

Relational Trauma and Posttraumatic Stress Symptoms among Pregnant Women

Alissa C. Huth-Bocks, Kylee Krause, Sarah Ahlfs-Dunn, Erin Gallagher, and Syreeta Scott

Abstract: Women experience remarkably high rates of relational trauma including childhood abuse and neglect and intimate partner violence (IPV) during adulthood, and the childbearing years are no exception. The meaning of past and current relational trauma perpetrated by primary caregivers and significant others may be unique during pregnancy, in particular, because pregnancy is a salient time when mothers' important relationships are reworked and reorganized to "make room" for the relationship with the baby. The present study examined associations between different forms of relational trauma and posttraumatic stress symptoms in 120 women during the last trimester of pregnancy. Women were between the ages of 18 and 42 years and came from diverse economic and ethnic backgrounds. Results indicated that severity of childhood maltreatment was significantly related to severity of IPV during pregnancy, and both types of trauma made unique, significant contributions to posttraumatic stress symptoms. Furthermore, emotional/psychological violence had the largest associations with posttraumatic stress symptoms compared to other forms of violence. Findings indicate that it is critically important for clinicians working with pregnant women to conduct a thorough assessment of current and past relational trauma, including emotional/psychological trauma, in order to improve the well-being of the mother, the infant, and the mother-infant relationship.

Women experience remarkably high rates of relational trauma throughout childhood and adulthood, including childhood abuse and neglect by primary caregivers and physical, sexual, and psychologi-

Alissa C. Huth-Bocks, Ph.D., Kylee Krause, Ph.D., Sarah Ahlfs-Dunn, M.S., and Syreeta Scott, M.S., Department of Psychology, Eastern Michigan University. Erin Gallagher, Ph.D., University of South Carolina.

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cal abuse by romantic partners (i.e., intimate partner violence; IPV) in adulthood. Previous research has indicated, for example, that at least 20% of women report childhood experiences of abuse (Finkelhor, Turner, Ormond, & Hamby, 2009), with approximately 80% of childhood abuse being perpetrated by a parent or caregiver (U.S. Department of Health and Human Services, 2010). Research has also shown that up to 38% of women experience IPV in their romantic relationships during adulthood (Tjaden & Thoennes, 2000).

Pregnant women are no exception; rates are just as high, if not higher, than rates of relational trauma in the general population of women (Seng, Kohn-Wood, McPherson, & Sperlich, 2011; Seng et al., 2010; Tailieu & Brownridge, 2009). However, the meaning of past and current relational trauma perpetrated by primary caregivers and significant others may be unique during pregnancy because pregnancy is a salient time when mothers' important relationships are reworked and reorganized to "make room" for the relationship with the baby. Thus, due to the physical and psychological demands of pregnancy, it is critical to better understand how relational traumas, including psychological violence, impact the mental health of pregnant women. This study examines how various forms of trauma from childhood and one's romantic relationship(s) during pregnancy impact posttraumatic stress symptoms among a generally economically disadvantaged sample of women in their third trimester of pregnancy. Findings have implications for the identification of trauma and efficacious clinical interventions aimed at improving the well-being of the mother, the infant, and the mother-infant relationship.

PREVALENCE OF RELATIONAL TRAUMA EXPOSURE AND TRAUMA SYMPTOMS IN PREGNANT WOMEN

Large-scale, epidemiological studies suggest that approximately 20% of individuals are maltreated as children, with the most common type being emotional or psychological abuse, followed by physical abuse, neglect, and sexual abuse (Finkelhor et al., 2009). Rates based on reports to child protective services indicate the most common reported cases are due to neglect, followed by physical abuse, sexual abuse, and emotional or psychological abuse (U.S. Department of Health and Human Services, 2010). Retrospective reports of child maltreatment by pregnant women, however, are considerably higher. For example, in one large-scale study of pregnant women ($N = 1,581$), 19% of Caucasian women and 24% of African American women reported some form of

childhood abuse (physical, sexual, emotional abuse, or neglect; Seng et al., 2011), and in a much smaller, convenience sample of pregnant women ($N = 44$), 46% reported emotional abuse, 27% reported physical abuse, 32% reported sexual abuse, 46% reported emotional neglect, and 32% reported physical neglect as a child (Lang, Rodgers, & Lebeck, 2006). Rates of physical, sexual, and emotional abuse during childhood were as high as 82% among a mostly minority sample of first-time mothers assessed 6 months after birth (Bert, Guner, & Lanzi, 2009).

Similarly, high rates of IPV (in this case, male-to-female violence) during adulthood have been consistently found. Based on large-scale studies, it is estimated that 20–38% of women experience IPV (including psychological, physical, and sexual violence) during their lifetime (Tjaden & Thoennes, 2000), and about 12% report IPV in the last year (Straus & Gelles, 1986). More specifically, Tjaden and Thoennes found that 4.5% of women had experienced forcible rape by a partner within their lifetime, 20% of women reported being physically assaulted by a partner, and approximately 78% of women who had experienced a physical assault by a partner also experienced psychological abuse, including threats and induction of fear of bodily injury or death at the time of the event. Thus, the different types of violence may occur independently or they may co-occur, as is also the case for child maltreatment.

