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Childhood Poly-Victimization and Perceived Family Environment

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Abstract

There is a growing body of evidence demonstrating the necessity of examining multiple victimizations when studying childhood victimization histories. Several studies have found poly-victimization (i.e., high cumulative levels of victimization) common in non-clinical samples and associated with greater trauma symptomatology than experiencing a single type of victimization (Finkelhor, Ormrod, & Turner, 2007; Richmond, Elliott, Pierce, Aspelmeier, & Alexander, 2009; Saunders, 2003). This study examined the relative contribution of six different categories of childhood victimization and poly-victimization in predicting the Conflict and Cohesion subscale scores of the Family Environment Scale (FES). In a sample of 330 female college undergraduates, the results showed that victimization was common in a non-clinical sample, and most participants who endorsed one type of victimization also endorsed multiple types. Poly-victimization accounted for significant proportions of variability in participants' perceptions of their family conflict and cohesion, but these contributions were small to moderate. Finally, poly-victimization and the simultaneous entry of all six categories of victimization accounted for large, and statistically significant, amounts of variance for perceived family conflict and cohesion.

Introduction

Research has consistently shown that childhood victimization is predictive of trauma-related symptoms and psychological distress in both childhood (Finkelhor, Ormrod, & Turner, 2007a; Saunders, 2003) and adulthood (Higgins & McCabe, 2003; Trickett, Noll, & Putnam, 2011; Vranceanu, Hobfoll, & Johnson, 2007). The majority of these studies have examined the association between individual categories of victimization (e.g., sexual abuse or physical abuse) and a variety of negative outcomes. However, in light of evidence that individuals who experience one category of victimization are at an increased likelihood of experiencing multiple categories of victimization, considerable recent research has focused on poly-victimization (i.e., high cumulative levels of victimization) and its relationship with a variety of environmental and psychological variables (Finkelhor Ormrod, & Turner, 2007a; 2007b; Finkelhor, Hamby, Ormrod, & Turner, 2005; Saunders, 2003; Higgins & McCabe 2000; 2001). Although several studies have examined the relationship between a history of a single category of childhood victimization and negative/dysfunctional family environment, relatively few studies have examined the relationship between poly-victimization and negative family environment.

Poly-victimization and Psychological Distress

Finkelhor and his colleagues (2007a) introduced the term poly-victimization to describe exposure to high levels of multiple types of victimization. In a series of studies exploring the relationship between poly-victimization and a variety of psychological correlates, they have provided evidence that poly-victimization is common and accounts for a relatively large portion of variance in measures of psychological distress. For example, Finkelhor et al. (2007a) examined a non-clinical cross-sectional sample of 2,030 children between the ages of two and seventeen and found that the majority had experienced multiple types of victimization. Specifically, within a one year period, 71% of the children had experienced at least one of the 34 types of victimization assessed by the Juvenile Victimization Questionnaire (JVQ: Finkelhor et al., 2005), and 69% had experienced multiple types of victimization.

A subsequent longitudinal study by Finkelhor et al. (2007b) examined trauma symptoms and poly-victimization occurring across a one year period in a sample of children aged two to seventeen at the initial

time of testing. They found that poly-victimization was highly predictive of trauma symptoms and that it accounted for a portion of the associations between individual categories of victimization and trauma symptomatology. Specifically, a regression analysis first examined the amount of variance in psychological distress that was accounted for by each of the five individual categories of victimization (i.e., conventional crime, child maltreatment, peer and sibling assault, and witnessing and indirect victimization). Then other variables, including poly-victimization, were progressively added into the equation. The authors concluded that when poly-victimization was taken into account, "it generally resulted in a substantial reduction, or in some cases the elimination, of the association between the individual victimization and the outcome" (Finkelhor et al., 2007b, p.160).

These analyses suggest that multiple victimizations are just as important, if not more so, than single victimizations in understanding trauma-related psychological distress. Finkelhor et al. (2007b) also found that poly-victimization was associated with more severe and persistent symptoms than was any single category of victimization (such as sexual assault), which is consistent with previous research examining multiple types of abuse and maltreatment (Mullen, Martin, Anderson, Romans, & Herbison, 1996; Turner, Finkelhor, & Ormrod, 2006; Clemmons, Walsh, DiLilo, & Messman-Moore, 2007). One possible explanation for these results is that poly-victimization is associated with more severe types of victimizations (Clemmons et al., 2007; Finkelhor et al., 2007b).

