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ORIGINAL ARTICLE

Intergenerational Transmission of Violence: the Influence of Self-Appraisals, Mental Disorders and Substance Abuse

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Abstract Although research has demonstrated connections between experiencing abuse as a child and being in a violent relationship as an adult, the specific mechanisms through which this transmission occurs are unclear. The purpose of this study was to identify the relationship between certain personal factors (self-appraisals and mental/substance use disorders) and experiencing violence as an adult. Data from the National Comorbidity Survey (NCS) 1990–1992 were utilized. Respondents who reported experiencing childhood abuse or victimization and were in a current intimate partnership (N=590) were selected for analysis. Multivariate logistic regression indicated that low self-esteem, past year PTSD, and past year alcohol dependence were significantly associated with intimate partner violence after controlling for other self-appraisals and mental disorders.

Keywords Violence transmission · Self-appraisal · Mental disorders · Self-esteem · Substance abuse

As many as 30–50% of children in the United States either witness or experience physical violence in their family of origin, including severe physical assault (Foo and Margolin 1995; Marshall and Rose 1988; Tjaden and Thoennes 2000; Straus et al. 1998). While the prevalence of child sexual abuse is lower, as many as 20% of women and 5% to 10% of men report experiencing sexual abuse as children (Finklehor 1994). Children who experience physical or sexual abuse are at higher risk for a variety of emotional, behavioral, psychological, and relational problems (Kitzmann et al. 2003).

Compared with children raised in non-abusive homes, abused children have higher rates of internalizing and externalizing behaviors, non-compliance, aggression, anxiety, depression, and lower self-esteem (Barnett et al. 2005; Holden et al. 1998). Other problems that become more prevalent with child abuse include cognitive impairments, limited emotional functioning, poor physical health, and social incompetence (e.g., Pears and Capaldi 2001). These effects can have long term implications. For example, experiencing violence as a child increases the likelihood of violence in one's adult intimate relationship (Ehrensaft et al. 2003; Kwong et al. 2003). The nature of this relationship is complex, however, and the violence transmission process has many influences and contributors. This study explores the role that self-appraisals and mental health disorders play in this transmission process.

Existing scholarship on intergenerational transmission of violence tends to draw from social learning theories that suggest children observe and imitate behavior (e.g., Bandura 1963). Much of this research focuses on children who witness violence between parents (e.g., Dunlap et al. 2002; Moffitt and Caspi 1999). Witnessing abuse is different than experiencing abuse, but these are related. Intimate partner violence (IPV) between adults is significantly related to the abuse of children in the home (Appel & Holden 1998). However, although many forms of childhood abuse are associated with an increased likelihood of adult violence

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(Chapple 2003; Kwong et al. 2003), most people who are abused as children do not grow up and enter violent relationships (Kaufman and Zigler 1987; Mihalic and Elliot 1997). Further, the effects of early abuse are not consistent, and the strength of the transmission relationship is not always highly significant (Stith et al. 2000). Thus, there is a need to better understand what factors are associated with experiencing abuse as a child and then entering an adult intimate relationship that includes violence (Grych et al. 2003). The questions remain: Why do some who are abused grow up to either become violent or become victims of violence? What factors are influential in avoiding violent adult relationships?

Relevant Literature

Cognition and Self-Appraisals

Self-appraisals include perceptions and beliefs about one's self and one's relationships (Logan et al. 2006; Whiting 2008). It is theorized that these appraisals are linked to internal schemas or models that affect how individuals relate to others (Zeanah and Benoit 1995). Appraisals develop in interaction with others, are influenced by abuse, and may become formative in future relationships (Cummings and Davies 2002). For example, when children feel hopeless and helpless in the face of traumatic experiences such as physical or sexual abuse, they are more likely to have negative appraisals of themselves. This can lead to chronic low self-esteem, anxiety, and depression, all of which have been associated with later intimate partner violence (Clements and Sawhney 2000; O'Keefe 1998). Childhood trauma has the potential to disrupt cognitive schemas associated with basic psychological needs, including safety, trust/dependency, esteem, intimacy, and control. Disruptions in these schemas may result in fear of others, anger, insecurity, an inability to trust perceptions about others, indiscriminant attachment to others, and interrupted formation of interpersonal relationships (Pearlman 2003; Pearlman and Saakvitne 1995). These views of self and other are affected by family violence, but are also mediated by the overall family environment (Busby et al. 2008).

