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Adult Recollections of Peer Victimization during Middle School: Forms and Consequences

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Abstract

This study examined memories of peer victimization by eliciting narratives from university students ($N = 210$) about one previous experience of peer maltreatment during middle school, and investigating how these recollections related to current levels of adjustment. The majority of participants described an experience of social victimization (70.0%) or physical victimization (16.7%), and analyses examining form of victimization were limited to these participants ($n = 182$). Previous experiences of peer maltreatment during middle school were associated with negative indices of adjustment in early adulthood. The implications of our findings for school intervention programs are discussed.

Although the immediate consequences of victimization are well documented, additional work is needed to examine how recollections of peer maltreatment during the school years are associated with indices of adjustment in adulthood (Roth et al., 2002; Schafer et al., 2004). Understanding these associations is of great public health importance as it has the potential to demonstrate the need for interventions and research addressing school bullying. Past research has largely relied on retrospective reports on structured questionnaires to assess the frequency of experiencing specific types of peer maltreatment (e.g., appearance-related teasing, Faith, Storch, Roberti, & Ledley, 2008). Even though this research provides important information, victims may go undetected if their experiences are not reflected in the questionnaires used. The current study builds on this past research by eliciting narratives from university students about one previous experience of peer maltreatment during middle school, and examining how their recollections of this event relate to current levels of adjustment.

Peer victimization has been defined as repeated exposure to peer maltreatment (Olweus, 1995). Although some children emerge as victims as early as the preschool years (Crick, Casas, & Ku, 1999), the prevalence of peer maltreatment is thought to be highest around age 12 and to decrease in later adolescence (Kaufman et al., 2000; Nansel et al., 2001; Teicher, Samson, Sheu, Polcari, & McGreenery, 2010). Further, research examining age of exposure suggests that experiences of peer victimization during middle school may have the most detrimental effects; reported peer verbal abuse at ages 11 through 14 was most predictive of maladjustment in young adulthood and corpus callosum abnormalities (Teicher et al., 2010).

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Thus, the current study examined recollections of peer victimization during the middle school years.

Peer maltreatment takes many different forms including being the victim of physical aggression, property damage, and social aggression (Mynard & Joseph, 2000; Underwood, 2003). Physical aggression refers to behaviors intended to inflict physical harm. Property damage is behavior aimed at destroying another's possessions. Social aggression refers to behaviors intended to harm another's social status or relationships and includes social exclusion, malicious gossip, and friendship manipulation (Galen & Underwood, 1997; Paquette & Underwood, 1999). These different forms of aggression are similar in that the aggressor intends to harm the victim, and the victim perceives the action as hurtful (Underwood, 2003).

Peer Victimization and Adjustment

Children and adolescents who are subject to peer maltreatment are at risk for a number of concurrent adjustment problems (Storch & Ledley, 2005). Peer victimization is concomitantly associated with feelings of loneliness, social anxiety (Storch, Brassard, & Maia-Warner, 2003; Storch & Masia-Warner, 2004), and low self-esteem (Paquette & Underwood, 1999; Prinstein, Boergers, & Vernberg, 2001). Victimized youth may be especially likely to suffer from depression (Brunstein Klomek, Marrocco, Kleinman, Schonfeld, & Gould, 2007; Hawker & Boulton, 2000; Prinstein et al., 2001).

In addition to internalizing problems, peer victimization is associated with externalizing problems and school difficulties (Eisenberg & Aalsma, 2005). Adolescents' self-reports suggest that victimization is linked to greater aggressive behavior, delinquent conduct, and substance use (Sullivan, Farrell, & Kliewer, 2006). Negative correlates of victimization also include indicators of school adjustment including school liking, grade point average, and standardized test scores (Kochenderfer & Ladd, 1996; Schwartz, Gorman, Nakamoto, & Toblin, 2005).

There may even be physical costs associated with experiencing peer victimization (Rigby, 2003). Victimization can be an extremely stressful experience, which may suppress the immune system and lead to illness (Nishina, Juvonen, & Witkow, 2005; Rigby, 1999, 2003; Williams, Chambers, Logan, & Robinson, 1996). Experiencing peer maltreatment, especially weight-related teasing, may also increase an individual's risk for disordered eating (Eisenberg & Neumark-Sztainer, 2008; Libbey, Story, Neumark-Sztainer, & Boutelle, 2008).

Cross-sectional research has examined sex differences in the prevalence and effects of peer victimization. Boys report experiencing more physical victimization and attacks on property than do girls, but there are not consistent sex differences in the frequency of social victimization (Craig, 1998; Crick & Grotpeter, 1996; Mynard & Joseph, 2000; Paquette & Underwood, 1999; Prinstein et al., 2001; Sullivan et al., 2006). Although both genders seem to suffer when faced with victimization (Crick & Grotpeter, 1996; Nishina et al., 2005), girls may be especially distressed by peer maltreatment, given the close, intimate nature of female friendships (Lagerspetz, Bjorkqvist, & Peltonen, 1988; Maccoby, 1988).

