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Child Maltreatment History Among Newlywed Couples : A Longitudinal Study of Marital Outcomes and Mediating Pathways

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Abstract

Participants included 202 newlywed couples who reported retrospectively about child maltreatment experiences (sexual abuse, physical abuse, psychological abuse, and neglect) and whose marital functioning was assessed 3 times over a 2-year period. Decreased marital satisfaction at T1 was predicted by childhood physical abuse, psychological abuse, and neglect for husbands; only neglect predicted lower satisfaction for wives. Increased maltreatment of various types was also related to T1 difficulties with marital trust and partner aggression. Dyadic growth curve analyses showed that the marital difficulties reported at T1 tended to remain over the course of the study. Further, in several instances, maltreatment exerted an increasingly detrimental influence on marital functioning over time, particularly for husbands. Examination of possible mediators between maltreatment and reductions in marital satisfaction revealed pathways through decreased sexual activity, increased psychological aggression, and increased trauma symptoms reported by husbands. These findings suggest that clinicians should consider how an adult's history of child maltreatment may contribute to current marital dysfunction. The authors also identify possible targets for intervention when working with this population.

Keywords: child maltreatment, marital satisfaction, trust, sexual functioning, partner aggression

Clinicians have long operated under the assumption that early abuse represents a traumatic interpersonal experience with the potential to result in long-term difficulties with intimate partner relations. Indeed, numerous books written by practicing clinicians reflect the belief that early maltreatment affects one's ability to establish lasting, satisfactory intimate relationships (e.g., Basham & Miehl, 2004; Davis, 1991). A number of theoretical models also point to intimate partner relations as an area of difficulty for adult survivors (e.g., Alexander, 2003; Finkelhor & Browne, 1985; Polusny & Follette, 1995). Among these theories, Finkelhor and Browne's (1985) traumagenic dynamics model has received a great deal of attention because of its utility for explicating the processes by which early sexual abuse may affect a variety of long-term outcomes (e.g., Coffey, Leitenberg, Henning, Turner, & Bennett, 1996). Although developed with sexual abuse in mind, the proposed "traumagenic dynamics" are likely to be common across various types of child abuse. Briefly, this model holds that the impact of childhood trauma can be accounted for by the dynamics of *betrayal*, *traumatic sexualization*, *stigmatization*, and *powerlessness*, which are said to "alter children's cognitive and emotional orientation to the world, and create trauma by distorting children's self-concept, world view, and affective capacities" (Finkelhor & Browne, 1985, p. 531).

Finkelhor and Browne's (1985) dynamics are useful for conceptualizing how various marital outcomes may be affected by early maltreatment. For example, the dynamic of betrayal may come into play in the aftermath of abuse when victims come to realize that an adult (often a family member) has violated the tacit but fundamental trust that normally exists between children and adults. Neglect represents a breach of trust whereby adults, who are expected to provide care and protection, deprive children of basic needs such as food, shelter, medical care, and supervision. Traumatic sexualization, which refers to developmentally inappropriate and dysfunctional sexual behavior stemming from sexual abuse, may manifest in a variety of lasting difficulties, including increased vulnerability to sexual assault, oversexualization of adult relationships, or aversion to sexual relations (Finkelhor & Browne, 1985). A third process, stigmatization, refers to internalized feelings of shame, guilt, and self-blame that arise from experiencing maltreatment. In the case of psychological abuse, for example, stigmatization may evolve from direct berating by the perpetrator. For other forms of maltreatment, stigmatization may develop in response to the secrecy that often surrounds abuse, reactions from family and the broader community upon the discovery of abuse, and from victims themselves. Carried into adulthood, stigmatization may contribute to lack of openness, feelings of

detachment, and general dissatisfaction in intimate relations. Finally, the dynamic of powerlessness refers to a lack of self-efficacy that is said to evolve from the uncontrollable and repeated boundary violations that accompany maltreatment. Powerlessness engendered by early sexual and physical abuse may undermine survivors' sense of control in relationships, rendering them less effective in asserting their needs during conflict and decision-making interactions with partners. In the extreme, such an imbalance of power or control may become a risk factor for additional victimizations within the marriage. Conversely, a preoccupation with issues of power may also manifest in compensatory striving on the part of victims to maintain or exert personal control in relationships. The extreme form of this tendency may again be linked to aggression, perhaps initiated by victims against their partners.

An emerging empirical literature has begun to test clinical and theoretical assumptions linking maltreatment to long-term deficits in couple functioning. Most of these studies have been conducted with women involved in dating relationships. For example, compared to nonabused women, unmarried women recruited from college and community settings who were exposed to child sexual abuse report having less emotional trust in their partners and view their partners as less reliable in following through with important aspects of the relationship (DiLillo & Long, 1999; Mullen, Martin, Anderson, Romans, & Herbison, 1994). Although studies of sexual functioning typically have focused on female survivors' sexual risk-taking that occurs outside the context of committed relationships (e.g., Orcutt, Cooper, & Garcia, 2005), maltreatment has also been linked to sexual difficulties with intimate partners (for a review, see Leonard & Follette, 2002). For example, women with a history of childhood sexual or physical abuse report engaging in less frequent sexual activity (Dinnerstein, Guthrie, & Alford, 2004), whereas both women and men who experienced sexual abuse report more symptoms of sexual dysfunction, including pain during intercourse, difficulty achieving and maintaining arousal, premature or delayed orgasm, and anxiety about sexual performance (Najman, Dunne, Purdie, Boyle, & Coxeter, 2005). These difficulties may also contribute to survivors' lower sexual satisfaction and sexual drive (Randolph & Reddy, 2006), as well as greater negative affect while sexually aroused (Schloretdt & Heiman, 2003).

Several studies of unmarried individuals have found that a history of maltreatment is associated with later psychological, physical, and sexual victimization by an intimate partner (e.g., DiLillo, Giuffre, Tremblay, & Peterson, 2001; Whitfield, Anda, Dube, & Felitti, 2003). Conversely, links have also been found for both men and women between a history of child maltreatment and the perpetration of physical aggression against a partner (DiLillo et al., 2001; White & Widom, 2003; Whitfield et al., 2003). Beyond group comparisons of victims and nonvictims, evidence suggests a dose-response relationship between maltreatment and partner aggression, such that men and women from a community setting who were exposed to greater adversity as children (including maltreatment) are more likely to perpetrate partner aggression as adults (Anda et al., 2006).

Difficulties in these more specific domains of couple functioning may contribute to general dissatisfaction and ultimately relationship dissolution for victims of maltreatment. For example, cross-sectional findings indicate that individuals with a history of maltreatment are less satisfied in their intimate relationships than are nonmaltreated individuals

(DiLillo & Long, 1999; Nelson & Wampler, 2000; Whisman, 2006). Moreover, in the few studies that have examined marital functioning, both husbands and wives with a history of sexual abuse, physical abuse, or neglect experienced higher rates of separation and divorce than did spouses without such histories (Colman & Widom, 2004; Finkelhor, Hotaling, Lewis, & Smith, 1989; Whisman, 2006).

