello, & Seulveda, 2005).

Understanding the function of risk and protective factors in determining both the likelihood of victimization and how correlating internalizing symptoms differ as a function of broader socio-contextual factors would be helpful in identifying populations and individuals at risk. The purpose of this study was to clarify inconsistent findings reported in previous research related to gender, grade level, and ethnic differences in overt and relational victimization and social support among elementary school aged children, to explore relationships between peer victimization and internalizing symptoms (e.g. obsessive compulsive disorder, separation anxiety) and to extend the literature on peer victimization by testing a model of demographic and socio-cultural factors moderating relationships between peer victimization and distress. Overt and relational victimization were hypothesized to predict symptom levels of OCD, GAD, separation anxiety, panic, social anxiety, depression, and loneliness. It was expected that grade level, gender, ethnicity, and minority status would have one-way and interactive effects on

reported levels of peer victimization and moderate victimization-distress relationships. Social support was hypothesized to moderate the relationship between victimization and distress differentially as a function of gender and ethnicity. It was expected that minority status would be related to increased peer victimization and psychological distress, and that the relationship between minority status and psychological distress would be mediated by social support.

CHAPTER II

METHODS

Participants

The sample for this study were drawn from completed data from the Behavioral Vital

Signs (BVS) Project, a mental health screening project conducted with second through twelfth

graders enrolled in public schools throughout a state located in the southeastern U.S. Participants

were 3,457 second through fifth graders participated in the BVS project between 2008 and 2010.

Of these, 332 (9.6%) were missing more than 10% of data one or more of the scale variables

(RCADS, ALS, SEQ) and were removed prior to analyses. Of the remaining 3,125 participants,

40.6% were African American, 52.6% identified as Caucasian, 1.1% as Asian, 2.6% as

Hispanic/Latino, and 3.1% identified as "other." The sample was 49% female.

Procedure

Data for this study were collected as part of the BVS youth screening. The BVS was approved

by the University Institutional review Board and state Department of Education and

administrators of participating schools. BVS project staff provided children with letters to be

given to their parents explaining the project and the instruction to return the letter if they did not

consent for their child to participate. If the letter was not returned within two weeks, children

were allowed to participate in the survey. Project staff provided instructions to classroom

teachers and distributed the assessment packets for each classroom. Classroom teachers read a

set of instructions and handed the surveys to the children in their classrooms. Teachers assisted

with reading items as needed. The youth provided answers on Scantron (Eagan, MN) brand forms.

Measures

Background Information

Participants were asked to indicate their ethnicity as African American, Asian, Caucasian/White, Hispanic/Latino/Latina or Other. They also completed an item indicating their gender/ethnicity. Participant responses were grouped and entered by grade level. Due to an error in coding by school, we were not able to determine participant's minority status within their school.

Revised Child Anxiety and Depression Scales

The RCADS (Chorpita et al., 2000) is a 47- item self-report measure designed to assess clinical symptoms of depression and anxiety disorders in children ages. The RCADS consists of 6 subscales corresponding to DSM-IV diagnoses of generalized anxiety disorder (GAD, 6 items, separation anxiety disorder (SAD, 7 items), social phobia (SP, 9 items), panic disorder (PD, 9 items), obsessive compulsive disorder (OCD, 6 items), and major depressive disorder (MMD, 10 items). Example items include "I feel worthless." and " I worry that I will do badly at my school work." Respondent is asked to rate each item according to how often each applies to them according to a four-point likert-type scale ranging from 0 (never) to 3 (always). Items are totaled for each subscale, the five anxiety measures (Total Anxiety Scale) and the entire measure yielding a Total Internalizing Scale (Chorpita et al., 2000; Chorpita, 2011). Factor analysis conducted with community and clinical samples yielded a six-factor structure corresponding to the six DSM-IV disorders (Chorpita et al., 2000; Chorpita et al., 2005). Correlations with other

validated measures and clinical interviews demonstrated strong concurrent and discriminant validity for community and clinical samples (Chorpita et al., 2000; Chorpita et al., 2005) Test-retest and internal consistency reliabilities for each of the subscales were found to be good among a community sample (.71-.85; .73-.82)

Loneliness Questionnaire

The Loneliness Questionnaire (LQ; Asher, Hymel, & Renshaw, 1984) is a self-report measure used to assess children's' loneliness and social dissatisfaction. The measure consists of 24 items, of which 16 focus on feelings related to loneliness (e.g. "I feel alone.") and 8 are filler items related to hobbies or interests. Participants respond to each item on a five-point likert-type scale according to how often the item is true of them (Always True to Not True at All). The factor structure of the AQ has been independently replicated by investigators and confirmed to consist of one primary factor for the 16 items (Asher & Wheeler, 1985; Crick & Ladd, 1993). A total score is derived by reverse scoring nine of the items and summing the scores for each item (1-5). Higher scores indicate greater loneliness. Convergent and divergent validity of the measure are supported by positive correlations with negative peer nominations, social avoidance, and depression and negative correlations with positive peer nominations and peer social support (Asher & Wheeler, 1985; Crick & Ladd, 1993; Storch, Nock, Masia-Warner, & Barlas, 2003). Internal consistency reliability has been shown to be high (Chronbach's α = .90) (Asher & Wheeler, 1985).