Rates of IPV may be as high, or in some cases higher, during pregnancy, quite possibly because women aged 18 to 25 (when many women are having children) are about two times more likely to experience IPV than women aged 26 to 50 (Walton-Moss, Manganello, Frye, & Campbell, 2005). Straus and Gelles (1990) also proposed that pregnancy could be an additional stressor that engenders feelings of inadequacy or jealousy from a male partner related to financial worries, the woman's decreased physical and emotional availability, or doubts about paternity, to name a few. Overall, the prevalence of IPV during pregnancy ranges from 0.9% to 36% (Taillieu & Brownridge, 2009), with a number of studies reporting rates around 20% (Gazmararian et al., 1996; Mezey, Bacchus, Bewley, & White, 2005). Although IPV may start for the first time during pregnancy or even stop during pregnancy, it is more often a continuation of violence that began before the pregnancy, and it may become more frequent and/or severe for 13–71% of pregnant women (Burch & Gallup, 2004; Taillieu & Brownridge, 2009).

A number of other studies have examined rates of Posttraumatic Stress Disorder (PTSD) among women, and among pregnant women specifically. Data from the National Comorbidity Survey indicate that, among the general population, 3.5% of individuals meet the criteria for PTSD within the last year and 6.8% meet criteria within their lifetime

(Kessler, Berglund, Demler, Jin, Merikangas, 2005; Kessler, Chiu, Demler, & Walters, 2005), with higher rates among women as compared to men. The National Women's Study, based on 4,008 participants, indicated that 4.6% of women met PTSD criteria within the last 6 months and 12.3% within their lifetime (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993); physical assault and rape were the top two predictors of a PTSD diagnosis. In another large-scale study, 13% of women met criteria for lifetime PTSD, a rate twice as high as that for males, and women had significantly longer duration of symptoms as compared to men (Breslau, Kessler, Chilcoat, Schultz, Davis, & Andreski, 1998).

In comparison, other studies have examined rates of PTSD among pregnant women specifically, as well as predictors of the diagnosis. For example, in a large ($N = 1,581$) study of diverse, first-time mothers, Seng, Kane Low, Sperlich, Ronis, and Liberzon (2009) reported that 7.9% of pregnant women currently met PTSD criteria, and of these, 86% also reported a history of IPV (52% within the last year); additionally, 20% had a lifetime PTSD diagnosis. In a later companion paper, Seng et al. (2011) reported that African American pregnant women were four times more likely to meet criteria for PTSD currently than Caucasian women (13.4% and 3.5%, respectively) and also were more likely to have a lifetime diagnosis (24% versus 17%); higher rates were explained by greater overall trauma exposure among African American women. In another large ($N = 948$) study of low-income pregnant women, the current PTSD rate was 3.5%, and of those with PTSD, 48.5% reported a history of childhood sexual abuse and 36.4% reported a history of IPV (Smith, Poschman, Cavaleri, Howell, & Yonkers, 2006). Similarly, rates were 7.7% for current PTSD and 13.6% for lifetime PTSD in another low-income sample of pregnant women. Those with PTSD were more likely to have experienced sexual abuse as a child and physical abuse within the last year (presumably mostly from a partner) than those without PTSD (Loveland Cook, Flick, Homan, Campbell, McSweeney, & Gallagher, 2004). Finally, Mezey et al. (2005) reported that 10.7% of their pregnant sample met criteria for current PTSD; childhood maltreatment was also significantly related to severity of trauma symptoms.

Thus, existing research documents that pregnant women report just as high, if not higher, rates of child maltreatment and IPV (i.e., relational trauma perpetrated by caregivers and significant others) and also experience high current and lifetime rates of PTSD as compared to the general population. However, few studies have closely examined emotional or psychological forms of relational trauma, which involve verbal and symbolic acts that cause fear or emotional pain such as intimidation, threats, degradation, isolation, and coercion, in regard to PTSD

symptoms among pregnant women. This may be because many existing studies have aimed to document rates of PTSD diagnoses, which require that “the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others” according to the A1 criterion for PTSD in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; American Psychiatric Association, 1994). Thus, the majority of past studies have primarily considered physical or sexual forms of relational violence exposure (in addition to other forms of non-relational trauma) with regard to trauma symptoms or diagnoses. It is important, however, to better understand the effects of psychological or emotional violence on pregnant women’s mental health because psychological violence often co-occurs with physical and sexual violence between partners (Tjaden & Thoennes, 2000; Yoshihama, Horrocks, & Kamano, 2009), and researchers are beginning to discover that psychological violence is just as deleterious as physical and sexual violence (Ludermir, Lewis, Valongueiro, Barreto do Araujo, & Araya, 2010; Mechanic, Weaver, & Resick, 2008; Yoshihama et al., 2009).

For example, several studies have found that psychological violence before and during pregnancy predict prenatal depression levels (Martin, Li, Casanueva, Harris-Britt, Kupper, & Cloutier, 2006) and postnatal depression symptoms, and this association remained when physical and sexual violence were taken into account (Ludermir et al., 2010). In another study, Ahlfs-Dunn and Huth-Bocks (2012) found that psychological violence (specifically, tactics that involved using children to threaten, intimidate, and control mothers by abusive partners) was relatively common among a sample of economically disadvantaged pregnant women, with 28% reporting this form of relational trauma during pregnancy. Additionally, those experiencing psychological violence had higher rates of PTSD symptoms, depressive symptoms, and general anxiety symptoms during and after pregnancy, as well as greater parenting stress one year after birth, as compared to those who had not experienced this form of violence during pregnancy.

