

Violence During Pregnancy and the Postpartum Period

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“Violence during pregnancy is a critical concern because it is often frequent and severe in nature. Pregnant abused women tend to report experiencing more severe violence compared to non-pregnant abused women (Campbell, Oliver, & Bullock, 1993; McFarlane, Parker, & Soeken, 1995). In addition, pregnant violence survivors often experience multiple violent incidents during pregnancy (Amaro, Fried, Cabral, & Zuckerman, 1990; Martin et al., 2004). Moreover, some (but not all) women violated both before and during pregnancy experience increases in the severity or frequency of violence during pregnancy (Karmaliani et al., 2008; Macy, Martin, Kupper, Casanueva, & Guo, 2007; Taillieu & Brownridge, 2010).”

Applied Research papers synthesize and interpret current research on violence against women, offering a review of the literature and implications for policy and practice.

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Violence against women is a global problem which exacts a high burden of suffering on millions of women and families, including women who are pregnant and postpartum.¹ This review will present some research findings concerning violence against pregnant and postpartum women, discuss some of the strengths and limitations of these studies, and conclude with comments concerning the implications of this work for practice and research.

Violence Prevalence

Prevalence During Pregnancy and the Postpartum Period

Although numerous studies from around the globe agree that violence is a common problem among pregnant women, estimates of the prevalence of this violence vary considerably. Most prevalence studies examining violence during pregnancy have focused on physical violence. For example, a 1996 review of 13 studies from the United States (U.S.) and other developed countries found that 1% to 20% of pregnant women experienced physical violence during pregnancy, with most studies reporting estimates between 4% and 8% (Gazmararian, Lazorick, Spitz, Ballard, Saltzman, & Marks, 1996). A 2010 review of 18 studies published after this 1996 review (including studies from Canada, China, England, Hong Kong, Mexico, Pakistan, Peru, Thailand and the U.S.) found that 1% to 30% of pregnant women experienced physical violence during pregnancy, with most estimates being between 3% and 11% (Taillieu & Brownridge, 2010). A review of six studies from developing countries (including India, China, Pakistan and Ethiopia) found that 4% to 29% of pregnant women experienced domestic violence during pregnancy (Nasir & Hyder, 2003), and a review of 13 studies from several African countries (including Nigeria, Rwanda, South Africa, Uganda

¹ Although there are multiple definitions of the postpartum period, we are following guidance from the Centers for Disease Control and Prevention in defining the postpartum period as being the first 12 months after the end of a pregnancy (Berg, Atrash, Koonin, Tucker, 1996).

and Zimbabwe) found that 23% to 40% of pregnant women experienced physical violence by an intimate partner (Shamu, Abrahams, Temmerman, Musekiwa, & Zarowsky, 2011). Although these estimates of the prevalence of physical violence during pregnancy vary, it is clear that a significant number of women experience physical violence during pregnancy.

Perhaps because of potential links between pregnant women's physical injury during pregnancy (such as injury to the abdomen) and injury to the developing fetus, much research has focused on the prevalence of physical violence during pregnancy. Less is known about the prevalence of other types of violence during pregnancy, such as emotional or sexual violence. Although estimates concerning emotional and sexual violence during pregnancy vary, there does appear to be a common pattern: the prevalence of emotional violence is generally greater than the prevalence of physical violence, whereas the prevalence of sexual violence is generally less than the prevalence of physical violence (Perales et al., 2008).

Fewer studies have estimated the prevalence of violence during the postpartum period, with most of these studies finding a lower prevalence of violence during the nine months of pregnancy than during the first 12 months postpartum. For example, an investigation of women from 16 U.S. cities found that physical violence was experienced by 2% of women during pregnancy compared to 3% of women during a 12-month postpartum period (Charles & Perreira, 2007). Studies set in China (Guo, Wu, Qu, & Yan, 2004) and a city in the Islamic Republic of Iran (Mohammadhosseini, Sahraean, & Bahrami, 2010) also found a lower prevalence of violence during pregnancy than the postpartum period. In contrast, a study from North Carolina found a somewhat higher prevalence of physical violence during pregnancy (6%) than during the postpartum period (3%) (Martin, Mackie, Kupper, Buescher, & Moracco, 2001), but this study examined only the first three months of the postpartum period.