A series of studies by Elliott and colleagues have extended the findings of Finkelhor's research to an adult population and found similar results. For example, a study conducted by Richmond, Elliott, Pierce, Aspelmeier, and Alexander (2009) examined poly-victimization and psychological distress in college women aged 18-23 using the adult retrospective version of the JVQ. The majority of women in their study reported experiencing at least one of the 34 types of victimization assessed on the JVQ at some point prior to the age of 17. Among these women, more than 40% had also experienced victimization in at least five of the six aggregate categories of victimization. Over 91% of participants had experienced victimization in two or more categories. Consistent with Finkelhor et al.'s research (2007a), Richmond and colleagues (2009) also found that poly-victimization contributed a significant amount of variance to psychological distress, beyond that contributed by any individual category of victimization (e.g., sexual assault). This was determined by first examining the amount of variance that each category of victimization contributed to psychological distress, and then by adding poly-victimization as a second step in the regression equation. A similar study by Elliott, Alexander, Pierce, Aspelmeier, and Richmond (2009) examined the association between college adjustment and poly-victimization. In their study, they found that women who had experienced higher levels of poly-victimization reported greater interpersonal and family problems, as well as poorer perceptions of and satisfaction with their college adjustment, than did women who experienced fewer types of victimization.

The necessity of examining multiple childhood victimizations has become an important area of research because results indicate that experiencing just one type of victimization on one occasion is relatively rare among children who have been victimized (Finkelhor et al., 2007a; 2007b;

Saunders, 2003). In a paper describing the results of the National Survey of Adolescents, involving 12-17 year olds, Saunders (2003) reported that approximately half of the sample of 4,023 adolescents had been exposed to at least one of the four types of violence assessed (i.e., community violence, school violence, dating violence, and witnessing violence). Additionally, 40% of those who had been exposed to one type of violence had been exposed to two or more additional types (Saunders, 2003). Numerous studies have also suggested that poly-victimization is associated with multiple types of psychological distress, often related to PTSD (Saunders, 2003; Lloyd & Turner, 2003; Vranceanu et al., 2007).

Childhood Victimization and Family Environment

The relationship between childhood victimization and family environment is not yet fully understood. However, evidence from several studies suggests that a history of childhood victimization and psychological distress in adulthood are associated with a variety of family environment variables, such as family adaptability, cohesion, conflict, quality of childhood relationships, and affection received from parents (Briere, 1988; Higgins & McCabe, 2000; Higgins, McCabe, & Ricciardelli, 2003). For example, adults who experienced childhood sexual abuse often report childhood family environments higher in conflict, but lower in expressiveness and cohesion than control groups, as measured by the Family Environment Scale (FES) (Gold, Hyman, & Andres-Hyman, 2004; Benedict & Zautra, 1993). Similar family environments have also been reported in children/adolescents who were victims of physical abuse (Meyerson, Long, Miranda, & Marx, 2002; Mollerstrom, Patchner, & Milner, 1992).

The association between family environment, child victimization, and psychological distress. Several studies have found that family environment is associated with childhood maltreatment and adult psychological adjustment (Higgins et al., 2003; Nash, Hulsey, Sexton, Harralson, & Lambert, 1993; Fassler, Amodeo, Griffin, Clay, & Ellis, 2005; Higgins & McCabe, 2001). For example, Nash and colleagues (1993) reported that family environment mediated a history of childhood sexual abuse and dissociation, for both clinical and non-clinical samples of adult women. Similarly, in a sample of adolescents who had experienced physical and/or sexual abuse, reports of high family conflict and low cohesion on the FES predicted greater levels of psychological distress (Meyerson et al., 2002). The same study found that for participants who had been sexually abused, conflict and control were significant predictors of types of psychological distress such as depression, anxiety, and somatization. Likewise, using hierarchical regression analyses, Higgins and McCabe (1994) reported that childhood family violence was a predictive variable for adult psychological maladjustment (e.g., dissociative symptoms, anxiety, and depression), in a sample of college women who had reported experiencing childhood sexual abuse. Higgins et al. (2003) also found poor family adaptability and cohesion to be a predictor for adult depressive symptoms in a non-clinical sample. However, family variables can also serve as protective factors for maladjustment. Higgins et al. (2003) further reported that family cohesion, as measured similarly to the FES, protects adult women from psychological maladjustment, such as

trauma symptoms and self-deprecation, associated with childhood maltreatment.