RELATIONAL REORGANIZATION DURING PREGNANCY

The effects of relational forms of trauma, such as childhood maltreatment and IPV, on pregnant women must also be understood within the context of the other, significant psychological transformations that are occurring during pregnancy. Drawing from earlier psychoanalytic work, and later attachment-informed work, clinicians and researchers have repeatedly described how relationship experiences are reor-

ganized and “reworked” during pregnancy, as the mother is forming a maternal identity and “making room” for her relationship with her infant (see Slade, Cohen, Sadler, & Miller, 2009 for a review). For example, Bibring, Dwyer, Huntington, and Valenstein (1961) noted that pregnancy revives old psychological conflicts, reorganizes a woman’s relationship with her own mother, and causes her to develop attitudes toward and representations of her developing infant. Similarly, others have noted that women gradually develop rich and specific representations of themselves as caregivers and of their infants as pregnancy progresses, which likely are constructed from mothers’ own experiences in relationships (Leifer, 1977; Lumley, 1982; Zeanah & Carr, 1990; Zeanah, Keener, & Anders, 1986). Stern (1995) later proposed that mothers’ mental representations of self and others are reactivated and reworked throughout pregnancy, especially after the first trimester when the baby becomes more “real” to the mother as fetal movement is detected and as women prepare psychologically for motherhood.

Rooted in attachment theory, George and Solomon (1996, 2008; Solomon & George, 2006, 2011), have theoretically and empirically described how most mothers also make a critical psychological shift away from the goal of *being protected and cared for* (i.e., the goal of the individual’s attachment system) to the goal of *providing protection and care* (i.e., the goal of the parent’s caregiving system). This psychological transformation undergoes its most rapid development during pregnancy as the mother is transitioning to parenthood, and thus, rich representations about the self as a caregiver and the baby typically appear during and immediately after pregnancy (George & Solomon, 2008; Slade et al., 2009). George and Solomon (2008; Solomon & George, 2011) have also noted how certain maternal experiences, such as maternal trauma, interfere with some mothers’ ability to make the important psychological shift to becoming a provider of care and protection. It is extremely difficult to feel psychologically prepared to provide care and protection when one’s own needs for care and protection are unmet or constantly in jeopardy, as in the case of relational trauma.

Indeed, research has shown that childhood maltreatment is associated with the development of problematic maternal representations of the self and the infant during pregnancy (Malone, Levendosky, Dayton, & Bogat, 2010). Unresolved trauma with respect to childhood maltreatment may also lead to frightening or fearful caregiving behavior (Hesse & Main, 2006; Main & Hesse, 1990) and other atypical caregiving behavior that has been linked with infant attachment disorganization (Lyons-Ruth, Yellin, Melnick, & Atwood, 2005). This may be because the parent still is overwhelmed by past trauma and may be responding to partially dissociated, frightening interpersonal experiences (Cas-

sidy & Mohr, 2001; Main & Hesse, 1990). Similarly, other research has shown that maternal experiences of IPV during pregnancy are associated with problematic representations of the self as a caregiver and the child (Huth-Bocks, Levendosky, Theran, & Bogat, 2004), including the expression of more anger, anxiety, and depression, as well as expectations of infant difficulty, while talking about the infant in *utero*. In fact, recent research suggests that women abused by a partner during pregnancy may become emotionally dysregulated by overwhelming fear and helplessness (often unconsciously) about becoming a caregiver due to their own unresolved experiences of relational trauma (Levendosky, Bogat, & Huth-Bocks, 2011). Subsequently, infants may become traumatized themselves through repeated interactions with their traumatized mothers because they are left in a state of perpetual fear without the necessary support from the primary attachment figure to regulate their emotional states (Scheeringa & Zeanah, 2001).

THE PRESENT STUDY

Associations between maternal experiences of relational trauma and difficulties with the psychological transition to motherhood are not surprising given the myriad of cognitive and affective symptoms of posttraumatic stress including intrusive thoughts, feelings and images, restricted affect, avoidance of cues associated with the trauma, dissociative symptoms, and hyperarousal or hypervigilance (American Psychiatric Association, 1994), all of which may reflect an incomplete process of mental reorganization following a trauma (Lyons-Ruth & Block, 1996). These symptoms are often more complex, diffuse, and long standing in victims of chronic trauma. In addition, repeated trauma that occurs in the context of relationships can severely affect an individual's capacity for relatedness (Herman, 1992), which is a central task during pregnancy for the development of a secure mother-infant relationship. Further, the relational traumas referred to in this article occur within the context of attachment relationships (i.e., with parents and romantic partners), and thus, likely have an even more profound effect on the woman's mental health and relational capacity.

Thus, it is important for researchers to more closely examine the effects of different forms of relational trauma on posttraumatic stress symptoms among pregnant women. The meaning of past and current relational traumas perpetrated by primary caregivers and significant others are likely unique during pregnancy because of the salience of relational experiences during this time. Furthermore, more research needs to be conducted on maternal experiences of emotional and psy-

chological violence, as these have been relatively neglected in past research. In the present study, it was hypothesized that: (a) experiences of childhood trauma would be associated with adult experiences of IPV (thus contributing to more chronic violence exposure over time), (b) both childhood maltreatment and IPV would be positively associated with greater severity of posttraumatic stress symptoms, and (c) emotional/psychological violence would be significantly associated with severity of posttraumatic stress symptoms, even after accounting for physical and sexual violence. Exploratory analyses investigating associations between types of childhood violence, types of IPV, and specific trauma symptoms are also reported.