Collectively, these findings support theories that maltreatment increases vulnerability to a variety of difficulties with intimate partner relations. However, this relatively small literature is characterized by a number of methodological shortcomings. For example, data about victims' couple functioning have often been collected as an ancillary part of larger surveys. As such, many studies have included a limited number of assessment measures, often consisting of global indicators of marital functioning (e.g., likelihood of separation, divorce rates) without considering the contributions of other relationship factors such as trust, sexual functioning, and partner aggression. Similarly, assessment of maltreatment history has usually been limited to a single abuse type (sexual or physical), employing instruments of unknown psychometric properties. This limitation has resulted in a crucial variable—victimization history—being assessed in little detail and with unknown reliability. Few maltreatment investigations have included both men and women, and we are aware of none focused on marital functioning that included both spouses. Rather, data most often reflect the evaluations of individuals involved in dating relationships. Finally, because previous work has been cross-sectional in design, our current body of knowledge consists mainly of descriptive snapshots of relations between large numbers of variables.

The present study is intended to address these methodological issues. To accomplish this, we assessed multiple forms of maltreatment (i.e., sexual abuse, physical abuse, psychological abuse, and neglect) and examined a range of both global (satisfaction) and more specific marital domains (trust, sexual functioning, partner aggression) that are theoretically tied to early maltreatment. The study was conducted with a sample of randomly recruited newlywed couples rather than individuals in dating relationships, enabling us to consider abuse history as a source of distress for both partners during a period of relationship development when the risk of divorce is high (Bradbury, Fincham, & Beach, 2000). Finally, to examine trajectories of marital change, couples provided data at three time points approximately 1 year apart. By exploring the role of child maltreatment in foreshadowing early changes in marital functioning, we sought to advance knowledge in this area beyond cross-sectional comparisons of victims and nonvictims.

Consistent with prior research with newlyweds, (e.g., Van Laningham, Johnson, & Amato, 2001), we predicted that overall, marital outcomes would show declining trends over the course of the study, independent of prior abuse. In each model, we expected that the introduction of maltreatment would be associated with poorer initial marital outcomes across a variety of domains, thus paralleling cross-sectional findings (e.g., Whisman, 2006). To investigate longitudinal changes in marital functioning, we examined child maltreatment measured at T1 as a predictor of marital outcomes assessed at two subsequent time points. Although marital functioning in general was expected to decrease during this time period, we predicted that marital outcomes across all domains would deteriorate more sharply as the severity of each abuse type increased.

Beyond elucidating trajectories of marital change in relation to prior abuse, an additional goal of the study was to shed light on the processes by which these changes may occur. Indeed, the temporally distal relationship between childhood abuse and marriage suggests that links between the two are likely to be mediated by more proximal intervening variables. Knowledge of such variables is valuable, in part, because these mechanisms represent potentially important targets for intervention. Here we examined several variables, both relational and psychological, that may account for linkages between maltreatment and ongoing marital distress. To evaluate mechanisms arising from within the couple, we investigated whether specific relationship characteristics explained the linkages between each partner's abuse history and his or her ongoing marital satisfaction. In particular, impaired trust, sexual dysfunction, and partner violence, which are each documented *sequelae* of abuse (DiLillo et al., 2001; DiLillo & Long, 1999) and have also been implicated in the development of marital difficulties (Schramm, Marshall, Harris, & Lee, 2005), were examined as possible mediators of more general marital satisfaction in relation to prior abuse.

In addition to relationship characteristics, we also explored the role of trauma symptomatology in mediating associations between a history of maltreatment and ongoing marital satisfaction. Early maltreatment is a traumatic experience that has been consistently linked with increased symptoms of posttraumatic stress disorder among adult survivors (Widom, 1999), which in turn have been associated with poor couple functioning, including increased partner aggression in participants from the community (Taft, Schumm, Marshall, Panuzio, & Holtzworth-Munroe, 2008) and marital dissatisfaction among veterans and former prisoners of war (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Dekel & Solomon, 2006). As suggested by these studies, survivors of childhood trauma who are coping with increased trauma symptoms may be so emotionally taxed that they have few remaining resources to devote to working through the stressors that couples encounter in the initial phases of marriage. Although individual linkages have been documented, we extended this literature by testing whether the impact of early maltreatment on marital satisfaction is mediated by the development of trauma symptomatology.

Method

Participants

Participants were recruited randomly from a list of all marriage licenses issued in Lancaster County, Nebraska, over a 12-month period. To be eligible, both partners had to be at least 19 years old and in the first year of their first marriage. Of the 1,420 couples who received letters inviting them to participate, 202 (14.2%) enrolled in the study. Although this figure is comparable to other studies using similar recruitment strategies (Davila, Bradbury, Cohan, & Tochluk, 1997; Kurdek, 2005), it likely underestimates our success in recruiting first-time married couples, because an unspecified number of those receiving recruitment letters had previously been married and thus were not eligible for the study (prior marriages were not designated in the public database).

On average, husbands were 27.23 years old ($SD = 4.05$ years) and wives were 25.75 years old ($SD = 3.96$ years) at

the T1 assessment. Most participants (94%) were European American; 2% were Latino American, 1% was Asian American, 1% was African American, and 1% was Native American. Race or ethnicity was unreported for 2% of participants. Participants reported the following as the highest level of education they had completed: less than high school (0.4%), high school or general equivalency diploma (6.2%), some college (30.6%), bachelor's degree (36.8%), and some graduate school or advanced degree (26.0%). Regarding average annual family income, 39.5% of participants reported earning less than \$40,000; 43% reported earning \$40,001 to \$80,000; and 17.5% reported earning more than \$80,000. At the T1 assessment, couples had been married for an average of 11.06 months ($SD = 2.46$ months). Participants' race or ethnicity, education, and income were consistent with the demographic composition of Lancaster County (U.S. Census Bureau, 2005). All procedures were approved by the University of Nebraska-Lincoln Institutional Review Board, and informed consent was obtained from participants upon arrival at each of the three laboratory sessions.

Attrition and Missing Data

Couples participated in three assessments spaced approximately 1 year apart. Of the 202 couples who completed the T1 assessment, 4 divorced prior to the T2 assessment and 8 were unable to be scheduled for a T2 assessment, resulting in a sample of 190 couples at T2 (94% of the original sample). An additional 4 couples divorced between T2 and T3, and 3 couples could not be contacted for the T3 assessment, yielding a total of 183 couples for the final study assessment (91% of the original sample). Data from the 8 couples who divorced during the course of the study were likely missing not at random (i.e., the missing-at-random assumption needed for maximum likelihood handling of missing data was likely not met). Further, Monte Carlo simulations indicated that notable parameter estimate bias occurred when these couples were retained in the database; therefore, these 8 couples were omitted from growth curve and mediation analyses. Nondivorce attrition and item-level missing data were handled via the default maximum likelihood estimation algorithm in Mplus (Version 5.1; Muthén & Muthén, 2007).