Revictimization, family environment, and an increased risk for multiple victimizations. Family environment also plays a role in how victims of abuse cope with their distress (Briere & Elliott, 1994). For example, victims who described their families as being high in conflict and low in cohesion often used social isolation and dissociation as coping mechanisms (Briere & Elliott, 1994; Nash et al., 1993). Numerous researchers have reported that families are important in helping a victim cope by providing support during the victim's recovery and that lack of support and cohesion can be associated with revictimization or experiencing multiple types of victimization (Gold et al., 2004; Higgins & McCabe, 1998). Messman-Moore and Brown (2004) found that participants who had experienced childhood emotional abuse were at a greater risk for adult rape if their childhood family environments were low in cohesion. The researchers also found that women who reported two or more childhood victimizations (e.g., sexual abuse, physical abuse, and emotional abuse) also reported more negative family environments (i.e., low expressiveness, high conflict, and low cohesion, as measured by the FES) than did women who reported one or no childhood victimizations.

Finkelhor, Ormrod, Turner, and Holt (2009) proposed a theory of four different "pathways" leading to poly-victimization. Two of the four "pathways" are related to a child's family environment, and they are described as, "living in a dangerous family" and "having a chaotic, multi-problem family environment" (p. 316). One possible explanation for the association between a negative family environment and experiencing multiple types of victimization, is that distressed family environments or family factors may put children at an increased risk for further victimization (Romano, Bell, & Billette, 2011; Turner et al., 2012). For example, it is possible that parental conflict can place a child at an increased risk for physical abuse by creating a violent or aggressive home environment. Research also suggests that family dysfunction, conflict, poor parental practices, and instability contribute to an environment that is associated with multiple victimizations in the family (Turner et al., 2012).

Another explanation for the relationship between a negative family environment and an increased risk for multiple victimizations is that intra-familial victimization is often associated with the development of cognitive distortions, such as inaccurate assumptions or interpretations of oneself and situations one is in (Briere & Elliott, 1994). The cognitive distortions and related feelings of hopelessness may be associated with an increased vulnerability for victims of childhood abuse to experience multiple forms of abuse in the future. These associations can lead to maladaptive behaviors, such as drug use, risky sexual behavior, interpersonal relationship difficulties, or involvement in abusive relationships, which puts children and adolescents at an increased risk for further victimization. For example, a child who has experienced physical abuse and neglect, within their family environment, may associate relationships with physical and emotional pain. The association can then lead to difficulties forming close friendships, by causing the child to withdraw from peers or to develop unhealthy connections through physical and emotional abuse from peers. In turn, this could put the child at an increased risk for peer victimization at school, in addition to the physical abuse experienced at

home. In summary, family environment can potentially serve as a "pathway" to a variety of childhood victimizations and may increase the risk for multiple victimizations, both in and out of the home (Higgins & McCabe, 2000; Finkelhor et al., 2009; Romano et al., 2011).

Difficulty in determining causality. Although considerable evidence suggests that family environment and victimization are closely associated, unfortunately, the causal nature of this relationship is unclear and somewhat controversial. This ambiguity stems from the issues of directionality and the possibility of a third variable (Briere & Elliott, 1993). In terms of directionality, even if there were a causal relationship between the two variables, without a longitudinal prospective study it would be impossible to conclude whether family dysfunction leads to victimization or whether victimization leads to dysfunction. Living in a dysfunctional family environment, that is high in conflict and low in cohesion, could predispose an individual to experience victimization. On the other hand, it is also possible that victimization occurs first and subsequently contributes to family dysfunction. For example, a child who has been physically assaulted by a sibling may withdraw from both the sibling and the parents, leading to a family environment low in cohesion.

The second issue which makes it impossible to determine causality between family environment and victimization is the possibility of a third variable. When explaining the correlational relationship between two variables, a third variable is any factor that is not controlled for and may influence the relationship between the two variables of interest. For example, in the present study, parental substance abuse could be a third variable which would simultaneously increase a child's risk for exposure to poly-victimization and also lead to low family cohesion. In other words, it is possible that the relationship between poly-victimization and low family cohesion is due to parental substance abuse impacting both family environment and exposure to victimization. When examining family environment and victimization it is clearly difficult to determine causality, because victimization and family environment are often highly intertwined. Therefore, the current study is not focused on determining the nature of causal relationships among these variables but, rather, on examining the associations among these variables in order to gain a greater understanding of the relationship between family environment and victimization.

The Present Study

The present study is designed to examine the relationships among childhood victimization, poly-victimization, and family environment. The first goal of the study is to replicate previous research examining the frequency of poly-victimization in a sample of college women (Richmond et al., 2009; Elliott et al., 2009). Based on the results from Finkelhor et al. (2007a; 2007b) with children and Elliott et al. (2009) and Richmond et al. (2009) with college women, our first hypothesis is that the majority of participants will report experiencing at least one of the 34 types of victimization assessed by the Juvenile Victimization Questionnaire (JVQ: Finkelhor et al., 2005), and that the majority of participants who experience one category of victimization will also report experiencing multiple categories of victimization.