Retrospective Recollections of Peer Victimization

Although the immediate costs of peer victimization are well-known, less research has examined how adults' recollections of previous instances of peer maltreatment relate to current indices of adjustment. Retrospective designs have been the most frequently used method with which to examine the long-term correlates of peer victimization (Miller &

Vaillancourt, 2007; Schafer, 1999). Some have questioned the reliability and validity of retrospective reports suggesting that autobiographical memory may be flawed, and that psychopathology in particular may be associated with less reliable and valid recall as a result of mood-congruent memory processes (Burbach & Borduin, 1986; Halverson, 1988; Hardt & Rutter, 2004; McFarland & Buehler, 1998). However, others have argued that psychiatric status does not influence recall, and that retrospective reports are reliable and valid (Brewin, Andrews, & Gotlib, 1993).

Experiences of peer maltreatment may be particularly salient and easily remembered given that they are unique and often unexpected, emotion-provoking episodes that are of great personal consequence to the victim (Berscheid, 1994; Brewin et al., 1993). Adults most commonly recall experiencing peer maltreatment between the ages of 11 and 13, and there do not appear to be differences between the recollections of traditional university students and mature students who have returned to school (Eslea & Rees, 2001). The consistency of retrospective reports of peer maltreatment has been demonstrated in studies that have assessed victimization status at multiple points (Olweus, 1993; Rivers, 2001). Regardless of their accuracy, retrospective reports provide important information because they “may reflect the meaning of those events to the individual” (Berscheid, 1994, p. 93). Miller and Vaillancourt (2007) further argue that “if their perception of past victimization is so salient to them now, these perceptions are ‘what matter most’ with respect to their current level of functioning” (p. 238). Thus, there have been a growing number of retrospective studies on the long-term costs of peer victimization.

Many of these retrospective studies have specifically focused on the effects of teasing (Storch & Ledley, 2005). Recollections of teasing during childhood predict depression, social anxiety, and loneliness in adulthood (Faith et al., 2008; Gibb, Benas, Crossett, & Uhrlass, 2007; Roth et al., 2002). Teasing is also associated with disordered eating and body dissatisfaction; adults with eating disturbances recall having experienced more weight-related teasing in school and a greater emotional impact of that teasing (Cash, 1995; Thompson, 1991; Thompson, Herbozo, Himes, & Yamamiya, 2005; Thompson & Psaltis, 1988).

However, some retrospective investigations of bullying have extended beyond the effects of teasing. Recollections of social victimization during high school predict depressive symptomology and social anxiety in college for both men and women (Dempsey & Storch, 2008). Additional research has examined recollections of nonspecified forms of bullying. Adults who reported being victimized in school demonstrated poorer psychological adjustment and physical health (Allison, Roeger, & Reinfeld-Kirkman, 2009). Former victims had lower self-esteem, greater depressive tendencies, and were more likely to engage in acting-out behaviors such as breaking things (Gladstone et al., 2006; Lund et al., 2009; Schafer et al., 2004). As adults, former school victims were also more likely to experience relationship problems such as difficulties trusting partners (Schafer et al., 2004). Likewise, there appeared to be some continuity in experiences of victimization; those who recalled being bullied in school were more likely to be bullied in the workplace (Smith, Singer, Hoel, & Cooper, 2003).

Current Study

Previous research has relied on retrospective reports of experiencing specific types of peer maltreatment (e.g., participants indicate whether or not others teased them because they were not good at sports, Faith et al., 2008) or simply participants’ appraisals of whether or not they experienced severe bullying at school (e.g., Allison et al., 2009). Victims may go unrecognized if their experiences are not reflected in the questionnaire items used or if they

do not perceive themselves to have experienced traumatic bullying. The current study builds on this past research by eliciting narratives from college students about one previous experience of peer maltreatment during middle school.

Further, little research has examined the emotional impact of earlier peer victimization on later adjustment. Retrospective research on teasing suggests that how distressing one found the name-calling is most predictive of current adjustment (Crozier & Skliopidou, 2002; Thompson & Psaltis, 1988). Thus, we also assessed affect and cognitions associated with recollections of peer maltreatment.

The current study was guided by four main research questions. First, we examined which forms of school victimization were most likely to be recalled by men and women. We expected that both males and females would be more likely to recall episodes of social victimization than physical victimization and property damage, which is consistent with youth reports of current victimization experiences (Mynard & Joseph, 2000). We also hypothesized that men would be more likely than women to recall physical victimization, which is consistent with adolescents' reports of specific incidents of victimization (Paquette & Underwood, 1999).

Second, we examined whether characteristics of the event (i.e., sex of perpetrator and group vs. individual perpetration) were related to thoughts and feelings about the memory for the victimization experience. We hypothesized that cross-sex bullying would be particularly troublesome (Felix & McMahon, 2006; O'Brien, 2011). Further, we hypothesized that group perpetration may be more distressing than individual perpetration because peers may encourage each other's negative conduct and add to feelings of embarrassment and isolation experienced by the victim (Karna, Voeten, Poskiparta, & Salmivalli, 2010).

Third, we examined sex differences in the emotional impact of and cognitions associated with different forms of victimization. We hypothesized that both males and females would be bothered by physical victimization and property attacks. However, we expected that women would be more troubled than men by experiences of social victimization given the close, intimate nature of female friendships (Lagerspetz et al., 1988; Maccoby, 1988) and greater interpersonal vulnerability to depression (Crick et al., 2002; Leadbeater et al., 1995).