Measures

Computer-Assisted Maltreatment Inventory (CAMI; DiLillo et al., 2006)— The CAMI is a behaviorally specific self-report measure that assesses various forms of maltreatment, including sexual abuse, physical abuse, psychological abuse, and neglect. The Sexual and Physical Abuse subscales include screening questions that correspond to commonly used definitions of each form of maltreatment; positively endorsed screening items are followed by a more detailed assessment of specific characteristics of the abuse (see DiLillo et al., 2009). From these responses, severity scores are derived for each form of maltreatment, reflecting the sum of six severity indicators selected for their ability to predict poor long-term outcomes for maltreatment victims (e.g., for sexual abuse, these indicators are nature, frequency, and duration of abusive acts; use of physical force; relationship to perpetrator; and number of perpetrators). Each severity indicator yields a score of 1, 2, or 3, with higher scores indicating greater abuse severity. The Psychological Abuse and Neglect subscales consist of 24 and 20

items, respectively, and responses to items are summed, with higher scores indicating greater levels of maltreatment. In the current sample, the internal consistency reliability estimates for the CAMI Sexual Abuse, Physical Abuse, Psychological Abuse, and Neglect subscales were .96, .86, .96, and .94, respectively.

Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998)— The CTQ is a 28-item self-report measure that assesses sexual abuse, physical abuse, emotional abuse, emotional neglect, and physical neglect. Using a 5-point Likert-type scale, respondents report their level of agreement with objective and subjective indicators of abuse during their childhood. Responses are summed; higher scores indicate greater levels of each type of maltreatment. In the current study, the mean internal consistency reliability estimate across the five CTQ subscales was .81.

Quality Marriage Index (QMI; Norton, 1983)— The six-item QMI was used to measure overall marital satisfaction. Responses are summed, with higher scores indicating greater global satisfaction with the marriage. Internal consistency coefficients for the present sample averaged .93 across assessment points.

Specific Interpersonal Trust Scale (SITS; Johnson-George & Swap, 1982)— The female (13 items) and the male (19 items) versions of the SITS were used to assess participants' trust in their partners. Responses are summed, with higher scores indicating greater trust in one's partner. Both the female and male versions of the SITS contain a Reliability subscale and an Emotional Trust subscale. The male version contains an additional General Trust subscale that was not used in the present study, due to the lack of a parallel scale in the female version of the SITS. In the present study, the average SITS internal consistency reliability estimate was .84 and .92 for husbands and wives, respectively, across all time points.

Sexual History Form (SHF; Nowinski & LoPiccolo, 1979)— The SHF is a 28-item measure that assesses respondents' sexual functioning in relationship to a specific partner. For the present study, two SHF items were examined separately: Item 1 ("How frequently do you and your mate have sexual intercourse or activity?"; higher scores indicate less frequent sexual activity) and Item 11 ("Overall, how satisfactory is your sexual relationship with your mate?"; higher scores indicate greater satisfaction). These items were selected because they represent key indicators of both the behavioral and affective aspects of sexual functioning; other SHF items assess much narrower facets of sexual relationships (e.g., length of foreplay).

Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996)— The CTS2 was used to assess physical (12 items) and psychological (8 items) victimization by and perpetration of aggression involving intimate partners. Participants separately indicated how often they and their partner engaged in each aggressive behavior during the year prior to each assessment. Consistent with prior research (e.g., Schumacher & Leonard, 2005), and to guard against abuse underreporting, the score of the partner who reported a greater frequency of abuse was used in all analyses for both victimization scores (i.e., participants' reports of their partner's behavior and partners' reports of their own behavior) and perpetration scores (i.e., participants' reports of their own behavior and partners' reports of participant behavior). Physical Assault subscale items were severity-weighted on the basis of their potential for injury (i.e., more severely aggressive items received higher scores, regardless of their frequency).

Correlations between husbands' and wives' physical and psychological aggression ranged from .70 to .88 across data collection waves. Alpha coefficients for the current sample ranged from .71 to .79 for physical and psychological aggression perpetration and victimization across all time points.

Trauma Symptom Inventory (TSI; Briere, 1995)— The TSI is a 100-item measure designed to assess posttraumatic stress symptomatology. Items were summed to arrive at a total score. The internal consistency reliability estimate for this measure was .96.

Analytic Strategy

Data analyses were carried out in five steps. First, descriptive statistics regarding participants' reported childhood maltreatment experiences were computed. Second, each partner's changes in marital functioning (i.e., satisfaction, trust, sexual functioning, and intimate partner aggression) over the course of the study were examined using an unconditional dyadic growth-curve model (e.g., see Kenny, Kashy, & Cook, 2006) to obtain intercept and slope fixed-effect estimates and to test for the presence of significant variance in these latent growth trajectory factors. Third, if significant intercept or slope variance was present in the previous step, conditional growth models that included childhood maltreatment as a time-invariant covariate were analyzed to predict significant intercept and slope variance, where appropriate. Specifically, structural equation modeling (SEM) was used to combine indices of childhood maltreatment into four latent variable measurement models for sexual, physical, and psychological abuse, as well as neglect (e.g., Kline, 2004). In light of findings that parental divorce is common in maltreating families and increases the likelihood that offspring will experience distress in their own marriages (e.g., Amato & Booth, 2001), this additional factor was included as a covariate to assess whether childhood maltreatment would be a significant predictor of marital functioning beyond that attributable to another index of family of origin discord. In addition, four "slope on intercept" regression paths were added to all models to examine the relationship between maltreatment and marital functioning trajectories after controlling for the influence of husbands' and wives' initial status on (a) their own and (b) their partner's subsequent marital functioning changes over time. A generic example of the conditional models is shown in Figure 1. Multiple group SEM analyses were used to test for significant gender differences in the estimated parameters. Finally, the conditional model shown in Figure 1 was expanded to test marital and trauma symptom variables as potential mediators of the relationship between childhood maltreatment and changes in marital satisfaction over time. In the interest of space, Figure 2 illustrates only how the model in Figure 1 was expanded to conduct these analyses.