The second goal of the study is to examine the extent to which victimization and poly-victimization are associated with

two family environment characteristics, conflict and cohesion, and whether the pattern of results will be similar to those found in past studies of poly-victimization and psychological distress (Finkelhor et al., 2007a; Richmond et al., 2009). Specifically, based on previous findings that poly-victimization accounted for a significant amount of variance in psychological distress, beyond that contributed by any single category of victimization, our second hypothesis is that poly-victimization will also account for large amounts of variance in participants' perceptions of family conflict and cohesion, beyond that accounted for by any individual category of victimization. Lastly, based on results of studies by Richmond and colleagues with college students (2009), the third hypothesis is that when all six JVQ categories of victimization are entered simultaneously into a regression equation, poly-victimization will contribute a significant amount of variance to perceived family Conflict and Cohesion, beyond that contributed by the combination of all six categories.

Method

Participants

Participants were 330 female students from a mid-sized university in southwest Virginia. The students' ages ranged from 18 to 22 (M = 18.8, SD = 1.03). A majority of participants were first year students (58.4%), 23.4% were second year students, and 18.3% were third, fourth or fifth year students. The majority were Caucasian (85.5%), followed by African American (6.4%), Asian or Pacific Islander (3.3%), other (2.4%), Hispanic (2.1%), and American Indian (.3%).

Materials

Family Environment Scale (FES). Form R of the Family Environment Scale (FES; Moos & Moos, 2002) was used to measure participants' retrospective perceptions of their family environment. The FES consists of 90 true/false statements. The scale is divided into ten subscales, each consisting of nine statements. Consistent with past studies which have examined the relationship between victimization and family environment, for the purpose of this study, only two of the ten FES subscales were examined: Conflict and Cohesion. The Conflict subscale measures "the amount of openly expressed anger and conflict" and consists of statements such as, "we fight a lot in our family" and "family members sometimes get so angry they throw things" (Moos & Moos, 2002, p.1 & 125). The Cohesion subscale was designed to examine "the degree of commitment, help, and support family members provide for one another" and it includes statements such as, "family members really help and support one another" and "we put a lot of energy into what we do at home" (Moos & Moos, 2002, p.1 & 125). The FES has been used to assess family environment in a variety of circumstances (e.g. childhood maltreatment, sexual abuse, physical abuse, alcoholism, conduct disorders, chronic illnesses, and community violence and victimization; Moos & Moos, 2002; Holtzman & Roberts, 2012).

Moos and Moos (2002) reported two month test-retest reliability coefficients ranging from .68 to .86 and adequate internal consistencies ranging from .61 to .78. For the current study, values for Chronbach's alpha were consistent with those reported in the FES test manual (Moos & Moos, 2002): Conflict (.79) and Cohesion (.76). Mean scores for the two FES

subscales could range from 0-9 and were used to examine participants' perceptions of their family environment. In the present study mean scores were similar to the normative means cited in the manual (Moos & Moos, 2002); the mean score for the Conflict subscale was 3.10 (*SD* = 2.47) and the mean score for the Cohesion subscale was 6.55 (*SD* = 2.29).

Juvenile Victimization Questionnaire (JVQ). The adult retrospective version of the Juvenile Victimization Questionnaire (JVQ; Finkelhor et al., 2005) was used to assess histories of victimization and poly-victimization. This version of the JVQ asks adult participants to recall events or experiences occurring prior to age 17. The JVQ contains 34 questions that assess 34 specific types of childhood victimization, grouped into six broad aggregate categories (e.g., Property Crime, Physical Assault, Childhood Maltreatment, Peer/Sibling Victimization, Sexual Victimization, and Witnessed/Indirect Victimization). Poly-victimization was assessed by adding the total number of victimization types endorsed by participants on each of the 34 questions, with higher scores indicating higher numbers of victimization.

The six aggregate category scores were created by grouping the 34 types of victimizations into their corresponding categories. For example, the category Child Maltreatment is made up of four types of victimization (i.e., physical abuse, psychological or emotional abuse, neglect, and custodial interference or family abduction). If a participant endorsed any of the four types of victimizations within the Child Maltreatment category, they were dichotomously categorized as having experienced Child Maltreatment. The JVQ assesses both high severity victimization experiences (e.g., kidnapping or exposure to war or ethnic conflict) as well as lower severity experiences (e.g., having something like a backpack stolen), which is partially responsible for the relatively high rate of victimization observed in this and previous studies.