Factors Related to the Variation in Prevalence Estimates

Variation in violence prevalence estimates may be due to true differences in the prevalence of violent acts within different study populations, as well as methodological differences between studies (Jasinski, 2004; Taillieu & Brownridge, 2010).

One methodological issue is the duration of the "risk period" examined in the studies. For example, studies typically ask women about violence that occurred during the nine months of pregnancy; in other words, a risk period of nine months. The risk period examined in studies of postpartum violence often vary, with some focusing on violence that occurred during the first three months postpartum and others focusing on violence that occurred during the entire 12 months of the postpartum period. Since a longer risk period gives more opportunities for violent victimization, one would anticipate that longer risk periods would be related to greater estimates of the prevalence of violence.

Another methodological issue related to the magnitude of violence estimates stems from the assessment instruments used to document violence. Assessment instruments that include multiple violence-related questions generally result in higher prevalence estimates than those that include one or just a few violence-related questions. In addition, assessments that occur multiple times during pregnancy (or postpartum) generally result in higher prevalence estimates than assessments that occur only once. Whether or not the assessment instrument specifies the relationship of the perpetrator to the survivor also is important, with assessment instruments that ask about violence perpetrated by "anyone" generally resulting in higher prevalence estimates than studies only referencing perpetrators with a particular social relationship to the violence survivor (e.g., violence perpetrated by a "husband," "intimate partner," etc.). Moreover, the terminology used to ask about violence may influence persons' responses, with behaviorally-specific terminology (e.g., questions about being "hit," etc.) typically resulting in higher prevalence estimates than

questions that include more conceptual terminology (e.g., questions about being “abused,” etc.).

Violence Frequency and Severity

Violence during pregnancy is a critical concern because it is often frequent and severe in nature. Pregnant abused women tend to report experiencing more severe violence compared to non-pregnant abused women (Campbell, Oliver, & Bullock, 1993; McFarlane, Parker, & Soeken, 1995). In addition, pregnant violence survivors often experience multiple violent incidents during pregnancy (Amaro, Fried, Cabral, & Zuckerman, 1990; Martin et al., 2004). Moreover, some (but not all) women violated both before and during pregnancy experience increases in the severity or frequency of violence during pregnancy (Karmaliani et al., 2008; Macy, Martin, Kupper, Casanueva, & Guo, 2007; Taillieu & Brownridge, 2010).

Risk Factors for Violence

Several variables have been found to be risk factors for violence during pregnancy and the postpartum period, some of which are discussed below.

History of Violent Victimization

One of the most consistent and strongest predictors of violence during pregnancy is having experienced violence before pregnancy (Bohn, Tebben, & Campbell, 2004; Dunn & Oths, 2004; Guo, et al., 2004; Helton, McFarlane, & Anderson, 1987; Martin et al., 2001; Saltzman, Johnson, Gilbert, & Goodwin, 2003). One literature review on this topic found that 60% to 96% of women in various studies who experienced violence during pregnancy also experienced violence before pregnancy (Taillieu & Brownridge, 2010). Given this continuity of violence over time, much of the violence that occurs during pregnancy may be characterized as being part of an on-going pattern of violent victimization (Saltzman et al., 2003). However, one should keep in mind that not all women who experience violence before pregnancy will continue to experience violence during pregnancy; in fact, many women violated before pregnancy will experience a cessation or

reduction of the violence during pregnancy (Martin et al., 2001; Taillieu & Brownridge, 2010). Such decreases in violence during pregnancy may be followed by increases in violence after pregnancy is over (Charles & Perreira, 2007).