Although both perpetrators and victims of violence have perceptual or atributional styles that are different from individuals in non-violent relationships, these are different from each other (Jory and Anderson 1999). Perpetrators of violence are more likely to endorse patriarchal beliefs, use justifications and rationalizations for violence and abuse, and to externalize blame for their violence than are non-violent individuals (Barnett et al. 2005; Boss 2002; Tilley and Brackley 2005). Victims of adult violence may inaccurately blame themselves or other contextual factors (such as substance use or stress) for the violence (Logan et al. 2006; Sleutel 1998). Unfortunately, victims of violence who have negative images of themselves or their personal control are less likely to take steps to avoid or exit these relationships (Clements and Sawhney 2000; Umberson et al. 1998). Self-appraisals that may be related to increased likelihood of either becoming a perpetrator or a victim can include shame, fear of abandonment, neuroticism, and dependency on others (Busby et al. 2008; Dutton et al. 1995; Murphy et al. 1994).

Mental Health and Substance Disorders

Mental health and substance abuse problems are more likely to develop in those who have been abused as children (e.g., Kessler et al. 2001; Pears and Capaldi 2001). A child who is abused is not only more likely to have distorted appraisals of self, but also antisocial attitudes, conduct problems, depression, anxiety, and trauma symptoms (Ehrensaft et al. 2003; Simons et al. 1995). Some scholars have suggested that the attitudes underlying conduct disorder and antisocial personality disorder may be the key characteristics that are transmitted in those who abuse (Dutton et al. 1995; Simons et al. 1995). Others have found that batterers often have some type of pathology or personality disorder (Dutton 1998; Henning et al. 2003). These mental health problems related to early victimization are also hypothesized to leave victims vulnerable to future victimization in adult relationships (Briere 2004; Logan et al. 2006).

Children who are abused are also more likely to report later substance use and abuse (Barnett et al. 2005; Burke et al. 2005; Carbone-Lopez et al. 2006). In one longitudinal study of women, victimization was the most robust predictor of substance abuse (Hequembourg et al. 2006). This may be due, in part, to the tendency to use substances to self-medicate for trauma symptoms, such as anxiety, depression, and other mental health issues (Briere and Elliot 1994). It seems clear that the use of alcohol and other substances play a role in understanding violence transmission.

In a study using data from the National Comorbidity Survey (also used for this study), Kessler et al. (2001) examined the patterns and mental health predictors of domestic violence for all married and cohabiting respondents. They found the overall prevalence of domestic violence was not statistically different for men and women, although more women than men reported their partners perpetrated severe violence (e.g., kicking, biting, choking, burning). Significant demographic variables for reporting minor domestic violence among women included Hispanic ethnicity and cohabitation, but these did not hold for men.

They found inconclusive evidence regarding the role of lifetime mental health status and IPV for women. However, men who experienced lifetime major depressive disorder, generalized anxiety disorder, alcohol dependence, and nonaffective psychosis were more likely to both perpetrate and be a victim of IPV. Finally, Kessler et al. (2001) found that while childhood victimization was not predictive of IPV for women, it was a significant predictor of both minor and severe violence for men. Interestingly, they also noted that the strength of these relationships were not as strong those between violence prediction and certain demographic variables, which indicated the need for more research to understand these other contributing factors, as well as the overlapping nature of effects on both sexes.