Results

Descriptive Data

For descriptive purposes, the child maltreatment latent variables were disaggregated to examine specific maltreatment characteristics for the husbands and wives included in the present analyses. Table 1 presents information regarding the CAMI sexual and physical abuse severity indicators for those

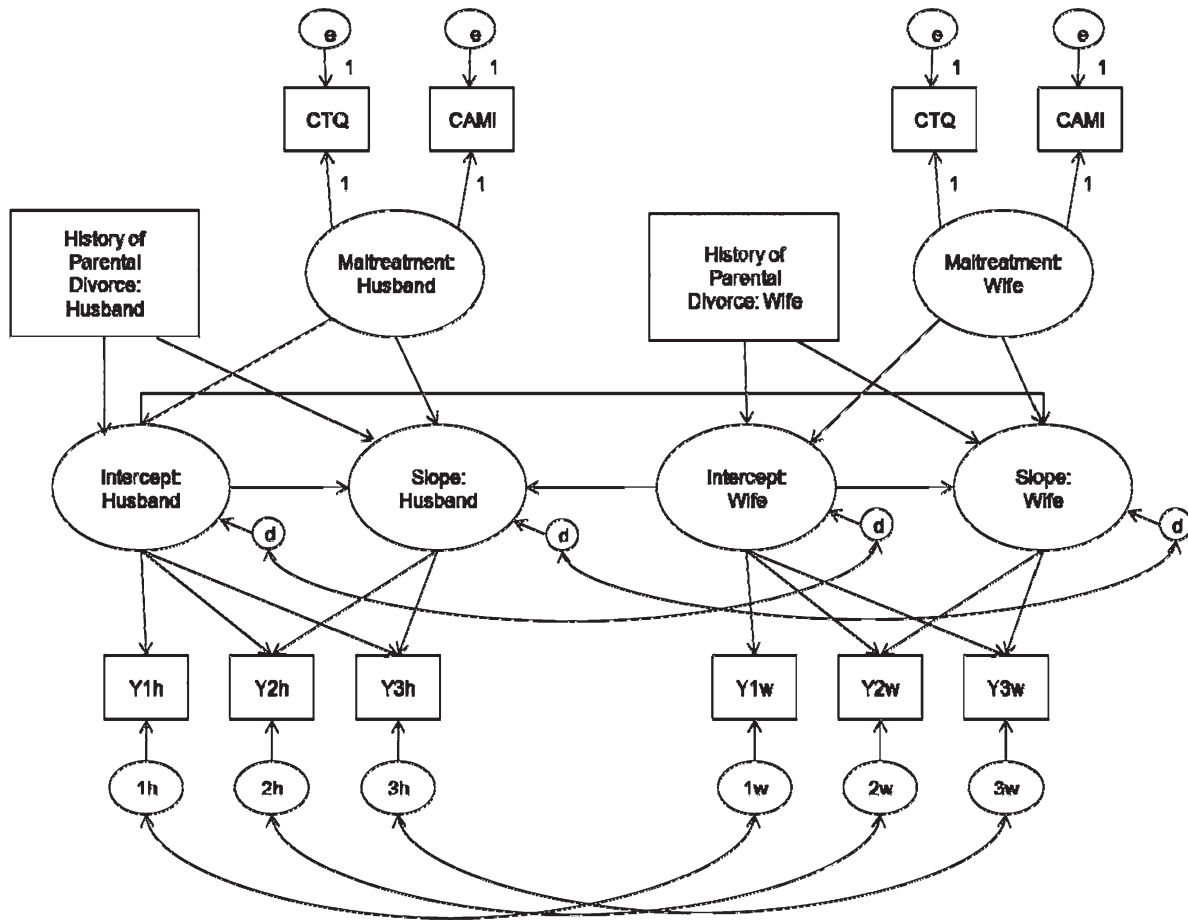


Figure 1. Conditional growth model: Childhood maltreatment with parental divorce. CTQ = Childhood Trauma Questionnaire; CAMI = Computer-Assisted Maltreatment Inventory; e = confirmatory factor analysis measurement error, d = latent variable disturbances (i.e., unexplained variance), Y = response variables measured from husbands (h) and wives (w) at all three time points (1, 2, and 3).

meeting victim criteria for each of these types of abuse on this measure. Responses indicated that both husbands and wives classified as victims of sexual abuse were most often abused by one nonfamily member for less than 1 year. Most husbands and wives reported that their abuse involved physical contact other than penetration, and most victims reported that the perpetrator used verbal tactics during the abuse. Most wives reported that their abuse occurred 1–2 times, whereas an equal number of husbands reported that their abuse occurred 1–2 times and 3–10 times. Most husbands and wives classified as victims of physical abuse on the CAMI reported being abused by two perpetrators, most often parents, more than 11 times over the course of more than 2 years. The continuous severity scores for psychological abuse and neglect on the CAMI were also examined. The mean severity scores for those meeting criteria for psychological abuse on this measure were 98.25 ($SD = 31.06$) for husbands and 92.31 ($SD = 27.81$) for wives. In addition, the mean severity scores for participants meeting abuse criteria for neglect on the CAMI were 61.80 ($SD = 20.40$) for husbands and 54.67 ($SD = 16.79$) for wives. When CAMI and CTQ subscale scores for husbands and wives were compared across abuse types, partners did not significantly differ on abuse severity, except that husbands reported more severe physical abuse than wives on the CAMI, $t(208) = 2.82, p < .001$.

Intercorrelations among severity scores for all abuse types on both the CAMI and the CTQ are presented in Table 2. On the CAMI, the average correlation between abuse types was .44 (range = .17 to .80) for husbands and .33 (range = .18 to .75) for wives. On the CTQ, the mean correlation between abuse types was .49 (range = .30 to .63) for husbands and .41 (range = .18 to .74) for wives. The mean correlations between abuse types across both measures were .47 (range = .24 to .76) for husbands and .40 (range = -.02 to .76) for wives. As expected, correlations between similar abuse types (e.g., psychological abuse as measured by the CAMI and by the CTQ) tended to be higher than correlations between less similar abuse types (e.g., sexual abuse and physical neglect).

An examination of the abuse characteristics of the 8 divorced couples revealed that 6 of the wives had been sexually abused, 4 of the wives had been physically abused, and 7 of the husbands had been physically abused. Further, 4 of the 8 wives reported both sexual and physical abuse. When abuse severity scores were compared between participants in divorced and intact relationships, several differences emerged. Specifically, husbands who divorced reported significantly greater physical and psychological abuse severity on the CAMI than husbands who did not divorce, $t(207) = -2.84, p < .01$, and $t(207) = -2.30, p < .05$, respectively. Wives who divorced reported significantly