METHOD

Participants

Participants included 120 pregnant women who were recruited for a larger, longitudinal study investigating the role of various risk factors and psychosocial experiences on women and their young children across the transition to parenthood. Data were collected during pregnancy, and at 3 months, 1 year, 2 years, and 3 years postpartum for the larger study; only data from the first wave of the larger investigation are used in the present study. Participants were recruited through public postings of fliers and in-person distribution at public locations, programs, and agencies primarily serving low-income families. More specifically, 23% were recruited from several community-based health clinics serving low-income and/or uninsured individuals, 18% from the Women, Infants, and Children (WIC) social service program, 16% from one regional-level university and one community college, 11% from a "community baby shower" sponsored by local social service programs, 11% heard about the study through word of mouth (friend, relative, another research study, or church), 7% from Head Start and local daycare programs, 7% from subsidized and/or temporary housing facilities, 5% from second-hand, donation centers for pregnant women and young children, and 2% from a parenting class.

At the first data collection point, which took place during the last trimester of pregnancy, participants ranged in age from 18 to 42 years ($X = 26$, $SD = 5.7$). Forty-seven percent of participants identified themselves as African American, 36% as European American, 13% as Biracial, and 4% as belonging to other ethnic groups. Sixty-four percent described themselves as single (never married), 28% married, 4% separated, and 4% divorced. Thirty percent of participants were first-time mothers.

Twenty percent of the sample reported having a high school diploma/GED or less education, 44% reported some college or trade school, and 36% reported a college degree. Forty-five percent of participants were currently employed. However, despite the wide range of educational attainment, the present sample was economically disadvantaged, overall. The median monthly income was reported as \$1,500 (range = \$0–\$10,416) at study entry. Eighty-eight percent received services from WIC, 62% received food stamps, 90% received Medicaid, Mi-Child, or Medicare, and 20% received public supplemental income at that time.

Procedures

Fliers asked interested pregnant women to call the study office to participate in a study about parenting. In order to participate, women needed to be pregnant, 18 years or older, and able to speak fluent English. Interested participants who were currently in their third trimester of pregnancy when they contacted the research office were immediately scheduled for the first interview. Interested participants who were not currently in their third trimester of pregnancy were tracked according to due date and contacted later (when they reached the third trimester) by research assistants to schedule the first interview if they were still interested in participating. This process continued until all 120 women completed the initial interview during the third trimester of pregnancy.

The pregnancy interview was conducted in either the participant's home (81%) or at a research office on campus (19%), based on participant preference. Interviews lasted approximately 2 ½ to 3 hours and were conducted in teams of two; one interviewer led the interview and the other assisted with child care if necessary and/or observed and assisted the lead interviewer. After informed consent procedures, a brief demographic questionnaire and a 1-hour audio-recorded semi-structured interview about mothers' ideas and feelings about pregnancy and their unborn child were completed. Subsequently, all study questionnaires were administered in the same, predetermined order for each participant. Participants were given an identical copy of the questionnaires with which to follow along, but the lead researcher read each questionnaire aloud and recorded the participant's verbal answers in order to minimize random responding and protect against possible literacy difficulties. Participants were compensated with a \$25.00 gift card.

Measures

Demographics Questionnaire. A brief demographic questionnaire was used to assess background characteristics such as age, marital status, ethnicity, educational level, and total family monthly income, among other things.

Childhood Maltreatment. The Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) was used to assess for a history of childhood abuse and neglect. The CTQ is a 28-item self-report questionnaire designed to assess experiences of five types of childhood maltreatment: emotional, physical, and sexual abuse, and emotional and physical neglect. Each scale includes five items that are scored on a 5-point Likert-type scale based on frequency (1 = *never true*, 2 = *rarely true*, 3 = *sometimes true*, 4 = *often true*, 5 = *very often true*). Scores can range from 5 to 25 for each scale, and a total childhood maltreatment score can also be calculated by summing the five subscales. Higher scores indicate greater severity of childhood maltreatment

Bernstein and Fink (1998) reported satisfactory median internal consistency reliability coefficients (based on seven diverse samples) for each of the CTQ scales (emotional abuse $\alpha = .89$, physical abuse $\alpha = .82$, sexual abuse $\alpha = .92$, emotional neglect $\alpha = .89$, physical neglect $\alpha = .66$). They also reported that scores on the CTQ were stable over a 1 to 6-month period ranging from $r = .79$ (physical neglect) to $r = .86$ (emotional abuse). Furthermore, Bernstein and Fink (1998) found that the CTQ scales were significantly and strongly correlated ($r = .42$ to $.75$) with corresponding scales on three other trauma measures (i.e., the Childhood Trauma Interview, the Childhood Maltreatment Interview, and the Evaluation of Lifetime Stressors) and therapists' best-estimate maltreatment ratings of clients.

In the current sample, coefficient alphas were .96 for the total score, .91 for emotional abuse, .90 for physical abuse, .96 for sexual abuse, .92 for emotional neglect, and .83 for physical neglect. Because emotional abuse and emotional neglect were very highly correlated ($r = .81$), they were combined for analyses; thus, four CTQ subscales and the total CTQ maltreatment score were used in analyses.