Purpose of Study and Research Question

There are many effects of abuse and these are often profound. As mentioned, it remains unclear as to the nature of many of the factors that play a role in linking effects of childhood abuse and later adult IPV. If professionals hope to mitigate the personal and community costs of abuse and violence, it would be helpful to better understand this transmission process in order to better be able to intervene in targeted areas. Research that looks at specific factors can shed light on this process. The purpose of this study was to expand upon the existing literature and explore specific factors associated with the relationship between experiencing abuse as a child and subsequently entering a violent relationship as an adult.The research question guiding this study was: Among individuals who experienced childhood violence, how do those who also experience adult intimate violence differ from those who do not? Specifically, what self-appraisals and mental disorders are associated these differences? Findings have the potential to inform future research in and clinical practice for those affected by both childhood and adult abuse.

Methods

Data from the National Comorbidity Survey (NCS) 1990–1992 (Kessler et al. 2001) were used in this study. We utilized the NCS despite the age of the data because it is the only nationally representative dataset of its kind to include variables pertinent to this study, including self-appraisals (i.e., self-confidence, dependence on others, sociability, and shyness), mental and substance diagnoses, history of childhood violence, and a description of violence experienced at the time of the interview in the respondent's partner relationship. The NCS-R, which provides more recent national data, does not include questions from the Conflict Tactics Scale (denoting intimate partner violence) or detailed personal characteristics about self-appraisals.

A stratified, multistage area probability sampling design was used in the NCS to recruit a nationally representative sample of 8,098 individuals ages 15–54 in the non-institutional, nonmilitary population of the 48 contiguous states to study the prevalence and correlates of mental health disorders and treatment. The overall response rate was 82.6%. Face-to-face psychiatric interviews were administered to all respondents by trained interviewers. In addition to the data gathered on mental health disorders and treatment, demographic characteristics, family history, and personal characteristics were obtained. Weights were calculated to account for nonresponse and variation in selection probability, and to reflect population distributions.

For the present analysis, data from individuals who reported experiencing childhood abuse or victimization (i.e., rape, molestation, physical abuse, or attack) and who were married or cohabitating at the time of the interview were selected (N=590). The latter inclusion criteria were established because only those who had a spouse or live-in partner were asked questions about violent acts within the context of their current relationships (Kessler et al. 2001). Childhood abuse and victimization were assessed in the life event history and family history sections of the NCS interview. In the life event history section, respondents were asked to report if they experienced a variety of traumatic events in their life (e.g., fires, war, combat, life threatening injury, rape, sexual molestation, physical abuse) and at what age. Respondents who reported rape, sexual molestation, physical attack/assault, physical abuse as a child, and childhood neglect were coded as experiencing childhood victimization/abuse. In the family history section, respondents were presented with three lists that described ways in which some adults handle children, including insulting, swearing, threatening to hit, pushing, spanking, kicking, choking, and burning/scalding. Respondents were asked to report how often such maltreatment occurred with responses ranging from 1 = often to 4 = never. Based on Kessler et al.'s (2001) previous research on the relationship between childhood and adult violence, respondents not already included based on life events history who reported any childhood maltreatment (rarely, sometimes, or often) were coded as experiencing childhood violence.

Measures

Intimate Partner Violence (IPV) as an Adult The NCS measured intimate partner violence using items from the Conflict Tactics Scale (Straus 1979). The items ranged from less severe (e.g., insults, swearing, and threatening to hit) to more severe (e.g., pushing, grabbing, slapping, kicking, hitting, choking, and burning). Respondents were asked to

report how often each act was committed by themselves and their spouses/partners, and responses ranged from 1 (*often*) to 4 (*never*). Respondents were initially coded as not engaged in IPV, being a victim of IPV, and perpetrating IPV. A frequency table showed that most respondents who reported IPV reported being a perpetrator as well as a victim (n=277). Just 36 respondents reported being a victim without perpetrating and 57 respondents reported perpetrating without being a victim. Based on these small cell sizes, the violence categories were collapsed into as a dichotomous variable, and respondents were designated as experiencing IPV (IPV=1) if they reported perpetrating or receiving less severe violent acts *sometimes* or *often*, and more severe violent acts *rarely*, *sometimes*, or *often*. This determination was made based on scholarship that suggests that even occasional instances of severe violence can suggest potential for lethality and psychological control (Bograd and Mederos 1999; Johnson and Ferraro 2000). (We address the implications of our decision to analyze victims and offenders together in the "Discussion" section.)