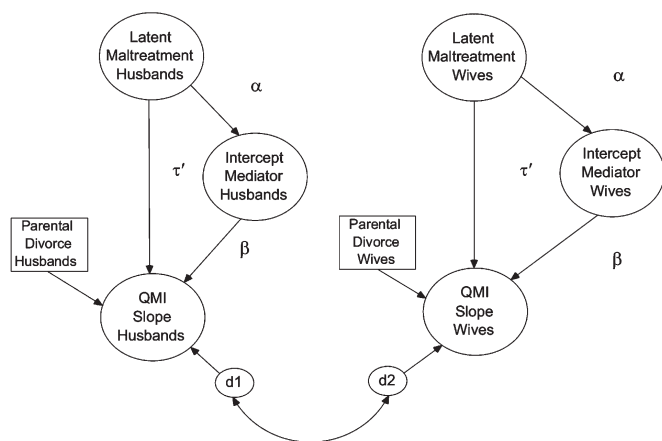


Figure 2. Mediation model illustrating how the model shown in Figure 1 was expanded upon to conduct mediation analyses. QMI = Quality Marriage Index; d = latent variable disturbances (i.e., unexplained variance). α indicates mediator on independent regression; β indicates dependent variable on mediator regression; τ' indicates dependent variable on independent variable regression in the presence of the mediator.

greater sexual and psychological abuse on the CAMI, $t(207) = -3.08, p < .01$, and $t(207) = -2.85, p < .01$, respectively, and significantly greater emotional neglect on the CTQ, $t(181) = -2.29, p < .05$, than wives who did not divorce.

Dyadic Growth Curve Models

Unconditional growth curve model fixed-effect (i.e., intercept and slope) and variance component (i.e., intercept variance and slope variance) estimates for all response variables are presented in Table 3. For all unconditional dyadic growth curve models, chi-square model fit statistics were nonsignificant; comparative fit index (CFI) statistics were .95 or above; and root mean square error of approximation (RMSEA) and standardized root-mean-square residual (SRMR) indices were, respectively, 0.05 and 0.08 or less. These models demonstrate that marital outcomes in the overall sample showed significant declines over time. As shown in Table 4, childhood maltreatment and history of parental divorce were added to the unconditional dyadic growth curve model, where applicable, to explain significant intercept and slope variation. The regression of slope on intercept (i.e., covariance) was also included for all response variables to further examine whether the relationship between maltreatment and marital functioning trajectories changed after controlling for the influence of both partners' initial status on their own and their partner's subsequent marital functioning changes. Examination of results omitting history of parental divorce as a covariate revealed no systematic effects on the present findings. Further, the ranges of fit index statistics for all conditional dyadic growth curve analyses across all maltreatment types (CFI = 0.92–0.99, RMSEA = 0.03–0.07, SRMR = 0.04–0.08) indicated these models were acceptable fits to the data (see Hu & Bentler, 1999; Marsh, Hau, & Wen, 2004).

Intercept variance prediction. Table 4 presents the intercept variance prediction results. For husbands, results indicated that lower levels of both marital satisfaction and

trust in their wife's reliability were associated with higher severity of husband physical and psychological abuse, as well as neglect. Further, lower levels of husbands' emotional trust in their wives were related to higher severity of husbands' psychological abuse and neglect. In addition, higher levels of husbands' perpetration of psychological aggression against partners were associated with higher severity of physical and psychological abuse, as well as neglect. Findings also showed that for husbands, higher levels of victimization by partner physical aggression were associated with higher levels of physical abuse and neglect. Results examining husbands' perpetration of physical aggression against partners further indicated that higher levels of this behavior were related to higher severity of sexual and physical abuse and lower neglect severity.

For wives, results indicated that lower levels of marital satisfaction and emotional trust in husbands were associated with higher neglect severity. In addition, for wives, lower levels of trust in their husband's reliability were associated with higher psychological abuse and neglect severity. Further, higher levels of wives' perpetration of psychological aggression against partners were related to higher neglect severity. Higher levels of wives' victimization by partner physical aggression were related to higher severity of physical abuse and neglect. Lastly, higher levels of wives' perpetration of partner physical aggression were associated with higher severity of sexual and physical abuse, but lower neglect severity.

As shown in Table 4, two paths predicting intercept variation showed a significant gender difference. The relationship between marital satisfaction and severity of physical abuse was significantly greater for husbands than for wives. In addition, the association between victimization by partner physical aggression and severity of physical abuse was significantly stronger for wives than for husbands.

Slope variance prediction. Table 4 also presents the slope variance prediction results. All interpretations below are made relative to the unconditional model results presented in Table 3; that is, changes in slope as a function of maltreatment are described in relation to the overall trends over time in marital functioning, independent of maltreatment history. Results indicated that decreases in husbands' marital satisfaction over time were greater for those who reported higher severity of psychological abuse and neglect. Also, husbands who reported higher severity of neglect showed greater decreases in victimization by partner psychological aggression over time but greater increases in perpetration of partner psychological aggression over time. Further, findings indicated that increases in victimization by partner physical aggression over time were greater for husbands who reported higher severity of physical abuse. For wives, increases in perpetration of partner psychological aggression over time were associated with higher severity of neglect. Similarly, increases in victimization by partner physical aggression over time were greater for those who reported higher severity of physical abuse.

As shown in Table 4, significant gender differences were observed for two slope variance on maltreatment regression coefficients. For model paths relating marital satisfaction slope to psychological abuse and neglect, husbands' coefficients significantly differed from wives' coefficients. This finding suggests that greater psychological abuse and neglect were related to significantly greater decreases in satisfaction over time for husbands than for wives.

Table 1. Sexual and Physical Child Maltreatment Descriptive Data From the CAMI

Variable	Maltreatment victims									
	Child sexual abuse (CSA)					Child physical abuse (CPA)				
	Wives (n = 59)		Husbands (n = 9)		Partner difference χ^2_{df}	Wives (n = 54)		Husbands (n = 80)		Partner difference χ^2_{df}
n	% of victims	n	% of victims	n		% of victims	n	% of victims		
Number of perpetrators					$\chi^2_2 = 0.48$					$\chi^2_3 = 8.09^*$
One	44	74.6	7	77.8		15	27.8	17	21.3	
Two	12	20.3	2	22.2		36	66.7	43	55.0	
Three	3	5.1	0	0		2	3.7	10	12.5	
Four or more	0	0	0	0		1	1.9	9	11.3	
Perpetrator					$\chi^2_2 = 0.60$					$\chi^2_2 = 7.10^*$
Nonfamily	35	59.3	6	66.7		1	1.9	2	2.5	
Family, but not parent	20	33.9	2	22.2		1	1.9	2	2.5	
Parent	4	6.8	1	11.1		52	96.3	76	95.0	
Frequency					$\chi^2_2 = 0.92$					$\chi^2_2 = 2.22$
1-2 times	32	54.2	4	44.4		4	7.4	7	8.8	
3-10 times	17	28.8	4	44.4		24	44.4	31	38.8	
11 or more times	10	16.9	1	11.1		26	48.1	42	52.5	
Duration ^a					$\chi^2_2 = 1.21$					$\chi^2_2 = 0.17$
Less than 1 year	36	61.0	5	55.6		2	3.7	7	8.8	
1-2 years	11	18.6	5	33.3		5	9.3	6	7.5	
More than 2 years 1	2	20.3	1	11.1		47	87.0	67	83.8	
Nature of acts (CSA)					$\chi^2_2 = 1.05$					
Noncontact	5	8.5	0	0						
Physical contact, no penetration	40	67.8	6	66.7						
Penetration	14	23.7	3	33.3						
Nature of acts (CPA) ^b										$\chi^2_2 = 0.52$
Mild						5	10.4	5	6.8	
Moderate						19	39.6	31	41.9	
Severe						24	50.0	38	51.4	
Force (CSA)					$\chi^2_2 = 7.11$					
No force	7	11.9	1	11.1						
Verbal tactics	26	44.1	8	88.9						
Threats of physical harm	3	5.1	0	0						
Physically held down	23	39.0	0	100						