Procedure

This study was approved by the university's Institutional Review Board for the Protection of Human Subjects. Participants were recruited from introductory and upper-level psychology courses through SONA (SONA Systems Ltd., Tallinn, Estonia), an online program for research participant recruitment. In groups of five to fifteen people, participants came to a laboratory where a research assistant provided them with an explanation of the study, informed that they would receive extra credit in their course, and informed that their participation was voluntary. As part of a larger study, after informed consent was obtained, participants completed a variety of measures including the demographic questionnaire, the JVQ, and the FES. In order to assure complete confidentiality of responses, participants did not place their names on any of the measures.

Results

Descriptive Analyses

As shown in Table 1, consistent with the first hypothesis, the majority of participants (i.e., 97%) reported experiencing at least one of the 34 types of victimization assessed by the JVQ. Over 93% of participants reported experiencing at least one type of victimization from two or more of the six categories, and 41% of participants endorsed at least one type of victimization in at least five of the six categories of victimization. The frequency with which participants

responded affirmatively to at least one question in each category was as follows: Peer or Sibling Victimization (84.8%), Physical Assault (81.8%), Witness/Indirect Victimization (71.5%), Property Crime (70%), Sexual Victimization (47.9%), and Child Maltreatment (37%).

Hierarchical Regression Analyses using Poly-victimization and Individual Categories of Childhood Victimization as Predictors of Perceived Family Environment

Unique contribution of poly-victimization in predicting family environment. Consistent with the statistical analyses conducted by Finkelhor et al. (2007a), Elliott et al. (2009), and Richmond et al. (2009), hierarchical regression analyses were used to test the second hypothesis, that poly-victimization would account for significant proportions of variance in participants' perceptions of family conflict and cohesion, beyond that accounted for by any individual category of victimization. In the first step of the regression analysis, each of the six individual categories of victimization was entered alone to examine the amount of variance it accounted for. Poly-victimization was then added as a second step in the regression equation to examine the amount of variance it accounted for beyond that already accounted for by the individual category of victimization. Finally, total variance accounted for by the combination of each individual category of victimization and poly-victimization, for the FES subscales Conflict and Cohesion, was recorded. As displayed in Table 2 (Column 1), the percentages of variability accounted for by each of the six categories of victimization when examined in isolation were all significant for the Conflict subscale of the FES. However, although large portions of the variance were accounted for by the Physical Assault and Child Maltreatment categories (22%), only 1-4% of the variance was accounted for by the remaining categories. For the Cohesion subscale, Child Maltreatment accounted for 11% of the variance, while Sexual Victimization accounted for 5%. All other categories accounted for small portions of variance (1-2%), even when statistically significant.

As seen in Column 2 of Table 2, as predicted, when poly-victimization was then added as a second step of the regression equation, it contributed a significant amount of variability beyond that accounted for by each individual category for all of the FES subscales. Poly-victimization's added contribution ranged from 3% to 13%. Finally, as seen in Column 3, the total variance accounted for by the combination of each individual category of victimization plus poly-victimization was significant for the Conflict and Cohesion subscales of the FES (ranging from 14-25% for the Conflict subscale and from 12-15% for the Cohesion subscale).

Unique contribution of poly-victimization after simultaneously entering all six aggregate categories of victimization as a predictor variable. A second set of hierarchical regression equations was used to examine the hypothesis that when all six categories of victimization were simultaneously entered as a first step in a regression equation, poly-victimization would account for a significant amount of variance in perceived family Conflict and Cohesion scores, when entered in a second step. As displayed in Step 1 of Table 3, the percentages of variance accounted for by simultaneously adding all six categories were significant for the Conflict (24%) and Cohesion (14%) subscales of the FES. When

poly-victimization was added to the six aggregate categories in Step 2, it contributed a small, but significant, amount of variance (Conflict 1.5%, Cohesion 1.9%) beyond that contributed by all six categories.

Conclusion/Implications

The results of the present study indicate that poly-victimization was common in this non-clinical sample of college women. Specifically, 97% of participants endorsed at least one of the 34 types of victimization assessed by the JVQ, and approximately 40% of participants endorsed at least one type of victimization in five or six of the categories of victimization. This pattern of results replicates the findings of past studies with children (e.g., Finkelhor et al., 2007a; 2007b) and college women (e.g., Richmond et al., 2009; Elliott et al., 2009) and provides further evidence regarding the importance of examining poly-victimization, even in non-clinical samples (Saunders, 2003; Higgins & McCabe, 2001).