Intimate Partner Violence (IPV). The Conflict Tactics Scale-2 (CTS-2; Straus, Hamby, & Warren, 2003) was used to assess for women's experiences of partner violence during pregnancy. The CTS-2 is a 78-item questionnaire designed to assess experiences of psychological (8 items assessing verbal and symbolic acts that may cause fear or emotional pain), physical (12 items assessing physically assaultive behaviors), and sexual partner violence (7 items assessing coercion to engage in sexual

acts), as well as violence causing injury from a partner (6 items assessing injuries and medical needs that may result from physical altercations); 33 items assess perpetration and 33 items assess victimization. Additionally, 12 items assess conflict negotiation. Due to the interests of the larger study, only the 33 items that assess experiences of victimization were administered. Response categories for each item included 0 (*never*), 1 (*once*), 2 (*twice*), 3 (*3–5 times*), 4 (*6–10 times*), 5 (*11–20 times*), 6 (*more than 20 times*), and 7 (*not during these time periods, but it happened before*). The CTS-2 was scored by using a weighting system recommended by Straus et al. in which frequency values were recoded (1 = 1, 2 = 2, 3 = 4, 4 = 8, 5 = 15, and 6 = 25; 7 was recoded to 0 for purposes of this study). Higher scores indicate greater severity (frequency) of partner violence.

Straus et al. (2003) reported good internal consistency reliability for each of the subscales of the CTS-2 (psychological violence $\alpha = .79$, physical violence $\alpha = .86$, sexual violence $\alpha = .87$, and injury $\alpha = .95$). There is also evidence of convergent and discriminant validity of the measure. Specifically, physical violence scores are significantly correlated with several scales on a measure of personal and relationship risk markers for violence (i.e., the Personal and Relationships Profile), such as the dominance, jealousy, antisocial personality, and violence approval scales (Straus et al., 2003), and there are nonsignificant correlations between the negotiation and injury subscales and the negotiation and sexual coercion subscales (Straus, Hamby, Boney-McCoy, & Sugarman, 1996).

In the current sample, coefficient alphas were .92 for the total score, .67 for psychological violence, .90 for physical violence, .81 for sexual violence, and .77 for injury from violence. Because physical violence and injury from violence were very highly correlated ($r = .98$), they were combined for analyses; thus, three IPV subscales and a total IPV score based on the sum of all items were used in analyses.

Posttraumatic Stress Disorder Symptoms. The Posttraumatic Stress Disorder Checklist–Civilian Version (PCL-C; Weathers, Litz, Herman, Huska, & Keane, 1993) was used to assess maternal PTSD symptoms. This scale is a 17-item self-report questionnaire comprised of three subscales that coincide with the three clusters of PTSD symptoms based on the *DSM-IV*: (a) avoidance, (b) re-experiencing, and (c) hyperarousal; the measure assesses the severity of these symptoms over the last month. Items are rated on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*extremely*), with increasing intensity of the symptoms. A total PTSD symptom score can also be calculated by summing the individual items; total scores range from 17 to 85. Higher total scores indicate more severe PTSD symptoms.

The PCL is a highly valid and reliable instrument and is commonly used in trauma research. PCL total scores have been correlated with scores on other psychological measures such as the Clinician Administered PTSD Scale, the Impact of Events Scale, and the Mississippi Scale for PTSD. The measure has been shown to have high 1-week test-retest reliability ($r = 0.88$; Ruggiero, Del Ben, Scotti, & Rabalais, 2003), and moderate 2-week test-retest reliability ($r = .68$; Ruggiero et al., 2003). High internal consistency reliabilities have been reported; $\alpha = .94$ to $.97$ for all three subscales (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). A recent study (Krause, Kaltman, Goodman, & Dutton, 2007) examining the factor structure of the PCL in a large sample of women experiencing intimate partner violence found support for a 4-factor (rather than a 3-factor) model of PTSD symptoms; these authors suggested that four subscales should be calculated reflecting: (a) avoidance (2 items), (b) intrusions/re-experiencing (5 items), (c) dysphoria (8 items), and (d) hyperarousal (2 items). This 4-factor model of symptoms is consistent with recommendations for PTSD symptoms in the upcoming *DSM-V*.

Thus, in the present study, the four subscale totals and the total PTSD symptom severity were used in analyses. Coefficient alphas in the present sample were: $.61$ for avoidance, $.83$ for re-experiencing, $.76$ for dysphoria, $.63$ for hyperarousal, and $.87$ for the total PTSD symptom score.

RESULTS

Descriptive Statistics

Overall, rates of childhood maltreatment and IPV during pregnancy were high in this sample of mostly economically disadvantaged women. In terms of childhood maltreatment, 68% reported childhood emotional abuse, 58% reported physical abuse, 28% reported sexual abuse, 75% reported emotional neglect, and 49% reported physical neglect; individuals reporting at least one item with a response other than "never true" within each type of maltreatment were included here due to the severity of items (e.g., "people in my family called me 'stupid,' 'lazy,' and 'ugly'" for emotional abuse, "I didn't have enough to eat" for physical neglect). In terms of IPV, 24% of women reported experiencing physical and/or sexual violence during the current pregnancy, and this number rose to 81% when psychological violence was included. Again, women were included if they endorsed one or more item from each type of IPV, even if something only occurred once, due to the severity of abusive behaviors.