Another important point is that pregnancy is not a risk factor for violent victimization. Studies have repeatedly found that pregnant women are not at increased risk for violence compared to non-pregnant women of similar ages (Chan, Brownridge, Tiwari, Fong, Leung, Ho, 2011; Gelles, 1988; Jasinski, 2001; Jasinski, Kaufman, & Kantor, 2001). Nevertheless, for a minority of women, violence first begins during pregnancy (Martin et al., 2001) and it may have severe consequences.

As in the case of violence during pregnancy, a history of violent victimization, both before and during pregnancy, is a strong risk factor for violence during the postpartum period; however, for some women, violence first begins during the postpartum period (Martin et al., 2001; Charles & Perreira, 2007).

Characteristics of Violence Perpetrators

Although a great deal of research has documented the characteristics of those who perpetrate violence against women in general, little research has focused on the characteristics of persons who perpetrate violence against pregnant or postpartum women.

Some research focused on violence against pregnant or postpartum women has examined the social relationship of the violence perpetrator to the violence survivor, typically finding that current or former intimate partners are the perpetrators in approximately 60% to 75% of these cases (Campbell, Poland, Waller, & Ager, 1992; Dunn & Oths, 2004; Martin et al., 2001; Saltzman et al., 2003). It is noteworthy that most research examining violence against pregnant or postpartum women focuses exclusively on violence by intimate partners, without asking about violence perpetrated by other persons; therefore, very little is known about the characteristics of non-intimate partners who perpetrate violence during pregnancy or the postpartum period.

Other studies have examined substance use or abuse by persons who perpetrate violence against pregnant or postpartum women. These studies have found that perpetrators are very likely to have problems with substances such as alcohol and illicit drugs (Amaro et al., 1990; Muhajarine, D'Arcy, 1999; Nasir & Hyder, 2003; Tzilos, Grekin, Beatty, Chase & Ondersma, 2010). Although perpetrator substance use or abuse has been associated with an increased risk of this violence, a causal relationship has not been clearly established.

Research also has found that men who perpetrate violence during pregnancy tend to have lower socioeconomic status. This includes lower levels of education (Nasir & Hyder, 2003) and employment (Leung, Leung, Lam & Ho, 1999).

Characteristics of Violence Survivors

Multiple studies have found particular socio-demographic characteristics of women associated with an increased risk of violent victimization during pregnancy and the postpartum period. For example, younger pregnant women (with different studies using different definitions of “younger”) have been found to be at increased risk of violence compared to older pregnant women (Cokkinides, Coker, Sanderson, Addy, & Bethea, 1999; Devries, Kishor, Johnson, Stockl, Bacchus, Garcia-Moreno & Watts, 2010; Janssen, Holt, Sugg, Emanuel, Crichlow, & Henderson, 2003; Saltzman et al., 2003). Two of these studies estimated that women younger than 20 years old were three to four times more likely than women aged 30 or older to experience violence during pregnancy (Cokkinides et al., 1999; Saltzman et al., 2003). In addition, several studies have found that women are more likely to experience violence during pregnancy if they are unmarried (Cokkinides et al., 1999; Janssen et al., 2003; Saltzman et al., 2003; Steward & Cecutti, 1993), with lower levels of education (Bohn et al., 2004; Cokkinides et al., 1999; Nasir & Hyder, 2003; Saltzman et al., 2003), or lower incomes (Janssen et al., 2003; Nasir & Hyder, 2003).

In addition to the socio-demographic characteristics listed above, reproduction-related variables also

have been found to be risk factors for violence during pregnancy. For example, women with unintended or unwanted pregnancies are more likely than women with intended/wanted pregnancies to experience violence during pregnancy (Gazmararian et al., 1995; Goodwin, et al., 2000). At least some of the unintended/unwanted pregnancies are the result of “reproductive coercion,” including both “pregnancy coercion” (such as male partners’ use of verbal pressure to get women pregnant) and “birth control sabotage” (such as male partners taking away or tampering with women’s birth control methods). Reproductive coercion is more commonly experienced by women who have recently experienced other forms of intimate partner violence (Miller et al., 2011).