Personal Characteristics and Self-Appraisals In the self-description section of the NCS interview, respondents were asked questions regarding personality traits and beliefs about themselves. These included a wide range of descriptors such as self-confidence, degree of dependence on others, sociability, and shyness. Respondents were asked to rate "how true" each of the statements were in describing them, and categories ranged from 1 = very true to 4 = not at all true. These responses were factor analyzed, resulting in ten factors (appraisal characteristics) that were hypothesized to potentially affect the relationship between childhood victimization and adult intimate partner violence. These factors included: (a) self-efficacy (7 items; α=0.64); (b) dependence on others (5 items; α=0.80); (c) independence from others (3 items; α=0.72); (d) enmeshment with others (6 items; α=0.78); (e) low self-esteem (10 items; α=0.76); (f) self-reliance (4 items; α=0.58); (g) extroversion (5 items; α=0.82); (h) introversion (5 items; α=0.68); (i) insecurity (7 items; α=0.83); and (j) openness to experience (5 items; α=0.81).

Mental Health Disorders The diagnosis of mental disorders was given based on the psychiatric interviews that were used to gather data. The interviewers followed a standard diagnostic procedure using a modified version of Wittchen et al.'s (1990) Composite International Diagnostic Interview (CIDI). The participants were given diagnoses based on DSM-III-R criteria, with lifetime, 12-month, and past month diagnoses made for 14 disorders. These were coded as absent (0) or present (1) in the NCS. Based on the domestic violence literature (e.g., Barnett et al. 2005; Logan et al. 2006), we considered diagnoses for eight disorders: (a) depression, (b) generalized anxiety disorder, (c) post-traumatic stress disorder, (d) antisocial personality disorder (lifetime only) (e) alcohol abuse, (f) alcohol dependence, (g) drug abuse, and (h) drug dependence.

Sociodemographic Variables Age was categorized into four, 10-year cohorts: 15–24, 25–34, 35–44, and 45–54. Race was categorized into Non-Hispanic White, Non-Hispanic Black, Hispanic, and other. Income was defined as total annual family income before taxes in the year prior to the interview and categorized into $0–$19,999, $20,000–$34,999, $35,000–$69,999, and $70,000 or greater. Employment was dichotomized as working or not working. Education was categorized into less than a high school education (0–11 years), a high school education or equivalent (12 years), some college (13–15 years), and a college degree or beyond (16+ years).

Statistical Analyses

STATA, version 9.0 (College Station, TX), was used to analyze all data. The *svyset* command, which calculates estimates using Taylor series linearization, was used to take into account the survey design and weighting. Four sets of analyses were conducted. First, cross tabulations were computed to compare demographic characteristics across the respondents who reported IPV and those who did not (no IPV). Second, mean comparisons of the self-appraisal characteristics hypothesized to affect the relationship between childhood victimization and the experience of adult IPV were calculated using independent samples t-tests. Third, the prevalence of lifetime and past year mental health and substance disorders was compared across the IPV and no IPV groups using cross-tabulations. Finally, a stepwise multiple logistic regression model was examined to determine the factors associated with experiencing IPV, controlling for income, which was the only statistically significant different demographic variable between respondents who reported IPV and no IPV. There existed no preexisting theoretical rationale in the research literature to determine the order of variable entry in the logistic regression model. The forward stepwise strategy of variables entry built on existing variance and was consistent with the study purpose of developing hypothesis about which subset of study variables best predict experiencing IPV in adult relationships (Keppel and Zedeck 1989; Tabachnick and Fidell 2007). Variables were entered into the multivariate model in order based on level of significance in the bivariate analyses until the most parsimonious model was achieved. Variables were considered statistically significant in the multivariate analysis if the 95% confidence intervals for the adjusted odds ratios did not include 1.