CAMI = Computer-Assisted Maltreatment Inventory

^a One wife was missing data on physical abuse duration.^b Mild CPA = grabbed, shook, slapped, pinched, and spanked with or without an object; moderate CPA = punched, kicked, knocked down, and had a hard object thrown at; severe CPA = hit with hard object, choked, beaten, burned, and threatened with a weapon.* $p < .05$

Mediation Analyses

To examine possible explanatory factors in changes in marital satisfaction over time, we next tested whether initial status on marital functioning and posttraumatic stress symptoms mediated the relationships between childhood maltreatment and these marital satisfaction changes; an example is shown in Figure 2. The notation employed here is consistent with Fritz and MacKinnon (2007), and the PRODCLIN2 program (Fritz & MacKinnon, 2007; MacKinnon, Fritz, Williams, & Lockwood, in press) was used to test for significant partial or full mediation effects (MacKinnon, Fairchild, & Fritz, 2007). As discussed below, results revealed one partial mediated effect (i.e., jointly significant α and β mediating pathways in the presence of a significant τ' path) and three fully mediated effects (i.e., jointly significant α and β mediating pathways and a nonsignificant τ' path; e.g., see Fritz & MacKinnon, 2007; MacKinnon et al., 2007;

MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). These effects were only evident for husbands, and no significant mediation effects emerged for the relationship between sexual or psychological abuse severity and subsequent marital satisfaction over time. Consistent with several investigations by MacKinnon and colleagues (e.g., Fritz & MacKinnon, 2007; MacKinnon et al., 2002, 2007), a significant "marital satisfaction change on maltreatment" relationship is not a prerequisite for mediation testing; however, the significance of that relationship in the presence of jointly significant α and β paths (i.e., τ' path) is needed to differentiate partially mediated and fully mediated relationships.

For husbands, three instances of fully mediated pathways emerged. Specifically, the relationship between physical abuse severity and subsequent marital satisfaction over time was fully mediated by T1 sexual activity frequency, T1 psychological aggression perpetration, and T1 trauma symptoms. Thus,

Table 2. Intercorrelations Among Abuse Types

Maltreatment type	1	2	3	4	5	6	7	8	9
1. CAMI-S	—	.58	.18	.32	.32	.31	.19	-.02 ^a	.27
2. CTQ-S	.31	—	.21	.26	.31	.28	.27	.18	.34
3. CAMI-PH	.17	.26	—	.52	.33	.37	.21	.28	.23
4. CTQ-PH	.33	.40	.53	—	.57	.60	.33	.33	.46
5. CAMI-PS	.46	.35	.52	.57	—	.70	.75	.50	.70
6. CTQ-E	.52	.40	.38	.61	.76	—	.51	.47	.74
7. CAMI-N	.18	.35	.48	.47	.48	.61	—	.48	.47
8. CTQ-PN	.31	.36	.34	.52	.61	.62	.66	—	.44
9. CTQ-EN	.24	.30	.38	.46	.73	.59	.63	.63	—

Husbands' correlations are presented below the diagonal; wives' correlations are presented above the diagonal. CAMI = Computer Assisted Maltreatment Inventory; CTQ = Childhood Trauma Questionnaire; S = sexual; PH = physical; PS = psychological; E = emotional; N = neglect; PN = physical neglect; EN = emotional neglect. All correlations except ^a are significant at $p < .05$.

as physical abuse severity increased, (a) T1 frequency of sexual activity significantly decreased ($\alpha = .03, p < .05$); (b) T1 perpetration of psychological aggression significantly increased ($\alpha = .48, p < .05$); and (c) T1 trauma symptoms significantly increased ($\alpha = 1.83, p < .05$)—each of which led to subsequent significant decreases in marital satisfaction over time (β s = $-0.25, -0.02$, and -0.01 , respectively; all $ps < .05$). Further, in the presence of this mediator, each of the previously significant relationships between physical abuse severity and marital satisfaction over time dropped to nonsignificance.

Table 3. Unconditional Growth Model

Variable	Unconditional Growth Model			
	Intercept	Variance	Slope	Variance
Satisfaction				
H	29.54*	7.96*	-0.55*	2.57*
W	29.21*	10.42*	-0.32*	1.50*
Reliability				
H	33.06*	13.84*	-0.18	10.39*
W	56.70*	41.16*	-0.04	16.18*
Emotional trust				
H	45.24*	53.60*	-0.63*	18.14*
W	48.60*	32.57*	-0.37	19.34*
Sexual frequency				
H	4.50*	1.51*	0.35*	0.25*
W	4.54*	1.38*	0.28*	0.10
Sexual satisfaction				
H	4.74*	0.62*	-0.19*	0.07
W	4.74*	0.40*	-0.12*	0.08
Psychological aggression				
H-V	25.61*	432.41*	-2.12*	60.12*
W-V	23.18*	402.61*	-1.39*	50.66*
H-P	23.17*	402.55*	-1.39*	50.62*
W-P	25.63*	431.85*	-2.13*	60.14*
Physical aggression				
H-V	4.57*	146.01*	-1.13*	46.83*
W-V	2.89*	71.68*	-0.80*	29.00*
H-P	2.89*	71.68*	-0.80*	29.00*
W-P	4.57*	146.01*	-1.13	46.83*

H = husband; W = wife; V = victimization scores; P = perpetration scores.

* $p < .01$

Results for husbands showed that the relationship between neglect severity and marital satisfaction over time was partially mediated by the frequency of sexual activity at T1. Specifically, as neglect severity increased, the frequency of sexual intercourse significantly decreased ($\alpha = .03, p < .05$), and subsequent marital satisfaction over time ($\beta = -0.21, p < .05$) significantly decreased. The negative relationship between neglect severity and marital satisfaction over time remained significant, though attenuated, in the presence of sexual activity frequency ($\tau = -0.15, p < .05$).