Table 1. Associations between Childhood Maltreatment and Intimate Partner Violence (IPV)

	Psychological IPV	Physical IPV	Sexual IPV	Total IPV
Child Emotional Abuse & Neglect	.25**	.18	.20*	.26**
Child Physical Abuse	.17	.25**	-.06	.18*
Child Sexual Abuse	.05	-.05	.17	.05
Child Physical Neglect	.15	.02	.20*	.14
Child Maltreatment Total	.24*	.16	.18	.24*

Note. * $p < .05$; ** $p < .01$.

Associations between Childhood Trauma and Intimate Partner Violence

Pearson's correlations were used to examine the hypothesis that childhood trauma would be significantly related to IPV experiences during pregnancy. As expected, severity of total childhood trauma was positively related to severity of total IPV experiences (see Table 1). However, exploratory analyses revealed a number of interesting findings regarding associations between different types of childhood and adulthood traumas. Emotional maltreatment from childhood was related to psychological violence and sexual violence from a partner, physical abuse from childhood was related to physical violence from a partner, physical neglect from childhood was related to sexual violence from a partner, and sexual violence from childhood was unrelated to any forms of violence perpetrated by a partner (see Table 1). Thus, for some types of relational traumas, there was specificity of chronic experiences (e.g., emotional/psychological violence, physical violence), which was not the case for other types of trauma (e.g., sexual violence).

Associations between Relational Traumas and Posttraumatic Stress Symptoms

Next, correlations were used to examine the hypothesis that both childhood trauma and IPV experiences during pregnancy would be significantly related to greater posttraumatic stress symptoms. Table 2 shows that the severity of total childhood trauma was significantly related to all clusters of PTSD symptoms, as well as total PTSD symp-

Table 2. Associations between Childhood Maltreatment, Intimate Partner Violence (IPV), and Posttraumatic Stress Symptoms

	Avoidance	Re-experiencing	Dysphoria	Hyperarousal	Total
Child Emotional Abuse & Neglect	.33**	.37**	.38**	.18	.42**
Child Physical Abuse	.32**	.29**	.29**	.19*	.35**
Child Sexual Abuse	.27**	.27**	.11	.19*	.24**
Child Physical Neglect	.29**	.32**	.26**	.20*	.34**
Child Maltreatment Total	.35**	.42**	.37**	.20*	.44**
Psychological IPV	.18	.36**	.35**	.18	.38**
Physical IPV	.09	.17	.31**	.05	.24**
Sexual IPV	.14	.15	.09	-.09	.11
Total IPV	.17	.32**	.35**	.12	.35**

Note. * $p < .05$; ** $p < .01$.

toms, as expected. Additionally, all types of childhood traumas were related to all clusters of PTSD symptoms and total symptoms, except for associations between emotional maltreatment and hyperarousal symptoms and between sexual abuse and dysphoria. Notably, of the four types of childhood maltreatment, emotional maltreatment (i.e., emotional abuse and emotional neglect) showed the largest associations with current PTSD symptoms. After controlling for maternal age and family income, demographic variables known to be associated with PTSD symptoms (e.g., Breslau et al., 1998; Kessler, Berglund et al., 2005), a multiple regression analysis indicated that the four types of childhood trauma explained an additional 19% of the variance in total PTSD symptoms.

Results also indicated that severity of psychological violence and physical violence from a partner during pregnancy was significantly associated with current, total PTSD symptoms (see Table 2), and in particular, with symptoms of intrusions/re-experiencing and dysphoric mood. Interestingly, severity of sexual violence from a partner was unrelated to PTSD symptoms. Also, similar to the findings for childhood trauma, of the three types of partner violence, psychological violence had the largest association with PTSD symptoms. After controlling for age and income, the three types of partner violence explained an additional 12% of the variance in total PTSD symptoms. Also, as hypothesized, severity of psychological violence was the only type of violence to remain significantly associated with symptoms ($\beta = .46, p < .01$) when all forms of partner violence were considered simultaneously.

Table 3. Results from Multiple Regression with Both Relational Traumas Predicting Posttraumatic Stress Symptoms

	Standardized Beta	R ² Change	F-Value	Adjusted R ²
Step One:				
Age	-.25**			
Income	-.06	.08*	4.47*	.06*
Step Two:				
Total Child Maltreatment	.44**	.19**	12.93**	.24**
Step Three:				
Total Intimate Partner Violence	.24**	.05**	12.36**	.29**

Note. * $p < .05$; ** $p < .01$.

Finally, a multiple regression analysis was conducted to examine the relative contributions of childhood trauma and current partner violence on total PTSD symptoms. After controlling for age and income, total childhood trauma severity was significantly associated with PTSD symptoms, and total partner violence significantly predicted PTSD symptoms above and beyond the other variables (explaining an additional 5% of the variance; see Table 3). Thus, both types of relational traumas made unique, significant contributions to posttraumatic stress symptoms.

DISCUSSION

This study aimed to examine associations between various forms of relational traumas perpetrated by caregivers during childhood and romantic partners during adulthood on women's posttraumatic stress symptoms during pregnancy; emotional and psychological forms of violence were included, and highlighted, given the relative lack of research on this type of relational violence as compared to physical and sexual violence. In addition, this study focused on these associations during pregnancy because this is a critical period in women's lives involving extensive psychological transformation and relational reorganization as mothers prepare for their caregiving role.

