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viewpoint and theory

Intimate Partner Violence Perpetration: Moving Toward a Comprehensive Conceptual Framework

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Intimate partner violence (IPV) is an urgent public health concern. Despite extensive research that has highlighted the heterogeneity of IPV perpetrators, the majority of treatment programs for perpetrators have taken a "one-size-fits-all" approach, which has rendered high rates of attrition and violence recidivism. More comprehensive intervention approaches are needed to address the individual treatment needs of IPV perpetrators. Intervention should be founded on a problem theory that delineates how the relevant sequelae are connected to the social problem in order to provide guidance on how it may be addressed. Accordingly, the primary aim of this article is to take an initial step toward improving IPV perpetrator intervention by examining current theory and offering a refined theoretical lens with which to view IPV perpetration. After a thorough examination of IPV perpetration, including the epidemiology, etiology, and implications for social welfare and social intervention, an in-depth review is provided on three key theories commonly applied to IPV perpetration: feminist theory, neurobiological theories of trauma, and attachment theory. This article concludes with a critique of each theory and the proposal of a new, more comprehensive conceptual model for understanding the risk factors of IPV perpetration.

KEYWORDS: partner abuse; family violence; intimate partner perpetration; theory; intervention; treatment

Intimate partner violence (IPV) is a significant and costly public health problem (Centers for Disease Control and Prevention, 2014) with a wide range of devastating personal and social consequences for victims, perpetrators, and society (Black et al., 2011). The need to understand and treat IPV perpetration is urgent if we consider the devastating health, social, legal, financial, and psychological outcomes for perpetrators, victims of partner abuse, and children exposed. However, despite the collective

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effort of scholars and practitioners, we have failed, as a field, to effectively address this social problem. While our understanding of the complex etiology of perpetrators has grown extensively, the majority of treatment has remained stagnant with a long-standing reliance on a "one-size-fits-all" approach, rendering persistently high rates of attrition and violence recidivism (Eckhardt et al., 2013).

Intervention should be based on an explicit problem theory, in which the sequelae relevant to the social problem are expounded through a display of risk factors, outcomes, and the mediators that connect them (Fraser & Galinsky, 2010). The majority of treatment approaches to date are, thus, a product of theoretical conceptualizations that do not incorporate the full gamut of contributing factors to IPV perpetration. Several theories have been used to explain this social problem. While all provide a thorough explanation for some part of violent behavior toward an intimate partner, each of them fails to address many other aspects. It is critical that we develop a comprehensive understanding of the wide range of causes and correlates of IPV perpetration. Through a multifaceted theoretical framework that captures the risk factors across all ecological levels, we can more effectively inform interventions that meet the heterogeneous treatment needs of perpetrators.

STATEMENT OF THE PROBLEM

Definitions of IPV

IPV can be defined as either threats or acts of emotional, physical, or sexual violence between two people in an intimate relationship (Centers for Disease Control and Prevention, 2012). More specifically, physical IPV is the intentional use of physical force to inflict harm, injury, or death, which can include behaviors such as slapping, pushing, kicking, shoving, punching, or use of a weapon. Sexual IPV refers to sexual touching that is nonconsensual, use or threat to use physical force to obtain sexual acts with an intimate partner, or to engage in sexual activity with a partner without the capacity to understand or consent. Finally, emotional IPV includes threats, acts, or some form of coercion used to cause psychological distress. This can include engaging in behavior such as yelling, name calling, or verbal threats (Saltzman, Fanslow, McMahon, & Shelley, 2002).

Epidemiology

IPV is an urgent public health crisis, with an alarming rate of 10 million men and women assaulted by an intimate partner each year (Centers for Disease Control and Prevention, 2015). More specifically, a recent national survey conducted by the Centers for Disease Control and Prevention revealed that women are victims of approximately 4.3 million minor and 3.2 million severe partner assaults, while men are victims of approximately 5.1 million minor and 2.2 million severe assaults (Black et al., 2011).

Moreover, approximately two million women are raped, and over seven million men and women are victims of stalking in one year (Centers for Disease Control and Prevention, 2015). Emotional abuse is considered to be the most prevalent, is highly correlated with physical abuse, is often considered a precursor to physical abuse, and has generally equal rates across gender (Carney & Barner, 2012; Schumacher & Leonard, 2005).