Last, we examined how feelings and thoughts about previous incidents of victimization related to current levels of adjustment. We hypothesized that adults who were most bothered by and thought more frequently of prior experiences of peer maltreatment would display higher levels of social anxiety, depression, and eating disturbance, and lower levels of self-esteem. We also examined whether affective reactions to victimization were more predictive of adjustment than was the frequency of peer maltreatment. Based on prior research, (Thompson & Psaltis, 1988), we expected that affective reactions to victimization would predict adjustment above and beyond the frequency of occurrence.

This study focuses on emerging adulthood, the developmental period that spans ages 18 to 29 (Tanner, Arnett, & Leis, 2009). Emerging adulthood has been characterized as "a time of exploring, of believing that many possibilities and opportunities are available in life, or feeling in between adolescence and full-fledged adulthood, and making the transition to assuming greater responsibility for oneself" (Reifman, 2011, p. 15). Past experiences of peer victimization may relate to how successfully individuals transition to adulthood, and emerging adulthood is also a high-risk period for mental health problems (Tanner et al., 2009).

The current study is important from an applied developmental perspective because findings have the potential to guide prevention and intervention programs. Efforts to prevent

aggression have largely focused on physical aggression, and examining recollections of different types of victimization experiences may highlight the importance of developing programs to prevent different forms of peer maltreatment including social and verbal aggression. Further, examining associations between earlier peer victimization experiences and later functioning may help counselors recognize how past painful experiences may relate to current relationship problems.

Method

Participants

Participants included 210 (155 female) undergraduate students ages 18–29 ($M = 21.99$ years, $SD = 2.64$) years at a public university in the southern United States. The ethnic composition of the sample was 64% European American, 18% Asian-American, 8% Hispanic, 3% African-American, and 7% other, and this is representative of the university community.

Participants were excluded from analyses if they did not provide a victimization experience response or provided a response that could not be coded. The majority of participants provided a codable response ($n = 186$, 136 females, $M = 21.97$ years, $SD = 2.65$ years). The ethnic composition of those with a coded victimization experience was 64% European American, 18% Asian-American, 8% Hispanic, 4% African-American, and 6% other. Further, only four participants described an experience that was not classified as either social victimization or physical victimization, and these participants were excluded from those analyses examining form of victimization.

Procedures

Participants completed a series of questionnaires online via a secure webpage. Questionnaires included a retrospective measure of victimization experiences, assessed via an open-ended item in which participants described an experience during middle school when a peer or group of peers had mistreated them. In addition, current levels of social anxiety, depression, disordered eating, and self-liking/self-competence were assessed. Participants were recruited from psychology courses and received research participation credits in exchange for their participation.

Measures

Recollections of victimization—Participants completed a modified version of the Childhood Personal Experience Questionnaire (Paquette & Underwood, 1999). Participants were asked to recall a specific experience of peer maltreatment from middle or junior high school. The specific prompt instructed participants to: “Now think back to when you were in middle or junior high school. Remember a time that another kid, or group of kids, did something that really hurt you.” Participants were asked “what happened?”, and were instructed to answer the open-ended question as completely as they could, using all available space if necessary. Participants were also asked to provide particular details about the event including whether the aggressor(s) was (were) one person or a group and if the aggressor(s) was (were) male or female. Following Paquette and Underwood (1999), participants described single experiences of peer victimization in order to provide the opportunity to elicit more detailed accounts. Our approach is also consistent with that of Matsui, Kakuyama, Tsuzuki, and Onglatco (1996) who examined long-term consequences of earlier victimization by asking undergraduates to recall the most salient episode of peer victimization from their youth.

Participant's narratives were coded and episodes of victimization were categorized as social victimization (e.g., a group of girls came up to me and were teasing me about my hairstyle and clothes, some girls started rumors about me), physical victimization (e.g., a sixth grader kicked me in the mouth), and property damage (e.g., during Gym class they took my backpack and clothes and got them wet). All narratives were coded by a trained undergraduate research assistant. We randomly selected a subset of participants' narratives to be double-coded to assess reliability, as commonly done in studies of peer relations (e.g., Dishion, Nelson, Winter, Bullock, 2004; Leman et al., 2011; Paquette & Underwood, 1999). Twenty percent of narratives were double-coded by a second trained research assistant for reliability analysis. The Kappa coefficient for coding the type of victimization narratives was .81. The reliability coder agreed with the primary coder on 87.5% of the instances of physical aggression, 91.7% of the instances of social victimization, and 100% of the instances of property damage.

In addition to the open-ended item, follow-up Likert scale items assessed participants' feelings and thoughts following the experience they described. Feeling items included how sad, mad, surprised, and bad the participant felt on a 5-point scale. Thought items included how much the participant thought about the event, why it had happened, how to get revenge, how to befriend the peer(s), if they deserved to be victimized, and whether or not the behavior was wrong, all on a 5-point scale. Participants also indicated how frequently they experienced the sort of incident they had described as a child by selecting one of the following options: Once a year (or less), 2 to 3 times a year, once a month, 2 to 3 times a month, once a week, or 2 to 3 times a week. Affect, thought, and frequency questions were phrased in the past tense and no specific time frame was provided (e.g., "How sad did it make you feel?", "After the event, did you think about what happened?", and "How often did something like this happen to you as a child?").