Results

Of the 8,098 respondents included in the NCS, 590 met the inclusion criteria (childhood experience of physical or sexual abuse, and an intimate partnership at the time of data collection) for the current analyses. Of these, 220 (37.3%) reported no IPV in their adult relationships and 370 (62.7%) reported IPV. A comparison of the demographic characteristics of the respondents who reported intimate partner violence at the time of the interview and those who reported none is presented in Table 1. Statistically significant differences were found only on income (p=.014).

Table 2 shows the results of the independent samples t-tests comparing the appraisal characteristics hypothesized to influence the relationship between childhood victimization and adult intimate partner violence across the two groups. Statistically significant differences were found on five variables. Compared to respondents who reported no IPV, respondents who reported IPV in their current relationships viewed themselves as more dependent on others (p=.002); more enmeshed with others (p=.010); and more insecure (p<.001). They also reported lower self-esteem (p<.001). Conversely, individuals who reported no IPV viewed themselves as more independent in their actions than those who reported IPV (p=.010).

Table 3 shows the prevalence of the mental health and substance disorders associated with adult IPV. Compared to individuals who reported no IPV, individuals who reported IPV were more likely to meet the DSM-III criteria for past year (p=.004) and lifetime (p=.005) depression, past year (p=.002) and lifetime (p=.010) generalized anxiety disorder, past year PTSD (p<.001), past year (p<.001) and lifetime (p=.023) alcohol dependence, past year (p=.042) and lifetime (p=.047) drug abuse, and past year (p=.037) and lifetime (p=.031) drug dependence.

While the majority of substance and mental disorders were associated with IPV at the bivariate level, only low self-esteem, past year alcohol dependence, and past year PTSD were independently associated with adult IPV. Table 4 shows the adjusted and unadjusted odds of experiencing adult IPV. Respondents who reported IPV were significantly more likely to have low self-esteem (Adjusted Odds Ratio [AOR]: 0.92, 95% Confidence Interval [CI]: 0.88–0.96), adjusting for income, alcohol dependence and PTSD. Alcohol dependence in the past year (AOR: 4.00, 95% CI: 1.55–10.3) was also indicative of IPV in this sample, as was PTSD in the past year (AOR: 2.21, 95% CI: 1.05–4.67) adjusting for income and the other variables (low self-esteem and alcohol dependence).

Table 1 Demographic characteristics of survey participants who were victims of childhood violence

	No IPV n=220 %	IPV n=370 %	p-value
Gender			
Male	43.4	42.5	0.877
Female	56.6	57.5	
Race/Ethnicity			
White	84.3	83.4	0.770
Black	4.0	4.2	
Hispanic	10.5	9.9	
Other	1.2	2.5	
Age			
18–24 years	8.6	14.3	0.075
25–34 years	33.2	39.2	
35–44 years	29.0	28.4	
45–54 years	29.3	18.1	
Marital status			
Married	87.5	81.3	0.089
Cohabitating	12.4	18.0	
Education			
0–11 years	19.9	19.9	0.074
12 years	32.7	39.5	
13–15 years	18.8	24.6	
16+ years	28.6	16.0	
Income			
$0–$19,999	13.9	27.3	0.014
$20,000–$34,999	21.0	24.8	
$35,999–$69,999	43.8	35.1	
$70,000 and above	21.3	12.9	
Employment			
Employed	91.3	94.7	0.700
Unemployed	8.7	5.3	

Table 2 Mean comparisons of personal characteristics

	No IPV n=220 m	IPV n=370 m	p-value
Self efficacy	12.23	12.81	0.184
Dependent on others	13.45	11.94	0.002
Independent from others	6.86	7.80	0.010
Enmeshed with others	19.03	17.86	0.010
Low self-esteem	33.21	29.15	<0.001
Self-reliant	6.93	6.77	0.657
Extroverted	9.99	9.74	0.551
Introverted	13.21	13.17	0.907
Insecure	17.41	15.95	<0.001
Open to experience	10.53	9.89	0.164