Social Experiences Questionnaire

Participants experience with their peers was assessed via the Social Experiences Questionnaire (SEQ; Crick & Grotpeter, 1996). The SEQ is a behavior-based self-report measure assessing children's receipt of overt victimization, relational victimization and positive support from their

peers. Each of the three subscales consists of five items. The overt victimization subscale is designed to capture experiences of direct physical and verbal harassment with items such as "How often does another kid kick you or pull your hair?" The relational victimization subscale is comprised of items such as "How often do other kids leave you out on purpose when it is time to play or do an activity?" evaluating the degree to which peer harm the child's relationships. The prosocial scale in contrast measures the frequency with which the child perceives caring behaviors from other children; for example, "How often does another kid say something nice to you?" Children respond to the items by rating the frequency with which they experience each, according to a five-point scale ranging from "Never" to "All the Time." Concurrent validity has been shown through correlations with peer reports of victimization and negative correlations with adjustment variables (Crick & Grotpeter, 1996; Crick & Bigbee, 1998; Storch et al., 2004). Test-retest reliability has been demonstrated to be good and internal consistency reliability is adequate (Chronbach's α = .74, .82, and .75) (Crick& Grotpeter, 1996; Storch et al., 2003). An advantage of behavioral based measures is that they allow for examination of frequency of different types of victimization and do not carry the risk of stigma or preconceived ideas associated with the terms bullying or victimization (Furlong et al., 2009; Sawyer, Bradshaw, & O'Brennan, 2008).

CHAPTER III

RESULTS

Missing values among variables were found to be missing at random. EM estimation

procedures were used to replace missing scale data for participants with less than 10% of data

missing for each scale. Distributions for continuous variables were examined for skewness and

kurtosis and were found to be approximately normally distributed. Means and standard

deviations were computed for scale variables and are presented in Table 1. Exploratory Pearson r

correlations were computed among all study variables and are presented in Table 2. For all

analyses, RCADS subscale scores were converted to t-scores to control for differences in gender

and age reporting differences. To control for Type I error, a significance level of $p<.01$ was used

for all analyses. Overt and Relational Victimization scores were significantly related to

Loneliness, Separation Anxiety, Panic, GAD, Social Phobia, OCD, and Depression. Receipt of

Prosocial Support was significantly correlated with Loneliness, Social Phobia, and OCD.

A multivariate regression was performed in order to determine the omnibus

predictive relationship between Overt and Relational peer victimization and the seven dependent

variables considered in aggregate (Loneliness, Separation Anxiety, Panic Disorder, Generalized

Anxiety, Social Phobia, Obsessive-compulsive Disorder, and Depression). There was a

significant main effect [$F(14, 6232) = 64.82$, Wilks' $\Lambda = .76$, $p < .001$]. Follow-up univariate

tests demonstrated that both Overt and Relational Victimization significantly predicted

Loneliness, Separation Anxiety, Panic Disorder, Generalized Anxiety, Social Phobia, Obsessive-

compulsive Disorder, and Depression ($p < .001$ for each). Table 3 provides a breakdown of the beta weights and t-values of overt and relational victimization predicting each of the dependent variables.

A 3 (ethnicity) X 2 (gender) X 4 (grade level) multivariate analysis of variance (MANOVA) was conducted in order to evaluate gender, grade level, and ethnic differences in rates of Overt and Relational Victimization and Prosocial support. Because there were so few Hispanic/Latino and Asian participants relative to African American and Caucasians, participants from those ethnic groups were combined with those who reported their ethnicity as "Other." There were significant group effects for ethnicity, $F(6, 6198) = 3.966$, Wilks' $\Lambda = .992$, $p = .001$, gender, $F(3, 3099) = 11.807$, Wilks' $\Lambda = .976$, $p < .001$, and grade, $F(9, 7542) = 3.443$, Wilks' $\Lambda = .990$, $p < .001$. There was also a significant interaction between grade level and ethnicity, $F(18, 8765) = 2.115$, Wilks' $\Lambda = .998$, $p = .004$.

Follow-up Univariate Analyses of Variance (ANOVA) were conducted to explore group differences. Results revealed significant gender differences for Overt Victimization, $F(1,3101) = 6.694$, $p = .01$ and Prosocial Support, $F(1, 3101) = 27.844$, $p < .001$, with boys reporting significantly more overt victimization and less Prosocial support than girls. Univariate follow-up also reveled an interaction between grade level and ethnicity on prosocial support; $F(12, 3101) = 2.640$, $p = .002$. There was also a main effect for ethnicity.