Social Anxiety—Participant's anxiety over the previous 12 months was measured using items from the Jesness Inventory of Adolescent Personality as reprinted in Mezzacappa et al. (1997). This measure includes 21 items that assess social anxiety (e.g., "I worry too much about whether I am doing the right thing"; "I worry about what others think of me"). Participants are asked to indicate whether each item is "true" or "false" for them. Self-reported anxiety scores on this measure have been found to relate to heart rate in a predictable fashion (Mezzacappa et al., 1997). For the current study, the scale was reliable, Cronbach's $\alpha = .79$.

Depression—Current depressive symptomatology was assessed using the Center for Epidemiologic Studies Depression Scale (CESD, Radloff, 1977). This measure includes 20 items that assess feelings and behaviors associated with depression from the past week (e.g., "I felt that I could not shake off the blues even with help from my family or friends"; "I had crying spells"). Participants respond on a 4-point Likert scale from 0 – Rarely or none of the time (Less than 1 day) to 3 – Most or all of the time (5–7 days). Concurrent validity of this measure has been established by comparison to other self-report measures of depression such as the Beck Depression Inventory – II as well as clinical ratings of depression (Radloff, 1997; Shean & Baldwin, 2008). The CESD was reliable for the current sample, Cronbach's $\alpha = .92$.

Disordered eating—Participants completed the Eating Attitudes Test (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982). This 26-item measure captures symptoms of disordered eating and includes subscales for dieting behavior, bulimia and food preoccupation, and oral control. Scores on the EAT distinguish between those with and without a DSM-IV eating disorder diagnosis (Mintz & O'Halloran, 2000). The overall score for the EAT-26 was used in the current study and was obtained by summing scores for all three subscales. Due to

procedural error, the EAT-26 was presented to participants with only a 5-point Likert scale for responses, rather than the 6-point scale in the original version. However, given that the two lowest points on the response scale are coded as “0” for scoring purposes in the original measure, the error in the response scale in the current study is unlikely to have significantly influenced participant’s scores. There was high internal reliability for the current sample, Cronbach’s $\alpha = .90$.

Self-liking/Self-competence—Participants completed the Self-Liking/Self-Competence Scale-Revised Version (SLCS-R; Tafarodi & Swann, 2001). This measure assesses two dimensions of global self-esteem, self-liking and self-competence, and includes 16 items total (8 items for self-liking and 8 items for self-competence). Sample items include “I am very comfortable with myself” for self-liking and “I am highly effective at the things I do” for self-competence. Respondents indicate how much they agree or disagree with each statement on a 5-point Likert scale. Tafarodi and Swann (2001) reported test-retest correlations of .75 and .78 for self-liking and self-competence respectively, and found that participants’ scores on this measure converged with their parents’ ratings of their self-views. For the current sample, alpha coefficients were .90 for self-liking and .80 for self-competence.

Results

Descriptive statistics are presented in Table 1. We first examined frequency of reporting specific types of victimization. We then examined feelings and thoughts associated with these experiences. Last, we examined how feelings and thoughts regarding these victimization experiences relate to indices of adjustment.

Frequency of Reporting Specific Types of Victimization

We coded participants’ narratives, and episodes were categorized as social victimization, physical victimization, and property damage. The majority of students (70.0%) described an experience of social victimization. Relatively few participants recalled an episode of physical victimization (16.7%) or property damage (1.9%). Only 11.4% of participants did not describe an event that could be classified, many writing that they did not experience such an event or could not remember.

There were no significant sex differences in the forms of victimization described, $\chi^2(1, N=182) = 1.40, p > .10$. Of females who provided a codable response other than property damage, 83% described an episode of social victimization and 17% described an episode of physical victimization. Similarly, of males who provided a codable response other than property damage, 75% described an episode of social victimization and 25% described an episode of physical victimization.

Characteristics of Victimization Experiences

We conducted a series of multivariate analyses of variance (MANOVA) to determine whether characteristics of the victimization experience (i.e., group vs. individual perpetration and sex of the perpetrator) influenced feelings and cognitions associated with the victimization experience. Eighty-five participants indicated that a group of individuals was involved in the incident and 95 participants indicated the perpetrator was a single individual. In terms of sex of the perpetrator(s), 76 participants indicated the perpetrator was (were) male, 86 indicated the perpetrator was (were) female, and 18 indicated that both males and females had been involved in the incident.

We first conducted a MANOVA with reported feelings following the episode (i.e., sadness, madness, surprise, and badness) as the dependent variables and considered perpetration by a single individual or group as the independent variable. There was no significant difference for perpetration by an individual as compared to a group.

We then conducted a MANOVA with reported thoughts following the episode as the dependent variables and considered perpetration by a single individual or group as the independent variable. Participants reported on whether they thought about: (1) what had happened, (2) why they had been victimized, (3) how to get back at the aggressor, (4) how to befriend the aggressor, (5) if they deserved the peer maltreatment, and (6) if what the aggressor had done was wrong. There was no significant difference for perpetration by an individual as compared to a group.

Further, we examined the effects of sex of the perpetrator. We conducted a MANOVA with reported feelings following the episode as the dependent variables and considered participant sex and sex of perpetrator (i.e., male, female, or both males and females) as the independent variables. The effect of sex of perpetrator, the effect of sex of participant, and the interaction between sex of perpetrator and participant sex were not significant.