Lower number is associated with higher levels of the characteristic

Table 3 Prevalence of mental and substance disorders

	No IPV n=220 %	IPV n=370 %	p-value
Major depression past year	3.7	11.9	0.004
Major depression lifetime	8.6	21.1	0.005
Generalized anxiety disorder past year	0.9	5.5	0.002
Generalized anxiety disorder lifetime	2.1	7.3	0.010
PTSD past year	2.4	10.7	<0.001
PTSD Lifetime	8.6	17.6	0.130
Antisocial personality disorder lifetime	2.1	4.4	0.432
Alcohol abuse past year	0.7	2.4	0.882
Alcohol abuse lifetime	11.7	22.2	0.138
Alcohol dependence past year	1.3	8.0	<0.001
Alcohol dependence lifetime	6.8	16.0	0.023
Drug abuse past year	0.2	1.2	0.042
Drug abuse lifetime	7.3	16.1	0.047
Drug dependence past year	1.1	4.1	0.037
Drug dependence lifetime	4.7	11.9	0.031

Discussion

Results of the bivariate analysis indicated that adults with a history of childhood abuse and adult IPV reported greater disruptions in their self-appraisals and greater likelihood of mental and substance abuse disorders than were adults with no IPV. Specifically, those who experienced IPV were more dependent on others, more enmeshed with others, more insecure, and had lower self-esteem. They also were more likely to have depression, anxiety, PTSD symptoms, and alcohol and substance abuse problems. Despite these differences, only three variables emerged as independent predictors of adult IPV in the multiple logistic regression analysis. These were low-self-esteem, past year PTSD, and past year alcohol dependence.

These findings are consistent with those that show children who are exposed to interparental violence are more likely to experience low self-esteem, alcohol and drug use, and trauma-related symptoms such as anxiety and sleep disturbance in later life (Choice et al. 1995; Silvern et al. 1995). Other studies have found high rates of low self-esteem in both female victims and male perpetrators of IPV (Boney-McCoy and Sugarman 1999; Logan et al. 2006). Similarly, our finding of PTSD as a factor in transmission of violence is suggestive. Although between 58% and 77% of women with partner violence histories report PTSD symptoms (Perrin et al. 1996), this study suggests that these trauma symptoms may be related to the adult violence, and may have a role in susceptibility to entering or remaining in violent relationships. This is also supported by Dutton's (1995, 1999) findings that violent men who experienced childhood abuse (through witnessing or experiencing) show PTSD-like symptoms.

While it cannot be said that alcohol causes family violence, alcoholism is present in a large number of both abusers and victims. According to Willson et al. (2000), 19% of male perpetrators consumed alcohol, and an additional 30% both drank alcohol and used illicit drugs. Studies have shown elevated levels of substance use, including alcohol, among victims of IPV (Danielson et al. 1998; Watson et al. 1997). In addition, more frequent victimizations are linked to greater likelihood of substance use for women (Logan et al. 2006). Although other research would suggest that these issues are common to both abused populations and those in relationships characterized by violence, this study provides a link between the two.

Interestingly, more individuals in this study who had experienced childhood abuse were experiencing IPV than were not (62.7% vs. 37.3%). This may be because our way of defining violence in this study did not discriminate well the various types of violence such as situational couple violence (more common) or intimate terrorism (Johnson 2008). However, these findings support the assertion that those who have experienced past abuse are susceptible to relationships characterized by violence. This has implications for practitioners who work with individuals or families experiencing abuse and violence, and for researchers.