Outcomes of Violence During Pregnancy and the Postpartum Period

Violence against pregnant or postpartum women may have multiple harmful effects. Some such outcomes include homicide, injuries and physical health problems, emotional health problems, substance use, adverse pregnancy outcomes, child exposure to domestic violence, and child neglect and abuse.

Homicide

Some women die from the violence that they experience while pregnant or postpartum. In fact, research has found that homicide was the second leading cause of injury-related death during pregnancy and the first year postpartum in the U.S. from 1991 through 1999, only surpassed by motor vehicle crashes (Chang, Berg, Saltzman, & Herndon, 2005), and that homicide was the leading cause of all types of death during pregnancy and the first year postpartum in Maryland from 1993 to 2008 (Cheng and Horon, 2010). In most cases of homicide during pregnancy, the fetus is not viable enough to survive outside of the womb, and in cases of homicide during the postpartum period, the infant is faced with life without his/her biological mother.

These tragic situations often receive a great deal of attention in the media, which may give some the impression that homicide is more likely among

pregnant or postpartum women. However, research on this topic suggests that homicide rates are lower among pregnant and postpartum women compared to other non-pregnant/non-postpartum women of reproductive age (Samandari, Martin, Schiro, & 2010; Samandari, Martin, Schiro, Norwood, & Avery, 2011). Although there is no single well-accepted reason for this difference in homicide prevalence, one small study suggests that women who experience violence during pregnancy are more likely to leave the most dangerous (most potentially homicidal) partners, perhaps providing themselves some protection from homicide (Decker, Martin, & Moracco, 2004). On the other hand, research demonstrates that leaving a violent perpetrator may be very dangerous for women. For example, a case-control study that compared female intimate partner homicide victims to female intimate partner violence survivors who were not homicide victims showed that, among those who had cohabited with the violent partner, homicide victims were more likely than violence survivors to have moved out of the habitation, often leaving for another partner (Campbell et al., 2003). This case-control study focused on female violence victims in general, not necessarily those who were pregnant or postpartum.

Injuries and Physical Health Problems

Violence at any time in a woman's life may result in injuries and physical health problems (Black et al., 2011; Campbell, 2002; Coker, 2007), and the same is true of violence that occurs during pregnancy and the postpartum period. Violence during pregnancy and the postpartum period may result in a wide range of minor as well as serious injuries, such as sprains, contusions, fractures and stabbing or gunshot wounds (Nannini et al., 2008; Poole, Martin, Perry, Griswold, Lambert, & Rhodes, 1996).

Emotional Health Problems

Not only does violence during pregnancy and the postpartum period result in physical injuries, but it also has been linked to elevated levels of various types of emotional health problems, including depression, anxiety, post-traumatic stress disorder, and other forms of psychological distress (Amaro et al., 1990; Campbell et al., 1992; Harris-Britt, Martin,

Li, Casanueva, & Kupper, 2004; Steward & Cecutti, 1993; Romito, Pomicino, Lucchetta, Scrimin, & Turan, 2009). In addition, some women become so depressed about the violence that they have suicidal thoughts/ideation (Karmaliani et al., 2008).