Post-hoc pair-wise comparisons among the groups revealed that second graders reported significantly more Overt Victimization than fourth graders ($p = .008$) and fifth graders ($p < .001$). Third graders similarly reported significantly more overt victimization than fifth graders ($p = .003$). Differences reported by second and third graders and third and fourth graders were non-significant. In terms of relational Victimization, the third grade cohort reported significantly

more relational victimization than the second graders ($p=.009$). Differences among the other grade levels were non-significant. Third graders reported significantly more prosocial support than second ($p=.004$), fourth ($p=.005$), and fifth ($p=.003$) graders. Levels of prosocial support did not significantly differ among the other grade levels. No significant differences were observed in rates of either overt or relational victimization for any of the ethnic groups. Caucasian participants reported significantly more prosocial support than did African American participants ($p = .003$) and participants of all other racial/ethnic groups ($p=.01$).

Moderation Analyses

Hierarchical linear regressions were performed in order to examine interactions between the two victimization variables and hypothesized moderators (gender, grade level, ethnicity, and prosocial support) in predicting distress variables. Only African American and Caucasian participants were included in these analyses due to the small sample of participants identifying as other ethnicities. The victimization variables and prosocial support were centered by subtracting the sample mean from each individual score. Ethnicity was dummy coded as a dichotomous variable where 1= African American and 0=Caucasian. Gender was dummy coded as 1= Female and 0 = Male. The interaction terms were computed by multiplying the centered and dichotomized values.

For the first analysis, lower-order, two-way, and three-way interactions were tested among Overt Victimization, gender, ethnicity, grade level, and Prosocial Support in the prediction of Social Phobia. Table 4 contains *B,* Standard error *B,* β, *t,* and *p* values for each variable in each step of the analysis.

Overt victimization, demographic variables, and Prosocial Support were entered in Step

1. This model was significant in the prediction of Social Phobia [$\underline{R}$ = .314, R^2 = .098, Adjusted

$\underline{R}^2$ = .097, ΔR^2 = .098, $F\Delta$ (5, 2906) = 63.375, p = .000]. Examination of coefficients of

individual variables entered into the model revealed that Overt Victimization and Prosocial

Support contributed significant predictive value to the model (p = .001 and p = .000) while the

demographic variables did not. The addition of the two-way interactions entered in step two did

not add significant explanatory power of the model. The addition of the three-way interactions

also failed to account for significant variance [$\underline{R}$ = .326, R^2 = .106, Adjusted $\underline{R}^2$ = .101, ΔR^2 =

.004, $F\Delta$ (6, 2896) = 2.639, p = .025]; however, examination of individual interaction terms

revealed that the interaction among Overt Victimization, Grade and Prosocial Support was

significant (p = .005).

The same procedures were used to examine the proposed moderators in the relationship

between Overt Victimization and Loneliness. The first step of the model including Overt

Victimization, the demographic variables, and Prosocial Support was significant [$\underline{R}$ = .491, R^2 =

.241, Adjusted $\underline{R}^2$ = .240, ΔR^2 = .241 $F\Delta$ (5, 2906) = 184.481, p = .000]. Examination of

coefficients of individual variables entered into the model revealed that higher levels of Overt

Victimization predicted significantly greater Loneliness, while higher reported levels of

Prosocial Support significantly predicted lower Loneliness scores. Children in earlier grades

reported significantly greater Loneliness than did children in later grades, females reported more

Loneliness than males, and African American participants reported significantly more Loneliness

than Caucasians. The addition of the two-way interactions in step two resulted in a statistically

significant increase in the predictive power of the model [$\underline{R}$ = .496, R^2 = .246, Adjusted $\underline{R}^2$ =

.243, $\Delta R^2 = .005$ $F\Delta$ (4, 2902) = 4.434, $p = .001$]. Higher levels of Prosocial Support

significantly reduced the magnitude of the relationship between Overt Victimization and

Loneliness while grade level moderated the relationship such that Overt Victimization was more

strongly related to Loneliness for children in higher grades. Gender and Ethnicity did not

significantly moderate the relationship. Addition of the higher-order interaction terms did not

significantly improve the explanatory power of the model.

In the regression predicting Depression, the model containing the lower-order variables

entered in Step 1 was significant [$\underline{R} = .346$, $R^2 = .119$, Adjusted $\underline{R}^2 = .118$, $\Delta R^2 = .119$, $F\Delta$ (5,

2906) = 78.817, $p = .000$]. Examination of coefficients of individual variables that Overt

Victimization was the only variable that contributed significant predictive value to the model.