A second finding of the present study was that family environment factors were highly correlated with some types of child victimization, but not others. When serving as single predictors of the family Conflict subscale, large proportions of variability were accounted for by Physical Assault and Child Maltreatment. All other correlations were modest in scale, even when statistically significant. This finding is not surprising given that many of the questions on the Conflict subscale tap verbal and physical conflicts (e.g., family members losing their tempers, and family members hitting one another), which overlap considerably with the types of Physical Assault assessed by the JVQ (e.g., attempted assault, kidnapping, and physical abuse). Therefore, it seems reasonable that physical abuse or assault within a home, would play a large role in shaping participants' perceptions of family conflict. Likewise, the Child Maltreatment category is made up of victimizations such as physical abuse, psychological abuse, neglect, and custodial interference or family abduction, and therefore it is also logical that these types of victimization would all be strongly associated with family environments characterized by high levels of verbal or physical conflicts. Sexual Victimization may not have been as strongly associated with family conflict because most of the types of victimization in this category (e.g., doing sexual things with anyone over 18, even if consensual; being flashed; and an adult you do not know touching your private parts) are not related to verbal or behavioral conflicts that are assessed by the Conflict subscale. Witness/Indirect Victimization, Peer and Sibling Victimization, and Property Crime may not have been strongly associated with perceptions of family conflict, because these categories mostly include victimization types occurring outside of the home or family.

A similar pattern of results was found for the Cohesion subscale. When serving as single predictors of family cohesion, Child Maltreatment and Sexual Victimization contributed moderate and statistically significant proportions of variance, more so than the other four categories of victimization. One possible explanation for these results is that the characteristics of a cohesive family (e.g., family members get along, help and support one another, and put a lot of energy into what they are doing at home) are uncommon among families in which Child Maltreatment (e.g., physical abuse, psychological emotional abuse, neglect, and custodial interference) and Sexual Victimization (e.g., sexual assault by a known adult, rape, and sexual harassment) occur. Similar to the results from the Conflict subscale, Witness/Indirect

Victimization, Peer and Sibling Victimization, and Property Crime may not have contributed large amounts of variance to perceptions of family cohesion, because these categories mainly included victimization types occurring outside the victim's family or home environment. Also, for the Physical Assault category of victimization it seems logical that this category would be more closely associated with Conflict than Cohesion, because the victimization types under this category tap many of the questions also assessed by the Conflict subscale but not the Cohesion subscale.

These results are largely consistent with prior research on childhood sexual and physical abuse, which has found these categories of victimization to be associated with family environments high in conflict and low in cohesion, as measured by the FES (Gold et al., 2004; Messman-Moore & Brown, 2004; Meyerson et al., 2002). Specifically, Messman-Moore and Brown (2004) found that victims of childhood physical and/or emotional abuse had family environments lower in cohesion and higher in conflict than did participants who had not experienced this type of abuse. Meyerson and colleagues (2002) also found that childhood physical and sexual abuse were strongly correlated with perceptions of low family cohesion and high family conflict. Gold and colleagues (2004) analyzed all ten of the FES subscales and found that childhood sexual abuse was strongly associated with perceptions of several of the subscales, including low Cohesion, Expressiveness, Independence, and high Conflict and Control. Thus, it is not surprising that Child Maltreatment, in particular, was strongly predictive of perceptions of conflict and cohesion because this category assesses four victimization types, two of which were assessed by previous research (e.g., physical abuse and psychological/emotional abuse). The results of the present study are consistent with prior research and indicate that certain types of victimization are more strongly associated with perceptions of family conflict and cohesion than are others.

Another finding of the present study was that poly-victimization contributed a small to moderate, but significant, amount variance beyond that contributed by each individual category of victimization, for the Conflict and Cohesion FES subscales. This finding was partially consistent with our second hypothesis, that poly-victimization would account for significant proportions of variance in participants' perceptions of family conflict and cohesion, beyond that accounted for by any individual category of victimization. However, we expected the amount of variance contributed by poly-victimization to be larger than what was found. Not surprisingly, we found that when a given category of victimization already accounted for a large proportion of variance, poly-victimization did not add as much. Conversely, when individual categories of victimization accounted for relatively little variance, poly-victimization added a greater amount of variance to the Conflict and Cohesion subscales. For example, Physical Assault contributed a large proportion of variance to participants' perceptions of family conflict (i.e., 22%), and poly-victimization added only a small amount of variance beyond that (i.e., 3%). However, Property Crime contributed small proportions of variance to Conflict and Cohesion (i.e., 1%), and poly-victimization contributed a significant amount of variance beyond that (i.e., 12-13%).