We also conducted a MANOVA with reported thoughts following the episode as the dependent variables and participant sex and sex of perpetrator (i.e., male, female, mixed) as the independent variables. There was a significant participant sex by sex of perpetrator interaction, $F(12, 340) = 2.28, p < .05$, partial $\eta^2 = .07$. When the perpetrator was a male, female participants were more likely to think about the event, why it happened, and that what the aggressor had done was wrong ($M = 3.51, SD = 1.24$; $M = 2.95, SD = 1.40$; and $M = 4.65, SD = .69$, respectively) than were male participants ($M = 2.67, SD = 1.27$; $M = 2.09, SD = 1.07$; and $M = 4.12, SD = 1.24$, respectively). When the perpetrator was a female, male participants were more likely to think about why the event had happened ($M = 3.80, SD = 1.03$) than were female participants ($M = 2.96, SD = 1.25$), and males were less likely to think that the aggressor had done something wrong ($M = 3.60, SD = 1.27$) than were female participants ($M = 4.63, SD = .76$).

Feelings Associated with Victimization Experiences

To assess how feelings associated with experiences of victimization differed as a function of sex and type of peer maltreatment, we conducted a MANOVA with reported feelings following the episode (i.e., sadness, madness, surprise, and badness) as the dependent variables and sex and form of victimization as the independent variables. We limited our analyses to participants who reported social victimization or physical victimization given the extremely small number of respondents who described an experience of property damage ($n = 4$). The Wilks' Lambda multivariate test of overall sex differences was statistically significant, $F(4, 170) = 4.87, p < .01$, partial $\eta^2 = .10$. Univariate between-subjects tests indicated that females reported significantly greater feelings of sadness and badness following peer maltreatment ($M = 4.08, SD = 1.27$ and $M = 3.50, SD = 1.44$, respectively) than did males ($M = 2.96, SD = 1.56$ and $M = 2.70, SD = 1.46$, respectively). The Wilks' Lambda multivariate test of overall differences among forms of victimization was also significant, $F(4, 170) = 2.62, p < .05$, partial $\eta^2 = .06$. Univariate between subject tests indicated significant differences for victimization type for surprise. Participants reported significantly greater feelings of surprise following physical victimization ($M = 4.32, SD = .88$) as compared to social victimization ($M = 3.80, SD = 1.34$). The interaction between sex and form of victimization was not significant.

Cognitions Associated with Victimization Experiences

Similarly, in order to assess how cognitions associated with experiences of victimization differed as a function of sex and type of peer maltreatment, we conducted a MANOVA with reported thoughts following the episode as the dependent variables and sex and form of victimization as the independent variables. We again limited our analyses to participants who reported an experience of social victimization or physical victimization because of the very small number of students that described an episode of property damage. The Wilks' Lambda multivariate test of overall sex differences was statistically significant, $F(6, 169) = 3.51, p < .01$, partial $\eta^2 = .11$. Univariate between-subjects tests indicated that females were more likely to perceive the aggressors' actions to be wrong than were males ($M = 4.68, SD = .69$ and $M = 4.09, SD = 1.23$, respectively). There was not a significant effect for form of victimization, and the interaction between sex and victimization was also not significant.

The Relation between Victimization and Adjustment

Correlational analyses examined the relations between recollections of peer maltreatment and adjustment. We examined correlations separately for males and females (see Table 2).

Given that previous research has suggested that affective reactions to victimization are more predictive of adjustment than frequency of victimization (Thompson & Psaltis, 1988), we also conducted hierarchical multiple regression analyses with frequency of victimization and sex entered on the first step, affective reactions to the victimization experience entered on the second step, and sex by affective reaction interactions and sex by frequency interaction in the third step (see Table 3). Continuous variables were centered prior to the regression analyses.

Social Anxiety—A hierarchical multiple regression (see Table 3) was conducted to predict social anxiety as outlined above. Step 1 considered sex and frequency of occurrence. Males were less socially anxious than were females ($\beta = -.27, p < .01$). Further, the difference in R^2 , which was the result of adding the affective reactions in the second step, was significant. Feelings of badness surrounding peer maltreatment positively predicted social anxiety ($\beta = .28, p < .05$) and with the additional predictors in the model males were still less socially anxious than females ($\beta = -.20, p < .01$). The difference in R^2 , which was the result of adding the interactions with sex in the third step, was not significant.

Depression—Findings of the regression analysis predicting depression are presented in Table 3. The difference in R^2 , which was the result of adding the interactions with sex in the third step, was significant. Frequency of occurrence positively predicted depression for females ($\beta = .19, p < .05$) but not males.

Disordered Eating—Findings of the regression analysis predicting disordered eating are presented in Table 3. Males were less likely to suffer with disordered eating than were females ($\beta = -.27, p < .01$). Further, the difference in R^2 , which was the result of adding the affective reactions in the second step, was not significant. The difference in R^2 , which was the result of adding the interactions with sex in the third step, was also not significant.

Self Esteem—Findings of the regression analysis predicting self-liking are presented in Table 3. Frequency of occurrence of peer maltreatment was negatively related to self-liking ($\beta = -.27, p < .01$). The difference in R^2 , which was the result of adding the affective reactions in the second step, was not significant, and neither was the difference in R^2 , which was the result of adding the interactions with sex in the third step.