The addition of the two-way and three-way interactions entered in subsequent steps did not add

significantly to the prediction of Depression. Similarly, none of the interaction terms entered in

the prediction of Panic, Separation Anxiety, or GAD were significant. Overt Victimization was a

significant predictor for each of the distress variables. Grade level was a significant predictor of

Panic Disorder such that children in higher grades reported more Panic symptoms than those in

lower grades. African American children reported greater levels of Panic and Generalized

Anxiety.

Independent variables entered in the first step in the regression predicting OCD

contributed significantly to the prediction model [$\underline{R} = .339$, $R^2 = .115$, Adjusted $\underline{R}^2 = .114$, $\Delta R^2 =$

.115, $F\Delta$ (5, 2906) = 75.658, $p = .000$]. Higher levels of receipt of Prosocial support and Overt

victimization predicted greater reported levels of OCD symptoms, females reported lower levels

than did males, and African Americans reported significantly more than Caucasians. The

addition of the two-way interactions did not account for significant additional variance, while the addition of the three way interactions accounted for an additional .50% of the variance [$\underline{R}$ = .352, R^2 = .124, Adjusted $\underline{R}^2$ = .119, ΔR^2 = .005, $F\Delta$ (6, 2896) = 2.994, p = .006]. Examination of coefficients of individual variables showed that the OvertXGradeXProsocial interaction was significant (p=.01). Prosocial Support moderated the relationship between Overt Victimization and OCD symptoms for children in higher grades but not lower grades.

A second set of hierarchical regressions was performed in order to examine interactions between Relational victimization and hypothesized moderators in predicting distress variables. Tables 11-16 contains B, Standard error B, β, t, and p values for each variable in each step of the analysis.

Social Phobia was the dependent variable in the first analysis. Relational victimization, demographic variables, and Prosocial Support were entered as the independent variables in Step 1. This model was significant in the prediction of Social Phobia [$\underline{R}$ = .348, R^2 = .121, Adjusted $\underline{R}^2$ = .120, ΔR^2 = .121, $F\Delta$ (5, 2906) = 80.045, p = .000]. Examination of coefficients of individual variables entered into the model revealed that Relational Victimization and Prosocial Support contributed significant predictive value to the model (p = .000 and p = .002). The addition of the two-way and three-way interactions entered in steps two and three did not add significant explanatory power of the model.

Two-way and three-way interactions failed to contribute significant explanatory power to the prediction of Loneliness, Depression, Panic, Separation Anxiety, or OCD. Independent variables entered in step one of each model contributed significant explanatory power for models predicting each of the dependent variables.

The variables entered in the first step in the regression predicting GAD contributed significantly to the prediction model [$R = .345$, $R^2 = .119$, Adjusted $R^2 = .118$, $\Delta R^2 = .119$, $F\Delta$ (5, 2906) = 78.766, $p = .000$]. The addition of the two-way interactions accounted for significant additional variance [$R = .352$, $R^2 = .124$, Adjusted $R^2 = .121$, $\Delta R^2 = .004$, $F\Delta$ (6, 2896) = 3.641, $p = .006$]. Grade level had a moderating effect on Relational victimization such that the relationship between Relational Victimization and GAD symptoms was stronger for children in higher grades. Three-way interactions did not account for significant additional variance in the prediction of GAD.

Table 1
Descriptive Statistics (with Standard Deviations in Parentheses)

Social Experiences	α	Sample Mean
Overt Victimization	.792	10.17 (4.86)
Relational Victimization	.755	11.26 (4.95)
Prosocial Support	.780	15.93 (4.97)
Loneliness	.700	38.31 (12.05)
RCADS Subscales		
Separation Anxiety	.708	51.02 (11.02)
Panic Disorder	.787	52.80 (12.34)
Generalized Anxiety	.772	50.59 (12.34)
Social Phobia	.775	48.68 (11.87)
OCD	.657	50.63 (11.92)
Depression	.707	53.71 (12.35)

Table 2
Correlation Matrix

	Overt	Relational	Prosocial Support	Loneliness	SAD	PD	GAD	SP	OCD	DEP
Overt	1	.679[*]	-.024	.316[*]	.257[*]	.325[*]	.292[*]	.304[*]	.288[*]	.338[*]
Relational	.679[*]	1	-.004	.297[*]	.271[*]	.338[*]	.330[*]	.338[*]	.314[*]	.350[*]
Prosocial	-.024	-.004	1	-.328[*]	.032	.026	.028	.054[*]	.070[*]	-.044
Loneliness	.316[*]	.297[*]	-.328[*]	1	.219[*]	.248[*]	.213[*]	.230[*]	.167[*]	.317[*]
Separation	.257[*]	.271[*]	.032	.219[*]	1	.590[*]	.552[*]	.577[*]	.502[*]	.493[*]
Panic	.325[*]	.338[*]	.026	.248[*]	.590[*]	1	.606[*]	.580[*]	.597[*]	.619[*]
Generalized	.292[*]	.330[*]	.028	.213[*]	.552[*]	.606[*]	1	.624[*]	.563[*]	.556[*]
Social Phobia	.304[*]	.338[*]	.054[*]	.230[*]	.577[*]	.580[*]	.624[*]	1	.546[*]	.556[*]
OCD	.288[*]	.314[*]	.070[*]	.167[*]	.502[*]	.597[*]	.563[*]	.546[*]	1	.541[*]
Depression	.338[*]	.350[*]	-.044[*]	.317[*]	.493[*]	.619[*]	.556[*]	.556[*]	.541[*]	1