Substance Use

Given the elevated emotional health problems among pregnant and postpartum violence survivors, it is not too surprising that those violated during pregnancy or the postpartum period are more likely than non-victimized women to use substances, including tobacco, alcohol, prescription drugs, and illicit drugs (Amaro et al., 1990; Campbell et al., 1992; Dunn & Oths, 2004; Martin, English, Clark, Cilenti, & Kupper, 1996; Parker, McFarlane, & Soeken, 1994). Although there is little longitudinal research on this topic, some research with general populations of women (not necessarily pregnant or postpartum) suggests that violence is both a risk factor for, and an outcome of, alcohol use/abuse. For example, violent victimization may lead a woman to increased drinking as a coping mechanism; this increased drinking makes her more vulnerable to severe violent victimization, which in turn leads to a greater increase in drinking (Sales & Murphy, 2000). In addition, some women initiate substance use in response to promptings by an abusive and substance-using partner (Hser, Anglin, & McGlothlin, 1987), suggesting that some perpetrators may push substances as a means of control.

Pregnancy Outcomes

Research examining pregnancy-related outcomes of violence has focused primarily on infant birth weight and preterm birth, two conditions associated with infant mortality. A recent meta-analysis of 30 studies on these topics (which resulted in increased statistical power to detect differences) found that maternal exposure to domestic violence was significantly associated with an increased risk of low infant birth weight, as well as an increased risk of preterm birth (Shah & Shah, 2010). Although the exact causal mechanisms underlying these associations are not clear, it may be that violence-related stress leads to increased levels of cortisol which has been associated with lower birth weight

infants (Valladares, Pena, Ellsberg, Persson, & Hogberg, 2009). Although not all studies have found associations between violence during pregnancy and low birth weight or preterm infants, most of these studies do not take into consideration the severity or specific bodily location of the physical assault (e.g., abdominal or other location) which may account for some of these differences.

A few studies report other types of pregnancy-related outcomes associated with violence during pregnancy. For example, some research has found that women who have experienced violence during pregnancy report having had miscarriages because of this violence (Berrios & Grady, 1991), while other research suggests that perinatal death (i.e., deaths in the first week of life and fetal deaths/stillbirths) is more common among women who experience violence during pregnancy (Janssen et al., 2003).

Child Exposure to Domestic Violence and Child Neglect and Abuse

Children of women abused during pregnancy or the postpartum period are at increased risk for child neglect and abuse by their families. For example, a study of more than 2,000 at-risk mothers participating in a home-visiting child abuse prevention program found that the occurrence of domestic violence during the first six months postpartum was associated with significantly higher levels of child neglect, psychological child abuse, and physical child abuse during the children's first five years of life (McGuigan & Pratt, 2001).

Interventions for Violence During Pregnancy and the Postpartum Period

There is limited research on the effectiveness of interventions for pregnant or postpartum violence survivors. Some of the existing research focuses on the effects of healthcare-based violence screening for pregnant women. Such screening identifies women who are currently in violent situations, and alerts all women that health care settings are safe spaces in which to disclose information about violence in their lives. A recent literature review on healthcare-based screening of prenatal patients found that the use of

standardized screening instruments and protocols enhances identification of pregnant violence survivors; moreover, asking about violence multiple times throughout the pregnancy leads to further increases in identification rates (O'Reilly, Beale, & Gillies, 2010).

Despite calls for pediatrician screening of postpartum women and other mothers for intimate partner violence during well-baby visits (Thompson & Krugman, 2001), research suggests that pediatricians seldom routinely screen for violence (Lapidus, Cooke, Gelven, Sherman, Duncan, & Banco, 2001). Some qualitative research shows that practitioners may experience multiple barriers to screening for violence during postpartum home visits, including the presence of the woman's partner or other family members during the visit, as well as time restrictions (Jack, Jamieson, Wathen, & MacMillan, 2008).