Overall, rates of retrospectively recalled childhood maltreatment and current IPV were considerably higher than what has been reported in large-scale epidemiological studies (e.g., Finkelhor et al., 2009; Tjaden

& Thoennes, 2000), as well as studies with pregnant women specifically (e.g., Mezey et al., 2005; Seng et al., 2011; Seng et al., 2010). This is notable given that the present study did not screen for violence or over-select for women with known trauma exposure; rather, it was simply a convenience sample of generally economically disadvantaged pregnant women from the community. However, as described earlier, the sample consisted of mostly minority, single, and low-income women, which may help explain the higher rates in this study. Past research has found, for instance, that trauma exposure is much more common in poorer communities (Breslau et al., 1998) and among African American women as compared to Caucasian women (Seng et al., 2011). In fact, in one study, about 82% of mostly minority, first-time mothers reported emotional, physical, and/or sexual abuse during childhood (Bert et al., 2009). It is also possible that higher rates reflect the salience of relational experiences with caregivers and romantic partners that characterize women during pregnancy, as significant relationships take a more prominent psychological role while the mother reworks prior relationships in preparation for a new relationship with her baby (Slade et al., 2009; Stern, 1995). Thus, mothers may be more acutely aware of past and current relational traumas and/or may consider some experiences as more noteworthy (i.e., more "reportable" on the violence questionnaires) than they might have at other time periods. Future research will need to consider this possibility further through careful examination of the type and meaning of relational traumas experienced by pregnant women.

As expected, results from this study also indicated that severity of childhood maltreatment was significantly related to severity of current IPV during pregnancy, that is, relational trauma was a chronic experience for many women over time. These results are consistent with several studies showing that childhood maltreatment is related to higher rates of violence with a romantic partner for women during the prenatal and postnatal periods (Lang et al., 2006; Mezey et al., 2005). This "continuity" of violence from significant others may occur because of the pernicious effects of early childhood abuse and neglect on individuals' working models or representations of the self in relation to others. For instance, based on attachment theory, children who are abused and neglected by attachment figures are likely to develop beliefs that the self is not worthy of love, care, and protection and that others are likely to be hostile, violent, and harmful. As maltreated children grow up, they may expect others to behave in these ways and may find such experiences consistent with their world views. This possibility may also help explain why exploratory analyses revealed that there was some specificity in experiences of violence over time, for example, emotional

maltreatment in childhood was significantly related to psychological violence by a partner.

Not surprisingly, results also revealed that both the total amount of childhood maltreatment and the total amount of current IPV (after controlling for age and income), made unique, significant contributions to posttraumatic stress symptoms, illustrating the importance of both types of relational trauma, although childhood maltreatment explained considerably more of the variance in PTSD symptoms. These findings make sense, given the wealth of data documenting that both forms of relational trauma are associated with PTSD symptomatology in the general population (Resnick et al., 1993) and in pregnant women specifically (Mezey et al., 2005; Seng et al., 2009; Smith et al., 2006); however, surprisingly few studies have included both types of violence simultaneously in predicting trauma symptoms. It is possible that trauma experienced during childhood (as opposed to adulthood) explained a larger portion of the variance in symptoms in this particular sample because of the re-emergence and salience of memories about childhood experiences with caregivers during pregnancy, as mothers are becoming parents themselves (Slade et al., 2009).

Importantly, this study also found that of the different types of childhood maltreatment, emotional abuse and emotional neglect, showed the largest association with PTSD symptoms; likewise, of the different types of IPV, psychological violence had the largest association with trauma symptoms. These findings are important for a number of reasons. First, relatively little is known about the effects of emotional and psychological forms of relational violence on women because most studies aim to examine violence in relation to PTSD diagnoses, and the former type of violence does not clearly fit the A1 criterion that is required for a diagnosis. Thus, many studies simply do not assess for emotional or psychological violence. Yet emerging evidence suggests that psychological violence is just as damaging as physical and sexual violence (Ludermire et al., 2010; Yoshihama et al., 2009) and leads to depressive symptoms, PTSD symptoms, and parenting difficulties among pregnant and postpartum mothers (Ahlfs-Dunn & Huth-Bocks, 2012; Martin et al., 2006).

Second, psychological violence may be particularly important to consider during pregnancy as women reorganize relationships and begin to form a new relationship with their infant. As noted earlier in the article, a critical task for pregnant women is to shift their perspective from being the *recipient* of care and protection to a *provider* of care and protection (George & Solomon, 2008; Solomon & George, 2011) during pregnancy. The capacity to do so can be severely undermined when a woman has experiences of being degraded, isolated, intimidated,

and threatened, including in the context of caregiving such as when an abusive partner may attempt to prevent the mother from protecting the child or threatening to take the child away from the mother (Ahlf-Dunn & Huth-Bocks, 2012). Having such experiences at a time when the mother is undergoing significant psychological transformations, and when she needs to identify with the caregiving role for the sake of the child, likely takes its toll on her mental health, thus giving rise to posttraumatic stress symptoms. Finally, these findings are important because clinicians may not regularly assess for, or identify, emotional and psychological forms of violence during standardized clinical interviews due to an overemphasis on other forms of violence and other types of traumatic events in order to evaluate for a possible PTSD diagnosis (see more detail and recommendations below).