Table 3

Dependent Variable	B	Beta	Std. Err.	t-Value	*p*
Loneliness					
Overt	0.53	0.21	0.06	9.27	.000
Relational	0.37	0.15	0.06	6.62	.000
Separation Anxiety					.000
Overt	0.31	0.14	0.05	5.82	.000
Relational	0.40	0.18	0.05	7.64	.000
Panic Disorder					.000
Overt	0.45	0.18	0.06	7.82	.000
Relational	0.54	0.22	0.06	9.57	.000
Generalized Anxiety					.000
Overt	0.32	0.13	0.06	5.53	.000
Relational	0.61	0.24	0.06	10.66	.000
Social Phobia					.000
Overt	0.34	0.14	0.06	6.11	.000
Relational	0.58	0.24	0.05	10.66	.000
OCD					.000
Overt	0.34	0.14	0.06	6.00	.000
Relational	0.53	0.22	0.06	9.58	.000
Depression					.000
Overt	0.47	0.19	0.06	8.22	.000
Relational	0.56	0.22	0.06	9.91	.000

CHAPTER IV

DISCUSSION

The results suggest that both overt and relational forms of peer victimization are associated with a range of emotional disorders among elementary school aged children. Consistent with findings from previous work, both forms of victimization predicted social anxiety, depression and loneliness with moderate effect sizes. While the correlational design of the study prohibits conclusions regarding the direction of causality, previous longitudinal and prospective studies examining the temporal relationships between victimization and social anxiety, depression, and loneliness suggest that distress and victimization have a bi-directional influence over time, with victimization being a somewhat stronger predictor of future distress than the opposite path (Reijntjes et al 2010). It has been suggested that negative interactions within the peer environment may lead to heightened anxiety and arousal with the peer group as well as negative self-evaluations and low-self efficacy in achieving goals, resulting in feelings of loneliness and depression. It has also been suggested that behaviors associated with social anxiety and depression, such as social withdrawal and passivity, may increase susceptibility to peer aggression over time.

Previous studies have focused on social anxiety, depression, and loneliness as dependent variables of interest because they are thought to be the most intuitively connected outcomes of peer victimization. It was hypothesized that victimization scores would also predict Separation Anxiety, Panic, GAD, and OCD. Although it was expected that the effect sizes would

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be smaller for these variables, results showed that each of these anxiety variables were predicted by both forms of victimization with moderate effect sizes. Storch et al (2006) found that peer victimization was related to OCD symptom severity within a sample of youth diagnosed with OCD, and that youth with OCD reported more peer victimization than controls. However, our work is the first study examining the relationship between multiple anxiety disorders and peer victimization among a non-clinical sample of children. There are several possible explanations for the current findings.

Peer victimization may directly contribute to the development and maintenance of the measured anxiety symptom clusters. Behavioral inhibition and avoidance are common to all anxiety disorders, and high levels of negative affect and low positive affect has been shown to be an underlying factor common to depression, GAD, OCD, social anxiety, and panic disorder (Brown, Chorpita, and Barlow, 1998). Being victimized or ostracized by peers could lead to general negative affect that manifests in a range of depressive or anxious symptoms. Scott, Smith, and Ellis (2010) found that a documented childhood history of maltreatment by caregivers was associated with an increased risk of a range of mental health problems in young adulthood; they found that the associations were strongest for some anxiety and depressive disorders including PTSD, OCD, social anxiety, and dysthymia. Other studies examining associations between adverse events in childhood and psychopathology in adulthood have shown that there is little specificity between adversities and their connections with specific mental disorders (Kessler, Davis, & Kendler, 1997; Green et al, 2010). The current pattern of findings is consistent with investigations and theories suggesting that emotional disorders may be more similar than dissimilar to one-another (Ellard, Fairholme, Boisseau, Farchione, & Barlow, 2010).

It may be that the range of symptoms resulting from peer victimization is much broader than previously thought.