Discussion

Before discussing primary findings, a brief mention of abuse rates and marital outcomes in the overall sample seems warranted. The prevalence of sexual abuse (6.4%) found here was identical to the 6.4% of participants reporting sexual abuse in Whisman's (2006) national probability sample of married couples. However, rates of physical abuse in the current sample (30%) were substantially higher than those found by Whisman (4.6%). The increased physical abuse found here is likely due to a broader definition and the use of multiple behaviorally specific screening questions, which have been found to elicit more disclosure (DiLillo, Hayes, & Hope, 2006). Comparisons of husbands' and wives' abuse severity revealed that, with the exception of more severe physical abuse reported by husbands on the CAMI, partners did not differ with respect to severity for other forms of maltreatment. Consistent with prior studies (Bradbury & Karney, 2004; Cohan & Bradbury, 1997; Kurdek, 2005), the current sample also reported relatively high initial relationship satisfaction, partner trust, and sexual frequency and satisfaction, as well as levels of partner aggression comparable to national averages. Also, congruent with other research (e.g., Van Laningham et al., 2001), downward growth trajectories emerged for the unconditional models, indicating that marital satisfaction decreased over time.

A major goal of this study was to determine whether various forms of maltreatment were associated with lower initial (T1) and ongoing (T2 and T3) marital functioning. Notably, physical abuse, psychological abuse, and neglect were related to lower T1 marital satisfaction for husbands, whereas only neglect predicted lower marital satisfaction for wives. Further, in the majority of cases where direct comparisons revealed significant

Table 4. Conditional Growth Model With Sexual Abuse, Physical Abuse, Psychological Abuse, and Neglect

Variable	Conditional Growth Model							
	Sexual		Physical		Psychological		Neglect	
	Intercept	Slope	Intercept	Slope	Intercept	Slope	Intercept	Slope
Satisfaction								
H	-0.32	-0.03	-0.25*,†	-0.10	-0.04*	-3.10*,†	-0.16*	-1.88*,†
W	-0.01	0.01	0.07	0.10	-0.02	0.00	-0.21*	0.96
Emotional trust								
H	-0.67		-0.20		-0.09*		-0.46*	
W	-0.10	-0.07	0.16	0.50	-0.03	-0.06	-0.35*	0.02
Reliability								
H	-0.17	-0.16	-0.78*	-0.26	-0.04*	-0.13	-0.15*	-0.14
W	-0.23		-0.75		-0.06*		-0.36*	
Sexual frequency								
H	0.46	-2.15	0.18	-0.36	0.00	0.00	0.01	0.01
W	-0.02		0.03		0.00		0.00	
Sexual satisfaction								
H	0.02	NA	0.01	NA	-0.01	NA	-0.03	NA
W	-0.02	NA	0.02	NA	0.00	NA	-0.01	NA
Psychological IPA								
H-V	-0.53	-1.07	-0.02	-0.01	0.02	0.01	-1.29	-0.12*
W-V	0.14	-.18	-0.13	-0.19	0.04	0.02	-0.68	-0.03
H-P	1.31	-1.11	0.70*	-0.29	0.13*	0.01	1.00*	0.53*
W-P	-0.11	0.08	0.37	0.17	0.03	-0.04	0.61*	0.29*
Physical IPA								
H-V	-0.11	-0.26	0.24*	0.39*	0.02	-0.02	1.23*	-0.25
W-V	-0.24	-0.71	0.43*,†	0.21*	0.02	-0.01	1.01*	-0.28
H-P	0.60*	-0.06	0.40*	-0.12	0.00	0.00	-0.95*	-0.17
W-P	0.42*	0.27	0.52*	0.45	0.00	0.01	-0.46*	-0.25

H = husband; W = wife; IPA = intimate partner aggression; V = victimization scores; P = perpetration scores. Slope variance in the unconditional model was not significant; thus, only the intercept variance component was regressed onto the maltreatment covariate. History of parental divorce and all intercept-slope covariances were controlled for in conditional model analyses.

† Path for one dyad member is significantly different from the corresponding path for the other dyad member.

* $p < .01$

gender differences (three out of four), husbands demonstrated much stronger links between maltreatment and marital outcomes. To our knowledge, this is the first study suggesting that male survivors of maltreatment have particular difficulties with intimate relationships. One factor that could contribute to this gender difference is greater maltreatment severity on the part of husbands. This is an unlikely explanation for the present findings, however, given that husbands and wives reported similar intensities of early abuse in this sample. Nevertheless, victimization and its oft-cited *sequelae* (e.g., feelings of helplessness and weakness, fear) are antithetical to the traditional male gender role, which emphasizes the virtues of independence, self-reliance, and strength (Spataro, Moss, & Wells, 2001). If maltreatment represents an especially significant breach of societal standards for men, it is possible that men may ultimately demonstrate greater levels of maladjustment, particularly in the realm of marital relations.

Prior work in this area has focused mostly on sexual abuse and cumulatively suggests that this maltreatment type may have a pervasive impact on intimate partner relations. In the present study, however, sexual victimization was related only to the increased physical aggression in the current relationship. Several factors may account for this relatively circumscribed impact. In particular, the elimination of couples who divorced during the present study—many of whom had extensive sexual

abuse histories—may have weakened expected linkages. For example, whereas 6 of 8 wives who divorced had been sexually victimized (and four reported sexual and physical abuse), the prevalence and severity of sexual abuse in the larger sample was rather modest by comparison, and rarely included forced sexual intercourse—a factor with strong ties to adult marital difficulties (Whisman, 2006). In addition, whereas the present study assessed couples early in their marriages, when satisfaction tends to be at its highest (Van Laningham et al., 2001), prior investigations included couples who had been married considerably longer periods of time (e.g., mean of 11 years in Whisman, 2006). These more established relationships may have allowed greater opportunity for CSA-related issues to surface.

For both husbands and wives, early maltreatment did predict a number of more specific marital difficulties at T1, most notably lower trust (both emotional and reliability) and increased partner aggression. Many authors have conceptualized maltreatment as a betrayal of trust by a caregiver toward a child (Finkelhor & Browne, 1985; Freyd, 1996; Freyd, DePrince, & Zurbriggen, 2001), but few studies have documented the long-term manifestations of this early rupture. Here, decreased marital trust was most strongly related to childhood psychological abuse and neglect. These findings suggest that a child who is berated by a caregiver or

does not have basic needs met may eventually find it difficult to rely on intimate partners emotionally or in more practical ways. Initial aggression between partners was also predicted by increased physical abuse and neglect severity. Although physical abuse has often been cited as a risk factor for partner violence (Delsol & Margolin, 2004; Hines & Saudino, 2002), this is among the first studies to place neglect in that role. Several authors have suggested that exposure to physical abuse may teach children that violence toward intimates is an acceptable and effective means of resolving conflicts (Cast, Schweingruber, & Berns, 2006; O'Leary, 1988; Straus & Smith, 1990). Likewise, children who are neglected may model similar behaviors as adults through difficulty in being aware of and responding to partners' needs—factors that may increase the risk of partner aggression. Taken together, these results place early maltreatment alongside other childhood experiences (e.g., parental divorce, family of origin conflict; Story, Karney, Lawrence, & Bradbury, 2004) in suggesting that the early family environment can be a source for learning maladaptive interpersonal processes that may then be generalized to subsequent intimate relationships.