Strengths and Limitations

Several strengths and limitations of the present study are worth noting when considering results. First, while the sample size was relatively small, all women were seen near the end of their pregnancies and were given several extensive assessment instruments to comprehensively evaluate their experiences of different forms of childhood and adulthood relational trauma. Furthermore, unlike most prior studies, posttraumatic stress symptoms were assessed along a continuum, allowing for the examination of a wider range of symptoms including subclinical (but still distressing) levels of trauma symptoms. However, PTSD diagnoses were unable to be made. Additionally, as noted earlier, different types of trauma were considered simultaneously, allowing the relative contributions of emotional, physical, and sexual forms of violence to be evaluated. The sample was also ethnically diverse rather than predominately Anglo or exclusively minority as in most other studies. On the other hand, the generalizability of results may be limited by the convenience sampling strategy from a medium size, Midwestern area. Also, the cross-sectional design of the study limits inferences about causality between variables.

Clinical Implications

The findings from the present study have several important clinical implications. First, it is essential that clinicians working with pregnant women in mental health and psychiatry clinics regularly assess for *both*

current experiences of partner violence *and* past experiences of partner violence and childhood maltreatment. Results from this study and other studies demonstrate that it is not just current experiences that impact mothers' emotional well-being, but their entire history of relational trauma. In fact, the present results found that childhood maltreatment explained considerably more of the variance in posttraumatic stress symptoms than current IPV experiences, thus, it would be remiss to neglect to ask about all types of relational traumas. Furthermore, past and current relational trauma perpetrated by attachment figures and significant others may be particularly insidious during pregnancy as women begin to form an attachment relationship with their infants in *utero*. Indeed, past research has found that unresolved trauma from childhood or from a current partner can seriously interfere with the development of balanced (i.e., positive, realistic, and coherent) representations of the baby in *utero* (Huth-Bocks et al., 2004; Levendosky et al., 2011) and after birth (Sokolowski, Hans, Bernstein, & Cox, 2007), and may lead to frightening, fearful, and other atypical caregiving behaviors that give rise to disorganized infant attachment (Hesse & Main, 2006; Lyons-Ruth et al., 2005). Thus, a woman's history of relational trauma not only impacts her current PTSD symptoms, but also her broader capacity to form a healthy attachment relationship with her infant.

Findings also indicate that it is critical to assess for emotional and psychological forms of relational violence rather than focus exclusively on physical or sexual violence and other non-relational events that threaten ". . . the physical integrity of self or others" per the current PTSD diagnostic criteria. This study, along with prior studies, indicate that emotional and psychological forms of violence are more prevalent than other forms of relational violence and may lead to symptoms consistent with PTSD as much as other forms of violence. Along these lines, there has been an ongoing debate in the field for some time surrounding what types of stressful events do or do not constitute a traumatic event that fits the required A1 criterion for a PTSD diagnosis (an extensive review of this debate is outside the scope of this article, but see Friedman, Resick, Bryant, & Brewin, 2011 and Weathers & Keane, 2007). In short, one side of the argument maintains that broadening the A1 criterion to include other stressful events would undermine the very nature of PTSD as a disorder of the stress response system, would make research more difficult due to the heterogeneity of individuals with the diagnosis, and would substantially increase the prevalence of PTSD and potentially trivialize the disorder (among other reasons). For example, Breslau and Kessler (2001) found that when A1 was broadened to include events such as learning about traumatic events to close

relatives, there was a 59% increase in exposure to A1 events, and 38% of the PTSD diagnoses were based on these additional events.

The other side of the argument purports that any event that produces PTSD symptoms deserves to be included, and that in fact, the prevalence of PTSD changes very little when A1 is eliminated or broadened (Kilpatrick, Resnick, & Acierno, 2009). This may be because events that would typically be considered "outside" of A1 events are often found in those individuals with a history of A1 events, and non-A1 events may be a reminder or a trigger for previous traumatic events. Furthermore, some have argued that other stressful events can produce an increase in PTSD symptoms even if the individual does not meet full criteria for PTSD (Brewin, Lanius, Nova, Schnyder, & Galea, 2009), and these individuals deserve to receive appropriate trauma treatments.

It appears that recommendations for the *DSM-V* PTSD diagnosis (Friedman et al., 2011) will be accepted and criterion A1 will be retained, albeit with some modifications that may slightly constrict the range of allowable events. Specifically, *DSM-V* will require the traumatic event to be actual or threatened death, serious injury, or sexual violation, either directly or indirectly through witnessing the event(s) or learning of the event of a loved one (vicarious exposure must be of "a loved one" rather than "a family member or close associate" as indicated in the text of *DSM-IV*). Thus, according to *DSM-V*, would emotional or psychological violence from caregivers and/or romantic partners constitute an A1 event? It is likely that many clinicians would not think so, yet there is a wealth of data to suggest that *relational* traumas from those who mean the most are among the events that are rated "the worst" or most traumatic and often lead to the worst symptomatic outcomes (e.g., Anders, Shallcross, & Frazier, 2012; Kilpatrick et al., 2009). While emotional and psychological maltreatment may not threaten the *physical* integrity of the person, it surely threatens and seriously degrades the individual's *psychological* integrity such that characteristic PTSD symptoms develop that are distressing and impairing and likely persistent over time. Thus, it is recommended that whether or not one considers emotional and psychological violence a traumatic experience that fits the A1 criterion, this type of violence should be seriously considered and associated PTSD symptoms should be carefully evaluated and treated as needed. Attention to this form of trauma, in addition to other relational forms of trauma such as physical and sexual violence, is imperative among pregnant women in order to help facilitate their own emotional well-being, the well-being of their infant, and a secure mother–infant relationship.

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Alissa Huth-Bocks
Department of Psychology
341 MJ Science
Eastern Michigan University
Ypsilanti, MI 48197
ahuthboc@emich.edu