A small but growing body of research has used rigorous randomized controlled trials to examine the effects of several other types of healthcare-based interventions for pregnant violence survivors (O'Reilly et al., 2010). This work has found some limited evidence that these interventions can be somewhat effective in helping pregnant violence survivors speak to their healthcare providers about the violence, increase their self-protective actions, decrease their mental health symptoms, and reduce the violence in their lives. Such interventions include: video-based educational interventions for prenatal care patients (Humphreys, Tsoh, Kohn, & Gerbert, 2011); psychological interventions (Kiely, El-Mohandes, El-Khorazaty, & Gantz, 2010; Zlotnick, Capezza, & Parker, 2011); and empowerment interventions (i.e., interventions that help women gain increased independence from controlling abusers by offering women advice in the areas of safety, choice making, and problem solving) (Cripeet al., 2010; Tiwari et al., 2005). McFarlane, Soeken, and Wiist (2000) compared three prenatal care interventions for pregnant intimate partner violence survivors (supplying a resource card with services and safety planning information for violence survivors; offering women unlimited use of a professional domestic violence counselor;

and providing counseling plus a community-based “mentor mother” trained in domestic violence providing support via personal visits and phone calls). They found that all interventions led to decreases in violence throughout an 18 month follow-up, with no significant differences between the groups over time.

Fewer studies have examined the effectiveness of postpartum interventions for violence survivors. A randomized controlled trial of the Hawaii Healthy Start home visitation program for high-risk mothers was shown to significantly reduce women’s perpetration of intimate partner violence during the first three years of the study. The mothers in the intervention group also experienced lower rates of intimate partner violence victimization during the first three years of the study; however, this effect did not reach the traditional level of statistical significance (Bair-Merritt et al., 2010).

Strengths and Limitations of the Research

The research literature on violence against pregnant and postpartum women has a variety of strengths and limitations, some of which will now be discussed.

One of the strengths of this research is that there has been an increase in the number of studies focused on violence against pregnant or postpartum women over the years, with studies now being conducted on this topic in many areas of the world. Additionally, most of these studies use methodologically sound, structured interviews to assess violence during pregnancy and the postpartum period. Moreover, these assessment instruments generally use behaviorally specific questions about violent acts, rather than vaguer, conceptually-focused questions about “abuse.” In addition, researchers are beginning to employ rigorous research designs, such as randomized controlled trials, to examine the effectiveness of interventions for pregnant or postpartum violence survivors.

This body of research also has many limitations. Research has not yet adequately addressed the

question of why persons commit violence against pregnant and postpartum women, although several ideas on this topic have been discussed, including issues around the stress created by pregnancy and newborns, perpetrators being jealous of the attention received by their pregnant partner, perpetrators feeling that their partner is pregnant by someone other than themselves, etc. Researching the answer to this question would help inform preventive interventions to end this violence. Another limitation is the relative dearth of information concerning violence during the postpartum period. In addition, many studies focus exclusively on physical violence, without asking about other forms of violence (e.g., sexual, emotional). Furthermore, many studies focus primarily on violence perpetrated by past/current intimate partners, even though it has been established that other types of persons (such as parents) may perpetrate violence against pregnant or postpartum women. Likewise, much of the research in this area does not identify the gender of the violence perpetrator despite the fact that violence against women may be perpetrated by other women and those in lesbian/bisexual/transgendered relationships (Jackson, Heintz, & Melendez, 2006; Tjaden, Thoennes, & Allison, 1999). Further, most studies of violence against pregnant or postpartum women only examine violence during one time in the women’s lives (i.e., most typically during pregnancy, and much less often during the postpartum period), rather than taking a life course approach to examine violence throughout the lifespan. Even when a life course approach is used in studies, and even when these studies determine the social relationship of the perpetrator to the survivor, we seldom know if the “intimate partner” (or person of some other social relationship to the survivor) perpetrating the violence during pregnancy is the same individual perpetrating the violence during the postpartum period. Moreover, although considerable research has focused on various types of birth outcomes among women violated during pregnancy, less research has examined the implications of violence during pregnancy and the postpartum period on later child outcomes. Finally, little rigorous research examines the effectiveness of preventive and therapeutic

interventions for violence during pregnancy and the postpartum period. The paucity of such evidence is a real barrier to the implementation of interventions that will make a substantial difference in the lives of women and their families.