The rather troubled picture of marital relations that emerged at T1 stayed consistent over time; all but one of the initial decrements in marital adjustment remained throughout the study. Even more troubling were several instances in which maltreatment exerted an increasingly detrimental impact on marital functioning over time. Specifically, the severity of husbands' and wives' neglect was associated with increases in the perpetration of psychological aggression over time, whereas husbands' psychological abuse and neglect predicted progressively worse marital satisfaction. These results paint a picture of escalating verbal (swearing at or insulting a partner) and nonverbal conflict (destroying something of the partner's) associated with early neglect, accompanied by deteriorating satisfaction on the part of husbands. Results such as these raise the possibility, supported elsewhere (Colman & Widom, 2004), that early maltreatment places couples at risk for reaching critical levels of discord more quickly.

We also conducted mediational analyses to shed light on mechanisms that accounted for relations between maltreatment and ongoing marital satisfaction. These findings suggest a developmental process in which exposure to harsh physical discipline as a child may set males on a course to marital dissatisfaction via multiple pathways, both relational and intrapersonal. Specifically, lower sexual activity, increased psychological aggression, and more severe trauma symptoms fully mediated physical abuse severity and declining marital satisfaction among husbands. The relational mechanisms implicated here are consistent with prior work linking lower sexual activity and men's perpetration of psychological aggression to marital dissatisfaction (Byers, 2005; Fisher & McNulty, 2008; Schumacher & Leonard, 2005; Testa & Leonard, 2001). Moreover, trauma symptoms are not only a common outcome of maltreatment (Widom, 1999) but have also been independently linked to marital difficulties (Riggs, Byrne, Weathers, & Litz, 1998; Savarese, Suvak, King, & King, 2001). Emotional numbing and avoidance, for example, which include loss of interest in activities, detachment from others, and restricted affect, are associated with marital distress among veterans (Riggs et al., 1998). The irritability and anger aspects of hyperarousal may also contribute to marital conflict and discord (Savarese et al., 2001).

Although this study has several strengths, including use of a newlywed sample, a longitudinal design, and detailed assessments of maltreatment and marital functioning, its findings must also be considered in light of several limitations. First, like many studies of marital functioning, couples were recruited randomly from marriage license records. However, sample demographics were rather restricted (i.e., primarily European American and well educated), which reflects the study location. Moreover, although the recruitment rate was in line with prior newlywed studies, the great majority of couples who received recruitment letters elected not to participate. This raises the possibility of systematic differences between participants and nonparticipants that could also limit generalizability. It will be important for future studies to replicate the current findings with more diverse and broadly representative samples. For example, children from ethnically diverse backgrounds have been shown to report more severe posttraumatic symptoms in response to sexual abuse (Clear, Vincent, & Harris, 2006). Such differences in abuse *sequelae* could extend to the marital realm as well, and this highlights the importance of replicating the current results with other populations.

Secondly, although they are common in the literature, retrospective reports of abuse may be affected by the deterioration of memory over time, intentional underreporting of abuse due to embarrassment, a desire to protect one's parents (Femina, Yeager, & Lewis, 1990), or possible inaccessibility of memories because of dissociative interference (Briere & Conte, 1993). We attempted to minimize these issues by using two psychometrically sound instruments with different formats that together are more sensitive than either measure alone in detecting prior maltreatment (DiLillo et al., 2006). Nevertheless, our approach was not immune to underreporting and possible method bias associated with the use of two self-report instruments. Future studies using longitudinal designs and documented abuse cases would avoid many of the limitations associated with retrospective reporting (see Widom, Raphael, & DuMont, 2004). Finally, abuse history was measured here on a continuous scale, which has the advantage of capturing gradations of severity associated with the varied experiences of victims. On the other hand, categorizing participants as either experiencing abuse or not could shed light on unique qualitative distinctions between these two groups.

Two limitations due to sample size should be noted as well. First, because of the modest number of maltreatment survivors, we were unable to differentiate between various abuse characteristics, such as duration, perpetrator identity, and age of onset. These factors have been found to predict long-term psychological adjustment (Trickett, Reiffman, Horowitz, & Putnam, 1997) and could be relevant to intimate partner functioning as well. We also were not able to examine the unique association between each form of maltreatment and marital functioning. The co-occurrence of different abuse types in childhood suggests that this may be an important question to consider. A much larger sample of individuals reporting maltreatment would be required to examine this question.

Finally, the implications of excluding couples who divorced from the majority of analyses should be considered. Although they were small in number (8 of 202), omitting these couples limits conclusions based on the present findings to intact marriages. Because this subsample reported rather extensive abuse histories—more severe than the larger sample on several abuse types—excluding these couples may have obscured

additional associations between maltreatment and marital functioning. On the other hand, our finding that early abuse predicted a number of marital outcomes despite the absence of couples who divorced indicates that some of these linkages may be quite robust. The severe abuse experiences reported by couples who divorced also support the possibility, suggested elsewhere (Colman & Widom, 2004), that child maltreatment contributes to a quicker dissolution of some marriages.

The current study has implications for researchers and practitioners alike. Whereas past research has mainly included women, the current findings suggest that among newlywed couples, a history of maltreatment may also be detrimental to husbands' marital adjustment. These findings reinforce the need for future research to take a dyadic approach rather than focusing on only one partner. Our findings that maltreatment may have an increasingly negative impact on husbands' marital satisfaction over time reinforce the need to examine longer term marital trajectories in relation to men's prior abuse. Extending the examination of change trajectories would enable the testing of our supposition that maltreatment places couples at risk for more quickly reaching critical levels of relationship discord. Such studies could also examine the ways that couples with a history of abuse adapt to contextual shifts in the marriage, including those that arise during important developmental transitions already associated with marital decline (e.g., birth of a first child; Huston & Holmes, 2004). Finally, although the present study focused on within-partner effects, clinical writings (e.g., Oz, 2001) suggest that partners of abuse survivors may struggle with unique issues related to their involvement with adult victims. Examining these cross-partner effects will be important to further enhance our understanding of the dyadic impact of early maltreatment. From a treatment standpoint, the present findings indicate that the early stages of marriage may become increasingly difficult for adult survivors. Thus, child maltreatment should be considered part of the constellation of factors—internal and external to the relationship—with the potential to disrupt marital functioning. The findings that frequency of sexual activity and trauma symptoms mediate marital satisfaction for husbands point to these areas of functioning as promising targets for intervention.

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