Findings of the regression analysis predicting self-competence are also presented in Table 3. The difference in R^2 , which was the result of adding the interactions with sex in the third step, was significant. In the final step, there was a significant main effect of frequency of occurrence ($\beta = -.23, p < .05$) such that a higher frequency of experiencing peer victimization was associated with lower self-competence. There was also a significant sex X sad interaction ($\beta = -.40, p < .01$). Feelings of sadness surrounding the event were negatively related to self-competence for males but not for females.

Discussion

The current study examined the forms of peer victimization that adults recalled experiencing during adolescence, and how these recollections related to current levels of adjustment. As we hypothesized, the vast majority of participants recalled an episode of social victimization (70.0%). This finding is consistent with research assessing victimization during adolescence; Mynard and Joseph (2000) found that youth between the ages of 11 and 16 years reported higher frequencies of social victimization than physical victimization and property damage.

Contrary to our expectations, we did not find sex differences in the types of victimization experiences reported. Past experiences of social aggression may be most salient to both men and women. Recent research suggests that social pain may be more easily re-experienced than physical pain, and that this effect holds for men and women (Chen & Williams, 2010). Further, findings of a recent meta-analysis suggest that the sex difference in perpetrating social aggression favoring girls, although significant, is so small as to be trivial (Card, Stucky, Sawalani, & Little, 2008), and thus boys and girls may be equally likely to be socially victimized by their peers.

However, we did find sex differences in our examination of affective reactions to and cognitions associated with peer maltreatment. Females reported greater feelings of sadness and badness following peer maltreatment than did males. In addition, women were more likely to perceive the aggressor's actions to be wrong. There were, however, no significant interactions between sex and form of victimization. That females were more bothered by all forms of peer maltreatment is consistent with the notions that girls have and value extremely close, intimate friendships (Lagerspetz et al., 1988; Maccoby, 1988) and display greater interpersonal vulnerability to depression (Crick et al., 2002; Leadbeater et al., 1995).

Recollections of peer victimization were related to myriad forms of maladjustment. Previous research has shown that children and adolescents who are victimized by their peers are at risk for a number of concurrent adjustment problems including social anxiety, depression, low self-esteem, and disordered eating (Brunstein Klomek et al., 2007; Eisenberg & Neumark-Sztainer, 2008; Hawker & Boulton, 2000; Paquette & Underwood, 1999; Prinstein et al., 2001; Storch et al., 2003; Sullivan et al., 2006). Furthermore, adults' recollections of earlier peer victimization have been shown to relate to depressive symptomatology and lower self-esteem in adulthood (Gladstone et al., 2006; Lund et al., 2009; Schafer et al., 2004). Consistent with this prior research, the current study demonstrates that for females, recollected frequency of experiencing peer victimization in middle school was associated with social anxiety, depression, and self-esteem in emerging adulthood.

We examined whether affective reactions to past victimization were more predictive of adjustment than was frequency with which victimization was experienced. Affective reactions (i.e., feelings of badness) to victimization predicted social anxiety. Similarly, for boys, affective reactions (i.e., feelings of sadness) to victimization predicted feelings of self-competence even controlling for the frequency of past victimization. As found in past research (e.g., Thompson & Psaltis, 1988), these results point to the importance of

considering both the frequency of peer maltreatment as well as the affective responses of victims.

Limitations and Strengths of the Present Study

All results must be interpreted in light of the methodological limitations of this study. First, we relied on retrospective reports to assess past experiences of victimization. Some have called into question the use of retrospective reports suggesting that factors such as current mood may bias recall (Hardt & Rutter, 2004; McFarland & Buehler, 1998). However, others suggest that retrospective reports provide a reliable and valid tool for assessing past experiences (Brewin et al., 1993). Peer victimization, in particular, may be easily remembered given that these episodes “satisfy many criteria for good recall; the events are emotion-provoking, consequential for well-being, and so far as victimization is concerned may have been unexpected” (Smith et al., 2003, p. 184). The accuracy of recollections about victimization is supported by research assessing peer maltreatment at multiple points in time (Olweus, 1993; Rivers, 2001). In addition, cognitive psychologists have noted that “people are quite good at remembering how often events occur” (Jonides, & Jones, 1992, p. 368; see also, Hock & Hasher, 1990). Furthermore, regardless of accuracy, retrospective reports convey how the victim views these experiences, which in turn is predictive of psychological adjustment (Graham & Juvonen, 1998; Miller & Vaillancourt, 2007). Miller and Vaillancourt (2007) assert:

That the frequency of the experiences are not what matter most, nor is the accuracy of the childhood victimization. Rather, we would argue, following Bronfenbrenner’s [1979] seminal paper on the *Ecology of Human Development* ‘that what matters for behavior and development is the environment as it is *perceived* rather than as it may exist in ‘objective’ reality’ (Miller & Vaillancourt, p. 238)

Thus, regardless of whether individuals over or under report past victimization, how they feel about those experiences matters greatly, and we assess feelings and thoughts surrounding peer maltreatment in the current study. Although we did not assess the accuracy of our measures of thoughts and feelings surrounding the event, our measures were similar to that used in past research (Nolen-Hoeksema & Morrow, 1991; Thompson & Psaltis, 1988).