Practitioner Implications

Practitioners who are working with individuals where abuse has occured should be aware that there may be issues of self worth or self-esteem that need to be assessed and addressed. Also, practitioners who are working with clients who present with low self-esteem, PTSD, or substance

Table 4 Odds of experiencing interpersonal violence as an adult

	Unadjusted odds ratio[a]	95% confidence interval	Adjusted odds ratio	95% confidence interval
Income				
$0–$19,999	-		-	
$20,000–$34,999	0.60	0.32–1.13	0.67	0.34–1.33
$35,999–$69,999	0.41**	0.22–0.77	0.60	0.30–1.19
$70,000 and above	0.31**	0.14–0.69	0.49	0.20–1.19
Dependent on others	0.91**	0.85–0.97		
Independent from others	1.14*	1.03–1.27		
Enmeshed with others	0.92*	0.86–0.98		
Low self-esteem[b]	0.91***	0.87–0.94	0.92***	0.88–0.96
Insecure	0.80***	0.72–0.88		
Depression past year	2.36**	1.31–4.26		
Depression lifetime	1.94**	1.22–3.09		
GAD past year	4.29**	1.60–11.5		
GAD lifetime	2.45*	1.18–5.08		
PTSD past year	3.29**	1.64–6.61	2.21*	1.05–4.67
Alcohol Dep past year	1.45***	2.00–10.4	4.00**	1.55–10.3
Alcohol Dep lifetime	1.75*	1.07–2.86		
Drug abuse past year	5.04	0.89–28.5		
Drug abuse lifetime	1.62*	1.00–2.62		
Drug Dep past year	2.53*	1.03–6.24		
Drug Dep lifetime	1.83*	1.05–3.21		

[a] No IPV is referent group

[b] Lower number is associated with higher levels of the characteristic

*$p<0.05$, **$p<0.01$, ***$p<0.001$

abuse should assess for abuse in either past or present relationships. This knowledge may help professionals better adapt their work when they are treating victims of past abuse. This may be relevant in such venues as premarital education, marriage and family therapy, groups for children or teens, and relationship enhancement.

For clinicians, these findings support the idea that making sense out of past abuse and strengthening self concepts is a way to help individuals have healthier intimate partnerships (Briere and Elliot 1994). This reflective process can help those abused as children to de-identify with the abuse, feel more in control of their lives, and avoid violence in one's behavior and relationships (Harris and Dersch 2001; Valentine and Feinauer 1993). Practitioners can help individuals break abusive cycles by focusing on concrete events, exploring effects of subtle or overt abuse, and encouraging responsibility for choices and appraisals (Jory and Anderson 1999; Whiting 2008). Identifying and changing appraisals is also a critical part of helping victims of abuse to leave abusive relationships (Moss et al. 1997).

The finding that past year alcohol dependence was significantly associated with experiencing IPV as an adult is also relevant for those who work with individuals and families. While these cross-sectional data cannot determine whether childhood abuse led to development of alcohol dependence, other studies have shown a similar association between child abuse, IPV and alcohol dependence. Carbone-Lopez et al. (2006) found that, among females, alcohol consumption was almost three times greater among women subjected to systematic abuse. Conversely, it also has been found that alcohol use may increase the likelihood that women experience IPV, which again, may indicate the transmission link (Lipsky et al. 2005; Schafer et al. 2004). Other studies have found that alcohol use by the perpetrator is associated with IPV (Thompson and Kingree 2006). Given the high comorbidity rates of substance abuse and mental disorders in populations where abuse has occurred, this should always be assessed carefully.

Research Implications and Limitations

The findings of this study suggest that there is still much to be learned about the relationships between family of origin abuse and intimate partner violence. The specific mechanisms of violence transmission remain vague, with studies such as this one offering potential directions. The range of abuse types and personality types mix with a host of family and ecological factors that offer many more directions for exploration in discovering how aggression and abuse develop (Busby et al. 2008). For example, further work could explore the function of substance use and abuse as both a coping mechanism for past abuse and a vulnerability factor in future abuse. Other studies could break down types of abuse and their effects. For example, how does

sexual abuse differ from physical abuse in terms of effects on self-esteem and appraisals? What factors are most related to resilience in those who have been abused? How do attachment styles shape the tendency for relationship violence or abuse? Another important question involves gender differences in transmission, specifically regarding differences of victims and perpetrators of violence.