Another explanation for the current findings is that children struggling with emotional disorders may be easy targets for aggressive children. While most children report at least occasional victimization, children with temperamental tendencies toward inhibition may be less assertive with other children, thereby increasing the probability that they will experience repeated victimization from the same aggressors. Spence et al (1999) and others have shown that children with social anxiety disorder are less assertive than non-anxious children but assertiveness in children with other anxiety disorders has not been studied. Children with high levels of negative affect and inhibition may also be poor play partners and thus more likely than other children to be excluded or rejected. Finally, peer victimization may interact with internalizing symptoms to maintain and exacerbate one another over time; again, this pattern has been found in longitudinal research examining social anxiety, depression, and loneliness, but other anxiety disorders have not been included in these studies. Future research in this area should focus on determining causal directions in these relationships.

Consistent with prior studies conducted within suburban and urban areas, boys reported significantly more overt victimization and less prosocial support than did girls, while there were no differences found in relational victimization (Storch Nock, Masia-Warner, & Barlas, 2003, Prinstein et al 2001). However, no differences in either Overt or Relational victimization were found among ethnic groups. The few previous studies examining ethnic differences in victimization have provided mixed results. Seals and Young (2003) found no ethnic differences in victimization among a rural sample of African American and Caucasian middle school children, while others have found differences between the groups in urban

samples (Sawyer et al, 2008). It is possible that ethnic differences exist within urban and suburban areas but not within rural regions.

Caucasian children reported significantly more prosocial support from peers than African Americans and children of other ethnic groups. This suggests that Caucasian children perceived more positive support from their peers within the school environment. Children as young as elementary-school-age tend to prefer play partners who are similar to themselves in gender, ethnicity, and other respects. Thus, ethnic minority children may have fewer possibilities to choose from for play mates and may not receive as many positive interactions from peers of the ethnic majority. Future studies should examine ethnic differences in social support within the school environment, particularly as a function of minority status within the school.

Previous studies have shown that victimization appears to decrease between middle school and high school, but studies examining the trajectory of victimization across the elementary school years are lacking (Nansel et al, 2001). We hypothesized that children in lower grades would report significantly more overt victimization than children in higher grades, while children in higher grades would report greater levels of relational victimization. Our findings partially supported these hypotheses; both second and third graders reported significantly more overt victimization than fourth graders and fifth graders, and third graders reported significantly more relational victimization than second graders. Olweus (1991) suggested that children are most likely to be physically victimized by children who are the same-age or older, so older children may be less likely than younger children to be victimized because there are fewer potential aggressors. Although the cross-sectional design only permits comparison of different cohorts, another possible explanation for our findings is that as children grow older they reduce

overt physical and verbal aggression as these methods of victimization are easily seen by adult authority figures.

In contrast, third graders reported significantly more relational victimization than the second graders, but no other significant differences in relational victimization were found between grade levels. Third graders also reported significantly more Prosocial support from peers than children in grades two, four or five, while no differences were found between any of the other cohorts. This pattern of results suggests that children may begin to perceive more prosocial behavior and support from peers around the same time that they perceive an increase in rejection from peer groups, suggesting a possible developmental shift in the nature of peer relationships occurring around the third grade. However, it should be noted that effects sizes were modest and actual differences between groups were relatively small. The results may also simply reflect a sampling bias for the third grade cohort Longitudinal studies are needed to compare these forms of aggression and victimization over time to determine whether meaningful developmental differences exist in children's peer relationships.

Contrary to predictions and findings from previous studies, gender was not a significant moderator for any of the victimization-distress relationships. Storch et al (2003) found that relational aggression was associated with some social anxiety symptoms and depression for girls but not boys among an ethnic minority sample. Others have shown differing trajectories in symptom increases related to peer victimization over time for adolescent boys and girls (Siegal, et al 2009; Sweeting et al, 2006). It may be that gender differences in the relationship between victimization and distress do not emerge until after the elementary school years, or that gender differences may be greater among urban and suburban populations.

We expected the relationships between victimization and internalizing symptoms to be stronger for African American children than for Caucasians given the greater risk for other traumatic life events and psychosocial stressors generally seen in minority groups. However, for this sample, associations between peer victimization and all emotional disorders were not affected by ethnicity. Although others have examined these relationships among ethnic minority samples (Storch et al., 2003; Siegal et al., 2009), this was the first study to specifically compare these relationships between African Americans and Caucasians. Others have suggested that higher rates of violence and ethnic differences in poverty levels seen in suburban and urban areas place African American children at greater risk for violence and exclusion at school; therefore, these results may not extend to urban populations and should be explored further in those settings.

Our hypothesis that prosocial support would attenuate victimization- distress relationships was partially supported. Prosocial support moderated the relationship between overt victimization and loneliness, but not did not influence the relationship between relational victimization and any of the distress variables. Erath et al (2010) found that among middle school students, having close friends buffered the relationships between victimization and both loneliness and social anxiety, while Storch et al (2003) found that prosocial support from peers moderated the relationships between both overt and relational victimization and loneliness but not social anxiety among high school students. It may be that some of the inconsistencies in these findings may be accounted for by the age of the children in the samples. For our sample, Prosocial Support moderated the relationships between Overt Victimization and OCD symptoms and Social Anxiety for children in higher grades but not lower grades. These results suggest that there may be developmental differences in the expression of distress related to adversity. As

children get older, peers relationships begin to take on greater importance and children spend increasingly more time with peers and away from caregivers. This is further supported by our findings that loneliness was more strongly associated with overt victimization for children in higher grades than in lower grades, and that relational victimization was more strongly related to GAD symptoms for children in higher grades.