Implications for Practice and Research

Given that many women experience violence during pregnancy and the postpartum period, and given that such violence has implications for the health of the women, their pregnancies, and their children, practitioners and others concerned with the well-being of violence survivors may ask how they should intervene. As mentioned above, research does not yet provide an adequate response to this important question. It is evident that routine screening for violence within healthcare settings increases identification of survivors, and signals to survivors that healthcare settings are safe places in which to disclose violence. But screening alone may not be immediately effective in reducing violence in women's lives. Although no single intervention has been found to be highly effective in reducing violence in the lives of women who have experienced violence during pregnancy and the postpartum period, a few interventions appear to offer some promise in terms of reducing violence in women's lives and enhancing well-being.

It is clear that rigorous research is still needed in many domains concerning violence against pregnant and postpartum women, including more explanatory, comprehensive, and longitudinal research on violence during pregnancy and the postpartum period. Such research would aim to determine why such violence occurs and the underlying motivations and dynamics at work, as well as inquiring about multiple forms of violence (e.g., physical, sexual, emotional), violence perpetrated by anyone (not just past/current intimate partners), the gender of the violence perpetrator, and violence over one's lifetime (rather than only one particular period). It could also help determine not only the social relationship of the perpetrator to the survivor, but also whether that same person is responsible for other instances of

violence. In addition, this research should examine multiple outcomes of violence, including child-related outcomes and the economic costs associated with violence. Additionally, research should not just focus on the violence survivors, but studies should also be conducted that focus on violence perpetrators. Information from a wide range of cultural areas is needed since some risk factors may be somewhat unique to particular cultures (for example, having multiple wives was noted to be risk factor for perpetration of violence during pregnancy in Pakistan; see Karmaliani et al., 2008). Moreover, given the ties between unintended pregnancy and violence against women (and their children), one may ask whether women in countries without easy access to contraception and safe abortion are at extreme risk of violence during pregnancy and the postpartum period. Finally, rigorous research designs (such as randomized controlled trials) are needed to document the effectiveness of preventive and therapeutic interventions for violence during pregnancy and the postpartum period. Such large-scale, multi-year investigations are costly. But investing to enhance our knowledge of this topic may well lead to identification of effective interventions that could be widely implemented to decrease the burden of suffering for women and their families, and to avoid the costly consequences of violence against pregnant and postpartum women.

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In Brief: Violence During Pregnancy and the Postpartum Period

Sandra L. Martin, Jennet Arcara, and McLean D. Pollock with contributions from Lonna Davis

Violence against women is a significant and disturbing problem which affects women around the world, including those who are pregnant or postpartum. Although numerous studies from around the globe agree that violence is a common problem among pregnant women, estimates of the prevalence of this violence vary considerably. Most prevalence studies examining violence during pregnancy have focused on physical violence. A 2010 review of 18 studies (including studies from Canada, China, England, Hong Kong, Mexico, Pakistan, Peru, Thailand and the U.S.) found that 1% to 30% of pregnant women experienced physical violence during pregnancy, with most estimates being between 3% and 11% (Taillieu & Brownridge, 2010). Although these estimates of the prevalence of physical violence during pregnancy vary, it is clear that a significant number of women experience physical violence during pregnancy.

Less is known about the prevalence of other types of violence during pregnancy, such as emotional or sexual violence. Although estimates concerning emotional and sexual violence during pregnancy vary, there does appear to be a common pattern: the prevalence of emotional violence is generally greater than the prevalence of physical violence, whereas the prevalence of sexual violence is generally less than the prevalence of physical violence (Perales et al., 2008). Fewer studies have estimated the prevalence of violence during the postpartum period, with most of these studies finding a lower prevalence of violence during the nine months of pregnancy than during the first 12 months postpartum.