Our measures were also limited in other important respects. As is common in retrospective studies of victimization (Dempsey & Storch, 2008), all assessments were self-reports, and thus results were limited by shared-method variance. Further, our measures are limited because no time frame was provided for participants in the assessment of their affect and cognition. Thus, we are unable to determine whether participants’ thoughts and feelings regarding the events changed over time. An additional limitation is that the modified version of the Childhood Personal Experience Questionnaire (Paquette & Underwood, 1999) used to assess recollections of victimization elicited detailed accounts of a specific incidence of peer maltreatment. Although we gauged the frequency with which such treatment was experienced, we did not provide participants the opportunity to describe multiple forms of victimization. Further, we did not have a separate code for verbal victimization and considered instances of teasing as socially aggressive as they embarrass the victim and degrade his or her social status. In addition, our coding was limited in that we did not separately code for sexual victimization; rather, we included these instances (e.g., unwanted touching) as physical victimization. Moreover, although we asked for many details about the event, we did not examine relationship with the perpetrator and whether the participant provoked the event, both of which could influence how the victims thought and felt about

the event. Future research is needed to examine multiple forms of victimization and the details surrounding them in relation to adjustment as assessed by different reporters.

Another limitation of our study is that we did not have an equal representation of men and women in our sample. Females have been overrepresented in other investigations of recalled victimization given their greater presence in psychology courses (e.g., Dempsey & Storch, 2008). These results, therefore, await replication with a more representative sample.

Further, our methodology does not permit us to determine whether a causal relationship exists between recollections of victimization and maladjustment. Although we believe that peer victimization predicts maladjustment, there are potential alternative explanations for our findings (Dempsey & Storch, 2008). One alternative interpretation of our findings may be that maladjusted adults are simply more likely to recall past experiences of victimization because current mood affects recall (Hardt & Rutter, 2004; McFarland & Buehler, 1998). A second alternative explanation is that adolescents predisposed to depression and other forms of psychopathology may be at a greater risk for victimization (Egan & Perry, 1998). Still, a third factor such as appearance may account for both victimization and maladjustment (Dempsey & Storch, 2008). Future longitudinal research is needed to further examine these relations.

Despite these limitations, this study has important strengths. Past research has largely relied on the use of structured questionnaires to assess the frequency with which specific forms of peer victimization were experienced in the past (e.g., teasing related to performance in sports, Faith et al., 2008), and victims may not be detected if their experiences are not reflected in the items used. We built upon this past research by eliciting narratives about one previous episode of peer victimization. In addition to assessing frequency with which these types of events were experienced, we examined feelings and thoughts associated with past peer maltreatment. Still another strength of this research is that we examined how recollections of peer victimization relate to multiple indices of maladjustment some of which are not commonly included in retrospective examinations of victimization.

Future research is needed to better understand the nature of the relation between recollections of peer victimization in adolescence and adjustment in adulthood. Research could identify factors that moderate the relation between previous experiences of maltreatment and current psychological functioning. Specifically, perceived social isolation and support may moderate the association between earlier victimization and later adjustment (Newman, Holden, & Delville, 2005). Future research could also examine how individuals' thoughts and feelings regarding the victimization experience change over time making it possible to determine whether feelings grow more intense (e.g., "I get angrier each time I think about it) or whether they were set at the time of the incident and remained as such (e.g., "I am still angry when I think about it"). Results from retrospective investigations such as the current study are also able to inform future prospective investigations (Dempsey & Storch, 2008; Miller & Vaillancourt, 2007; Schafer, 1999). The current findings help to justify the need for longitudinal research to examine how victimization in adolescence relates to adjustment in adulthood.

Implications for Interventions

The findings of the current study have significant implications for teachers, counselors, and other school officials at all levels of education from elementary school to college. That recollections of peer victimization during middle school were associated with maladjustment in adulthood highlights the importance of identifying and monitoring those students who are subject to peer maltreatment. Given that the majority of participants recalled experiencing a hurtful episode of social aggression, it is important that schools expand their focus beyond

physical aggression. As of yet, the focus has been on programs to prevent physical aggression, and we know little about how to effectively prevent social aggression (Capella & Weinstein, 2006). Further, many of the interventions designed to help chronically victimized youth draw on social skills training, and although this behavioral approach may be effective to a certain extent, the current findings documenting affective and cognitive responses to peer maltreatment further support the need to develop multi-dimensional interventions that also contain cognitive and emotional components (Rosen, Milich, & Harris, 2007).

Moreover, the current findings may be of great import to college counseling centers and other mental health professionals as they suggest that it is critical for clinicians working with adults to consider the effects of earlier peer experiences. Clinicians may find it beneficial to discuss current peer relations as well as social experiences that occurred at much earlier points in development.

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Highlights

- Most young adults recalled a middle school memory of social/verbal victimization.
- Memories of adolescent peer victimization were related to myriad forms of adult maladjustment.
- Both frequency of victimization and affective responses predicted maladjustment.