Although preliminary, our findings suggest that both overt and relational forms of peer victimization are associated with a range of symptoms of emotional disorders, and that these relationships are fairly consistent across gender and ethnicity for our young rural sample of children. A limitation of the present study is that the correlational nature of the design prohibits conclusions as to the direction of the causality in these relationships, particularly relationship between victimization and OCD, GAD, Panic, and Separation Anxiety. Longitudinal and prospective designs would be beneficial in understanding the directional nature of these relationships. Another limitation of the present study is that we were unable to examine minority status within the school context as a possible variable influencing victimization rates and victimization distress relationships. This variable should be examined more fully in future studies. Finally, although we found preliminary evidence suggesting developmental differences in forms of peer victimization and in the expression of distress related to victimization further longitudinal studies are needed to examine changes over time within the same cohort to rule out the possibility that our results reflect cohort effects and to explore causal directions in the observed differences in symptomology.

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Research Experience

Intern, Connecting Cultures, University of Vermont Clinical Psychology Internship Program, August 1, 2013- present
Duties include assisting with clinical data collection, designing research studies, coordinating research assistants, data collection, data coding and analysis, and manuscript preparation with a population of child and adolescent refugees.
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Teaching Experience

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Publications and Manuscripts

Hamblin, R.J. & Gross, A.M. (2013). Religious faith, homosexuality, and psychological well-being: A theoretical and empirical review. *Journal of Gay and Lesbian Mental Health.* doi:10.1080/19359705.2013.804898

Hamblin, R.J. & Gross, A.M. (2011). Attention-Deficit/Hyperactivity Disorders. In Sturmey, P. & Hersen, M. (Eds.). Handbook of Evidence-Based Practice in Clinical Psychology. Hoboken, NJ: Wiley.

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Johnson-Pynn, J. S., Johnson, L. R., Sweeney, S., **Hamblin, R.J**., & Anglin, A. (2010). The power of youth is global: Researching an international youth program. *Advances in Service Learning Research Proceedings from the International Association of Research in Service Learning and Civic Engagement.*

Hamblin, R. J. & Gross, A.M. (In Press). Empirically informed pediatric clinical care: Effective interventions and where to find them. [Review of the book Treatments That Work With Children: Empirically Supported Strategies For Managing Childhood Problems (2nd Ed.)
By E. R. Christophersen & S. Mortweet Vanscoyoc].

Hamblin, R.J., Gross, A.M., & Young, J.N. (under review). Peer Victimization and Anxiety Disorders among Elementary School Children in the Rural South.

Hamblin, R.J., Gross, A.M., & Young, J.N. (under review). Peer Relationships, Loneliness, and Internalizing Symptoms: A Moderated Mediation Model.

Hamblin, R. J., Johnson, C.N., Luchkiw, T.K., and Young, J.N. (In Preparation). Teacher perceptions of mental health in public schools.

Presentations and Workshops

Hamblin, R. J., & Kellum, K. K. (2013, May). Building stronger relationships through stronger repertoires: Perspective taking and verbal competence in children. In Carreker (chair) Beyond the Racing Horses: Components and Processes of Contextual Behavioral

Interventions. Symposium to be presented at the 39th annual meeting of the Association for Behavioral Analysis International, Minneapolis, MN.

Hamblin, R. J., Drescher, C.F., Stewart, R.W, & Young, J.N. (2012). Peer victimization in elementary school children: associations with internalizing symptoms. Poster presented at the meeting of the Association for the Advancement of Behavioral
and   Cognitive Therapies Annual Conference, Maryland, November 2012.

Hamblin, R. J., & Young, J.N. (2012). Peer victimization, social support, and emotional adjustment in African American and Caucasian children. Poster presented at the meeting of the Association for the Advancement of Behavioral and Cognitive Therapies Annual Conference Maryland, November 2012.

Hamblin, R. J., & Young, J.N. (2012). Grade and gender differences in overt and relational victimization in elementary school children. Poster presented at the meeting of the Association for the Advancement of Behavioral and Cognitive Therapies Annual Conference Maryland, November 2012.

Hamblin, R. J., & Gross, A.M. (2012). Religious attendance and faith conflict in the prediction of psychological distress among gay men and lesbians. Poster to be presented at the Association for the Advancement of Behavioral and Cognitive Therapies Annual Conference, Maryland, November 2012.