Risk Factors for Violence

- One of the most consistent and strongest predictors of violence during pregnancy is having experienced violence before pregnancy (Bohn, Tebben, & Campbell, 2004; Dunn & Oths, 2004; Guo, et al., 2004; Helton, McFarlane, & Anderson, 1987; Martin et al., 2001; Saltzman, Johnson, Gilbert, & Goodwin, 2003).
- As in the case of violence during pregnancy, a history of violent victimization, both before and during pregnancy, is a strong risk factor for violence during the postpartum period; however, for some women, violence first begins during the postpartum period (Martin et al., 2001; Charles & Perreira, 2007).
- Younger pregnant women (with different studies using different definitions of “younger”) have been found to be at increased risk of violence compared to older pregnant women (Cokkinides, Coker, Sanderson, Addy, & Bethea, 1999; Devries, Kishor, Johnson, Stockl, Bacchus, Garcia-Moreno & Watts, 2010; Janssen, Holt, Sugg, Emanuel, Crichlow, & Henderson, 2003; Saltzman et al., 2003).
- Studies have found that women are more likely to experience violence during pregnancy if they are unmarried (Cokkinides et al., 1999; Janssen et al., 2003; Saltzman et al., 2003; Steward & Cecutti, 1993), with lower levels of education (Bohn et al., 2004; Cokkinides et al., 1999; Nasir & Hyder, 2003; Saltzman et al., 2003), or lower incomes (Janssen et al., 2003; Nasir & Hyder, 2003).
- Reproduction-related variables also have been found to be risk factors for violence during pregnancy. For example, women with unintended pregnancies are more likely than women with intended pregnancies to experience violence during pregnancy (Gazmararian et al., 1995; Goodwin, et al., 2000).

Outcomes Related to Violence Against Women who are Pregnant or Postpartum

- Research has found that homicide was the second leading cause of injury-related death during pregnancy and the first year postpartum in the U.S. from 1991 through 1999, only surpassed by motor vehicle crashes (Chang, Berg, Saltzman, & Herndon, 2005).
- Violence in pregnancy and postpartum has been linked to elevated levels of various types of emotional health problems, including depression, anxiety, post-traumatic stress disorder, and other forms of psychological distress (Amaro et al., 1990; Campbell et al., 1992; Harris-Britt, Martin, Li, Casanueva, & Kupper, 2004; Steward & Cecutti, 1993; Romito, Pomicino, Lucchetta, Scrimin, & Turan, 2009).
- Maternal exposure to domestic violence was significantly associated with an increased risk of low infant birth weight, as well as an increased risk of preterm birth, and miscarriage in some cases (Shah & Shah, 2010; Berrios & Grady, 1991).
- Studies have also found that the occurrence of domestic violence during the first six months postpartum was associated with significantly higher levels of child neglect, psychological child abuse, and physical child abuse during the children's first five years of life (McGuigan & Pratt, 2001).

Interventions

- Researchers have found some limited evidence that healthcare based interventions can be somewhat effective in helping pregnant violence survivors. Examples of healthcare based interventions include educational interventions in prenatal care (Humphreys, Tsoh, Kohn, & Gerbert, 2011); psychological interventions (Kiely, El-Mohandes, El-Khorazaty, & Gantz, 2010; Zlotnick, Capezza, & Parker, 2011); and empowerment interventions (Cripe et al., 2010; Tiwari et al., 2005).
- Research regarding effectiveness of postpartum interventions for violence survivors found that home visitations programs were shown to somewhat reduce victimization of women, however, this reduction did not meet the traditional level of statistical significance (Bair-Merritt et al., 2010).

Finally, rigorous research designs (such as randomized controlled trials) are needed to document the effectiveness of preventive and therapeutic interventions for violence during pregnancy and the postpartum period. Such large-scale multi-year investigations are costly. But investing to enhance our knowledge of this topic may well lead to identification of effective interventions that could be widely implemented to decrease the burden of suffering for women and their families, and to avoid the costly consequences of violence against pregnant and postpartum women.

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