These findings are somewhat different from studies by Finkelhor et al. (2007b) and Richmond et al. (2009), who found that

poly-victimization accounted for relatively large and statistically significant proportions of variance in psychological distress beyond that contributed by any individual category of victimization. Similarly, Elliott and colleagues (2009) found that poly-victimization accounted for large proportions of variance in college adjustment, more so than did any individual category in isolation. The current pattern of results differed from those of past studies of poly-victimization and psychological distress in two ways. First, although past studies and the present study found that poly-victimization contributed significant amounts of variance in either distress or college adjustment, beyond that contributed by each category of victimization in isolation, the magnitude of poly-victimization's contributed variance was smaller for family conflict and cohesion than it was for distress or college adjustment. Second, when the six categories of victimization were entered simultaneously into a regression equation, they contributed large and statistically significant variance in participants' perceptions of family conflict and cohesion, but, surprisingly, poly-victimization contributed only a small amount of variance beyond that. While the amount of variance contributed by poly-victimization was greater than that of the combined six categories of victimization, our third hypothesis was only partially supported, due to the magnitude of poly-victimization's contributed variance being smaller than expected. This is in contrast to prior research of Elliott et al. (2009) and Richmond et al. (2009), which found that poly-victimization accounted for a considerably higher proportion of variance in psychological distress and college adjustment. The difference in the degrees of association found between previous studies and the present study may be attributed to psychological distress and college adjustment possibly having a stronger relationship with poly-victimization than do family conflict and cohesion.

While the proportion of variance accounted for by poly-victimization and the six categories of victimization in isolation was not as large as expected, the results do suggest important conclusions and implications for practice. First, the results of the present study suggest that family environment factors were highly correlated with some types of childhood victimization, but not others. Specifically, Physical Assault and Child Maltreatment were found to be strongly associated with participants' perceptions of family conflict, whereas Child Maltreatment and Sexual Victimization were strongly associated with perceptions of family cohesion. Second, these results provide evidence that college females experience a broad range of victimizations. Thus, it is important for clinicians who work at university counseling centers and community mental health facilities to have broad training regarding all major categories of victimization. Finally, these results also provide evidence to support screening for exposure to multiple categories of victimization and poly-victimization using an assessment instrument, such as the JVQ, that assesses a wide range of victimization categories as well as poly-victimization. Failure to inquire about multiple types of traumatic experiences will likely yield an incomplete victimization history, which could negatively impact the focus and course of treatment.

Study Limitations

As with any self-report adult retrospective design, there are several limitations associated with the current study. Self-report measures, such as the FES,

reflect participants' perceptions of their family environment and can thus be subject to biases or fabrications. Retrospective accounts can be inaccurate and some details or events may have been forgotten. Although the FES is one of the most commonly used measures of family cohesion and conflict, it does not provide an independent and objective report of participants' family environments from an outside observer. Additionally, the facts that (a) the sample consisted only of college females between the ages of 18 and 22, and (b) the sample was 85% Caucasian, precludes generalizing results to people who are not in college, older, male, or non-Caucasian. In particular, it is unclear the extent to which the results of the present study would generalize to a clinical sample of individuals who have experienced victimization.

Another limitation of the present study is that the correlational design does not allow for cause and effect conclusions to be drawn concerning the relationships among victimization, poly-victimization, and family environment. Due to the cross-sectional nature of this study, it is not be possible to determine whether victimization experiences precede family dysfunction or whether family dysfunction precedes victimization. Additionally, it is possible that a third variable, such as parental substance abuse, is responsible for both the increased risk for multiple victimization experiences and for participant's perceptions of family environment being low in cohesion and high in conflict.

Future Research

Future research should attempt to assess causality through a longitudinal prospective study, which would examine the relationship between victimization and family environment, as well as other factors that could influence the relationship between these two variables. Such a research design could provide a greater understanding of directionality between victimization and negative family environment and control for possible third variables. Further studies should also provide data from additional demographic categories, such as males, non-Caucasian ethnic groups, participants below the age of 18 and above the age of 22, and clinical samples. In addition to family cohesion and conflict, it would also be important to examine other aspects of family environment that were not examined in the present study, such as parental alcohol use, mental illness, and family structure (e.g., single-parent homes, parental divorce, and parental remarriage). Lastly, further research should make a distinction between victimizations occurring in the home and out of the home, in order to better understand victimization types that contribute to perceptions of family conflict and cohesion.