Stewart, R.W., Drescher, C.F., **Hamblin, R. J.,** & Young, J.N. (2012). The role of ethnic composition in peer victimization. Poster presented at the meeting of the Association for the Advancement of Behavioral and Cognitive Therapies Annual Conference, Maryland, November 2012.

Hamblin, R. J., Boerger, E.A., Kellum, K.K., and Wilson, K.G. (2012, July). Perspective
Taking   and Social Competence in Children. In D. Carnathan (chair) *It takes a village: Children in their social world.* Symposium presented at the annual meeting of the Association for Contextual and Behavioral Sciences World Conference X, Washington, DC.

Hamblin, R.J., Gross, A.M., Wilson, K.G., & Kellum, K.K. (2012, July). Social Problems in Socially Anxious Children: Skill Deficit or Avoidant Behavior? In D. Carnathan (chair) *It takes a village: Children in their social world.* Symposium presented at
the   meeting of the Association for Contextual and Behavioral Sciences World Conference X, Washington, DC.

Hamblin, R.J. (2011, December). Understanding children with ADHD and helping them thrive. Invited workshop. Water Valley, MS.

Hamblin, R. J., Johnson, C.N., Slater, R. M., and Young, J.N. (2010, May). Teacher perceptions

of appropriate mental health practice. In J.N. Young (chair) *Behavioral principles applied to system issues: The role of good science in building good relationships.* Symposium presented at the meeting of the Association for Behavior Analysis International, San Antonio, TX.

Johnson, L.R. & **Hamblin, R.J.** (2007). Re-entry adjustment following the study abroad program. Invited workshop. University of Mississippi, University, MS.

Editorial Activities

2010 Guest Reviewer, Clinical Case Studies
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Clinical Experience

Connecting Cultures, Behavior Therapy and Psychotherapy Center, Burlington, *Clinical Psychology Intern*
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Duties include providing assessment, individual, group, and family therapy with child and adult immigrants, refugees, and torture survivors originating from over twelve countries.
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Vermont Center for Children, Youth, and Families, UVM College of Medicine, *Clinical Psychology Intern*
August 1, 2013-present
Duties include providing assessment, individual and family therapy, and behavioral parent training for children and adolescents with externalizing behavior problems, anxiety and mood disorders, ADHD, and Autism Spectrum Disorders as part of a multidisciplinary team in a medical setting.
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Institute of Community Services*,* MS *Mental Health Consultant*
Fall 2009 – Spring 2013
Duties include consulting with teachers and staff in Head Start preschools in several rural counties in MS concerning classroom management strategies and effective interventions for preschool children with behavioral difficulties and special needs.
Supervised by Alan M. Gross, Ph.D.

 Psychological Services Center, University of Mississippi, *Therapist*
Fall 2008 – Spring 2013
Duties include screenings, intakes, and individual psychotherapy for University of Mississippi

students, faculty, and staff, and community members.
Supervised by: Laura Johnson, Ph.D., John Young, Ph.D., Scott Gustafson, Ph.D., Alan Gross, Ph.D., and Kelly Wilson, Ph.D.

Baptist Children's Village, Water Valley, MS, *Therapist and Behavior Consultant*
September 2011– June 2012
Duties included conducting individual psychotherapy and implementing behavioral programming for residents of a children's home.
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Communicare Community Mental Health Center, Oxford, MS, *Therapist*
September 2010 – June 2011
Duties included conducting screenings, intakes, individual psychotherapy with adults, adolescents, and children, family psychotherapy, pre-evaluations for involuntary commitments, and writing treatment plans in a community mental health setting.
Supervised by Dixie Church, M.A.

Oxford School District, Oxford, MS, *Behavioral Health Specialist*
August 2009 – Summer 2010
Duties included writing individual behavior plans, evaluating and modifying token economy systems, conducting individual and group therapy, conducting psychological assessments, and training staff on behavior principles and procedures.
Supervised by John Young, Ph.D.

Desoto County School District, Olive Branch, MS, *Behavior Specialist*
July 2008 – July 2009
Duties included writing individual behavior plans, evaluating and modifying token economy systems, and consulting with teachers on individual behavior plans and implementation.
Supervised by Sheila Williamson, Ph.D.

The Gathering Place, Houston, TX, *Program Coordinator*
February 2007- June 2007
Duties included supervising and coordinating seriously mentally ill members of a clubhouse program in running the clubhouse store and clerical unit, teaching technological skills and job skills, and facilitating social skills and social interactions among members.
Supervised by Peggy Roe, Ph.D.

The Menninger Clinic, Houston, TX, *Mental Health Counselor*
June 2006- June 2007
 Duties included assisting with nursing care of patients in a psychiatric hospital, including helping patients through daily activities, facilitating healthy interactions, and developing a safe and therapeutic community.
Supervised by Peggy Johnson, R.N.