Table 1

Descriptive Statistics

	<u>Males</u>		<u>Females</u>	
	Mean	SD	Mean	SD
Feeling Elicited				
Sad *	2.94	1.53	4.10	1.26
Mad	3.71	1.14	3.93	1.22
Surprised	3.61	1.44	3.99	1.21
Bad *	2.74	1.41	3.48	1.42
Thoughts About The Event Did you think about....				
What Happened	3.06	1.32	3.34	1.21
Why It Happened	2.70	1.36	3.01	1.28
How To Get Revenge	2.32	1.41	2.22	1.29
How To Befriend them	1.70	1.18	1.78	1.17
Whether you deserved it	1.36	.83	1.31	.73
Whether what they did was wrong *	4.10	1.21	4.66	.72
Frequency of Occurrence				
How often does it happen to you	1.88	1.44	1.81	1.40
Adjustment				
Anxiety *	8.10	4.11	10.72	4.21
Depression	14.86	10.56	17.99	11.26
Disordered Eating *	8.26	6.29	15.56	13.01
Self-Liking *	28.36	6.64	26.13	6.84
Self-Competence	27.12	4.79	26.27	5.09

* Significant sex differences, $p < .05$. Descriptive statistics are based on all those reporting a codable event.

Table 2

Correlations between Recollections and Adjustment

	11 Frequency	12 Depression	13 Disordered Eating	14 Anxiety	15 Self-Liking	16 Self-Competence
Feelings Elicited						
1. Sad	.19 [*] /.18	-.01/.30 [*]	.12/- .10	.10/.24	-.15/- .22	.04/- .38 ^{**}
2. Mad	-.03/.07	-.03/.36 [*]	-.13/- .05	.04/.14	-.02/- .25	-.01/- .03
3. Surprised	-.41 ^{**} /.31 [*]	-.11/.22	-.03/.20	-.18 [*] /.01	.14/- .17	.02/- .10
4. Bad	.25 ^{**} /.23	.12/.23	.19 [*] /- .12	.28 ^{**} /.27	-.18 [*] /- .30 [*]	-.07/- .24
Thoughts About The Event						
5. What Happened	.26 ^{**} /.12	.18 [*] /.31 [*]	.17 [*] /.00	.14/.18	-.30 ^{**} /- .41 ^{**}	-.04/- .46 ^{**}
6. Why It Happened	.23 ^{**} /.00	.05/.16	.09/.02	.13/.26	-.18 [*] /- .29 [*]	-.03/- .36 [*]
7. How To Get Revenge	.14/.11	.14/.09	.09/.11	.17 [*] /- .01	-.20 [*] /- .20	.02/- .08
8. How To Befriend them	.01/.16	.14/.16	.09/- .12	.17 [*] /.13	-.05/- .16	-.00/- .19
9. Whether you deserved it	.13/.04	.24 ^{**} /.11	.14/- .14	.23 ^{**} /.03	-.13/- .02	-.25 ^{**} /- .02
10. Whether what they did was wrong	.06/.14	-.05/.16	.05/.26	-.03/.25	-.09/- .25	-.05/- .12
Frequency						
11. Frequency of Occurrence	-	.19 [*] /- .16	.01/- .13	.18 [*] /- .05	-.36 ^{**} /- .04	-.17 [*] /- .01
Adjustment						
12. Depression	-	-	.38 ^{**} /.16	.54 ^{**} /.58 ^{**}	-.49 ^{**} /- .77 ^{**}	-.46 ^{**} /- .52 ^{**}
13. Disordered Eating	-	-	-	.40 ^{**} /.10	-.23 ^{**} /- .20	-.29 ^{**} /.16
14. Anxiety	-	-	-	-	-.56 ^{**} /- .69 ^{**}	-.50 ^{**} /- .53 ^{**}
15. Self-Liking	-	-	-	-	-	.58 ^{**} /.59 ^{**}
16. Self-Competence	-	-	-	-	-	-

Females (131<n<=136) presented first and males (49<n<=50) presented second.

^{**} Correlation is significant at the .01 level^{*} Correlation is significant at the .05 level

Table 3

Frequency and Affect as Predictors of Maladjustment

	Social Anxiety			Depression			Disordered Eating			Self-Liking			Self-Competence		
	ΔR^2	β	ΔR^2	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
<i>Step 1</i>	.09**		.02			.07**						.02			
Sex		-.27**			-.11										.06
Frequency of Occurrence		.12			.09									.12 ^t	-.13 ^t
<i>Step 2</i>	.07**		.02			.04								-.27**	.02
Sex		-.23**			-.08										.03
Frequency of Occurrence		.03			.08									.07	-.15 ^t
Sad		-.06			-.06									-.27**	.04
Mad		.08			.01									-.02	.01
Surprised		-.08			.04									-.05	-.10
Bad		.28**			.18 ^t									-.08	-.13
<i>Step 3</i>	.02		.07*			.02								-.13	.06*
Sex		-.20*			-.02										-.05
Frequency of Occurrence		.08			.17 ^t									.04	-.23*
Sad		-.11			-.17									-.36**	.24 ^t
Mad		.10			-.04									-.04	-.05
Surprised		-.12			-.01									-.04	-.10
Bad		.29*			.18									-.00	-.17
Sex X Frequency of Occurrence		-.10			-.19*									-.06	.12
Sex X Sad		.10			.26 ^t									.18*	-.40**
Sex X Mad		-.04			1.33									.08	.11
Sex X Surprised		.08			.09									.00	-.04
Sex X Bad		-.02			-.11									-.13	.12
Total R ²	.17		.11			.13				.16				.10	

Males were coded as 1 and females as 0.

* p .05,
** p < .01,
 t p < .10

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