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Table 1
Frequency Table for the 34 Types of Childhood Victimization on the JVQ

Victimization Type	N = 330 Frequency (%)
34 types of childhood victimization (endorsed at least one type)	319 (96.7%)
Property Crime Aggregate (endorsed at least one type)	231 (70.0%)
Robbery	87 (26.4%)
Theft (Steal something from you)	180 (54.5%)
Vandalism (Break or ruin something of yours)	154 (46.7%)
Physical Assault Aggregate (endorsed at least one type)	270 (81.8%)
Assault with a weapon	62 (18.8%)
Assault without a weapon	127 (38.5%)
Attempted assault	51 (15.5%)
Kidnap, attempted or completed	20 (6.1%)
Bias Attack	9 (2.7%)
Physical Abuse (not spanking)	62 (18.8%)
Assault by group or gang of peers	5 (1.5%)
Peer or sibling assault	216 (65.5%)
Genital assault	21 (6.4%)
Dating violence	50 (15.2%)
Child Maltreatment Aggregate (endorsed at least one type)	122 (37.0%)
Physical Abuse (not spanking)	62 (18.8%)
Psychological or Emotional Abuse	87 (26.4%)
Neglect	10 (3.0%)
Custodial Interference or Family Abduction	37 (11.2%)
Peer & Sibling Victimization Agg.(endorsed at least one type)	280 (84.8%)
Assault by group or gang of peers	5 (1.5%)
Peer or sibling assault	216 (65.5%)
Genital assault	21 (6.4%)
Bullying	161 (48.8%)
Teasing, emotional bullying	158 (47.9%)
Dating violence	50 (15.2%)
Witnessed/Indirect Victimiz. Agg.(endorsed at least one type)	236 (71.5%)
Witness domestic violence	65 (19.7%)
Witness physical abuse	47 (14.2%)
Witness assault with a weapon	81 (24.5%)
Witness assault without a weapon	152 (46.1%)

Household theft	88 (26.7%)
Someone close murdered	28 (8.5%)
Witness murder	3 (0.9%)
Exposure to shooting, bombs, riots	45 (13.6%)
Exposure to war	2 (0.6%)
Sexual Victimization Aggregate (endorsed at least one type)	158 (47.9%)
Sexual Assault, known adult	16 (4.8%)
Sexual Assault, unknown adult	4 (1.2%)
Sexual Assault, with peer	66 (20.0%)
Rape, attempted or completed	62 (18.8%)
Flashing or sexual exposure	89 (27.0%)
Sexual harassment	73 (22.1%)

Table 2
Hierarchical Regression Analyses Examining the Relative Contributions of each of the six Aggregate Categories of Victimization and Poly-victimization

	Start Model: Indiv. Category R^2	Add: Poly-vict R^2-change	Total % Variance [a]
Sexual Victimization N=330			
Conflict	.04**	.10**	.14**
Cohesion	.05**	.07**	.12**
Physical Assault N=330			
Conflict	.22*	.03**	.25**
Cohesion	.02**	.10**	.12**
Child Maltreatment N=330			
Conflict	.22**	.03**	.25**
Cohesion	.11**	.04**	.15**
Witness N=328			
Conflict	.01*	.13**	.14**
Cohesion	.02*	.10**	.12**
Peer/Sibling N=330			
Conflict	.02*	.12**	.14**
Cohesion	.01	.11**	.12**
Property Crime N=330			
Conflict	.01*	.13**	.14**
Cohesion	.01	.12**	.13**

Note. ** indicates $p < 0.01$, * indicates $p < 0.05$.
[a] *The proportions of variability accounted for in steps 1 and 2 of each set of hierarchical regression analyses should sum to the value reported in the total variance column. Minor differences from this expected pattern in the table are due to the rounding of values to 2 decimal places.*

Table 3

Hierarchical Regression Analyses Examining the Unique Contribution of Poly-victimization After Simultaneously Entering All Six Aggregate Categories of Victimization as a Predictor Variable.

FES-R subscales		R^2 for 6 Categories Combined	Significant Squared Semi-partial Correl. for 6 Categories Combined	Unique Predictor
STEP 1				
Conflict		.24*	.20**	Childmaltx
Cohesion		.14**	.08** .02*	Childmaltx Sexual-Vict
FES-R subscales	**R^2 –change with Poly-Vict added in block 2**	**R^2 for 6 Categ. plus Poly-Vict**	**Significant Squared Semi-partial Correl. for 6 Categ. plus Poly-vict**	**Unique Predictor**
STEP 2				
Conflict	.02*	.25**	.10** .01*	Childmaltx PV
Cohesion	.02**	.16**	.03** .02**	Childmaltx PV

Note. ** indicates $p < 0.01$, * indicates $p < 0.05$.