As discussed, we found no differences between men and women in their report of experiencing IPV, which is supported by other research using these data (Kessler et al. 2001). This was important however, because there tend to be clear roles for men (perpetrator) and women (victim) in intimate terrorism-types of violence (Johnson 2008), which are characterized by high levels of control and domination. It is likely that much of the violence reported in this data are of a different type, namely, situational couple violence. This can be severe, but is less likely to be characterized by terrorizing, and is much more likely to be found in survey data (Johnson 2008). If there were greater numbers in this survey, and better distinction between types of violence, it could be possible to analyze this data according to sex differences and violence types.

Also, there have been several studies suggesting the intergenerational transmission process may play out differently for men and women (e.g., Busby et al. 2008; Foo and Margolin 1995; Stith et al. 2000). For example, some literature has suggested that men who are exposed to abuse are more likely to become violent, and that women may be more prone to "select themselves into abusive relationships as adults or differentially fail to leave ongoing abusive relationships" (Kessler et al. 2001, p. 488). In a meta-analysis of studies on the intergenerational transmission of spouse abuse, Stith et al. (2000) found a stronger relationship between family of origin violence and perpetrating marital violence for men and a stronger relationship between family of origin violence and becoming a victim of marital violence for women. Given that we were not able to differentiate between perpetrators and victims of adult IPV in our analyses, the lack of sex differences in reports of IPV in this study may again reflect the inadequacy of the data in answering some of these questions.

It is important to remember that these data are cross-sectional in nature, and therefore we cannot assume any temporal relationships between variables. It is not knowable, for example, what effect current violence may be having on one's self-esteem or trauma symptoms. A victim of abuse may have had low self-esteem before getting into a violent relationship, but it is likely that this would be exacerbated after getting hurt. However, although the design of the study prevents drawing conclusions about whether the self-appraisals mediate the relationship between family of origin and adult violence, or are the result of adult violence in adult relationships, according to Pearlman (2003), the development of vulnerabilities in schemas related to safety, trust, intimacy, esteem, and control is strongly influenced by childhood experience and, due to the complex interplay of variables, remain relatively stable over time.

It may be that longitudinal studies are the only way to effectively understand the sequencing of violence transmission. These would be able to follow the temporal sequence of risk factors, appraisal characteristics, and the development of relationships. Qualitative studies may be another way to explore the sequence of violence transmission, although one's current perceptions may be skewed by ongoing interpersonal abuse and therefore the accuracy of in-depth interviews could be limited.

These data were collected in 1991 and may no longer capture the true prevalence and correlates of IPV today. However, it is unlikely that there has been a significant change in the prevalence and correlates of IPV since these data were gathered. Further, we know of few other nationally-representative datasets with the ability to simultaneously examine the associations between substance/mental disorders and IPV like that which was conducted in the current analysis. Also, there may be a limitation in a downward bias in reporting rates of IPV, especially among men, who tend to underreport the severity and frequency of violence, as compared to women (Archer 1999; Kessler et al. 2001).

Another limitation is in regard to the measure of mental disorders. Not only is it impossible to fully disentangle mental disorders and self-appraisals (e.g., low self-esteem is likely to overlap with depression), but these diagnoses are based on fully-structured trained interviews that, despite evidence of good reliability and validity, are not as sensitive as those carried out by clinicians (Kessler et al. 2001). Also, the diagnostic criteria for the aforementioned disorders have changed slightly since these interviews were undertaken. As with any study it would be helpful to replicate these findings with other samples and data.

Despite these limitations, the results of this study highlight the importance of self-appraisals, specifically self-esteem, in avoiding IPV in adulthood. Future research should focus on understanding in more detail both the process through which self-esteem is developed in childhood and adolescence, and how it may mitigate the effects of childhood violence into adulthood. This may help to inform future clinical interventions with children who are victims of abuse. Additionally, research and clinical interventions should focus on prevention of substance use disorders among children who experience violence. Given data that show substance use and mental disorders are often comorbid (Bucholz 1999; Simmons and Havens 2007), these preventive efforts might be bundled with mental health services for youth who experience childhood

violence. Future work in this area might serve to improve long-term outcomes, including reducing the transmission of abuse across generations.

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