There are a wide range of differences in IPV prevalence in terms of demographics. While the majority of research has focused on IPV within heterosexual relationships, research on IPV within LGBT relationships has grown in recent years (Cannon & Buttell, 2015). Using the Centers for Disease Control and Prevention's latest National Intimate Partner and Sexual Violence Survey, Walters, Chen, and Breiding (2013) reported the differences of IPV rates based on sexual orientation. The lifetime prevalence of physical violence, rape, and/or stalking by an intimate partner for females was 43.8% for lesbian women and 61.1% for bisexual women, compared to 35% for heterosexual women. For males, the lifetime prevalence of physical violence, rape, and/or stalking was 26% for gay men and 37.3% for bisexual men, compared to 29% for heterosexual men (Walters, Chen, & Breiding, 2013). Regarding ethnic composition, data from the 2010 National Intimate Partner and Sexual Violence Survey demonstrate that the lifetime prevalence of physical violence, rape, or stalking by an intimate partner is 34.6% for Whites, 37.1% for Latinas, 43.7% for Blacks, 46% for American Indians and Alaskan Natives, and 53.8% for women of mixed race (Black et al., 2011). Research has also demonstrated that IPV prevalence is significantly less among immigrant groups compared to those born in the U.S.A. (Chang, Shen, & Takeuchi, 2009; Johnson, 2011). Moreover, IPV rates are the highest among adolescents and emerging adults (Capaldi, Kim, & Hyoun, 2007; Halpern, Spriggs, Martin, & Kupper, 2009), and among those with lower income and those who are unemployed (Stith, Smith, Penn, Ward, & Tritt, 2004).

Etiology

IPV perpetration is multifaceted, as research has demonstrated that it is more complex than originally thought. There is a general consensus that IPV perpetrators are a heterogeneous group (Cavanaugh & Gelles, 2005), as they differ markedly from each other in a variety of ways. The acknowledgment of this diversity has stimulated great academic inquiry among researchers regarding the differences between perpetrators. Consequently, an abundance of research has been produced on perpetrator typologies and the correlates of IPV perpetration in an effort to understand this social problem. It is important to note that while the majority of research over the past several decades has focused primarily on male perpetrator typologies and correlates (Hamel, Ferreira, & Buttell, 2015), female perpetrators of IPV have been found to display many of the same risk factors (Capaldi, Knoble, Shortt, & Kim, 2012).

Perpetrator Typologies. Extensive research over the past few decades led to the development of batterer typologies based on common characteristics identified among

different subgroups within perpetrator samples. Holtzworth-Munroe, Meehan, Herron, Rehman, and Stuart (2000) did a comprehensive review of 15 batterer typologies among male perpetrators and presented three subtypes: family only or moderate offender, dysphoric or borderline, and generally violent or antisocial. One study adapted the Holtzworth-Munroe et al. (2000) typology and tested it with female perpetrators. Women arrested for IPV were divided into two groups: partner-only violence (in the context of an intimate relationship) and general violence (in multiple contexts) and found that women in the general-violence group perpetrated more severe physical and psychological abuse, and were more likely to use violence as an instrument of control (Babcock, Miller, & Siard, 2003). Another study tested Holtzworth-Munroe et al. (2000) typology to compare the differences between female and male perpetrators and found results consistent to that of Holtzworth-Munroe and Stuart for both men and women (Walsh et al., 2010). Johnson (1995) examined data from survey research with a large sample of shelter populations and identified four patterns of IPV among male perpetrators. These include common couple violence, intimate terrorism (IT), violent resistance, and mutual violent control (Johnson, 1995). More recently, an analysis of the National Violence Against Women Survey was performed to compare the differences in victimization by gender. This study found approximately equal rates of between males and females, with 36% of women and 35% of men reported experiencing this type of abuse (Jasinski, Blumenstein, & Morgan, 2014).

What's more, extensive research has delineated two distinctive subtypes of IPV: one characterized as an impulsive, reactive, and emotion-based type of violence and another described as a calculating, proactive, and predatory type of violence. These bimodal approaches to the classification of IPV perpetrators have proliferated the literature (Gottman et al., 1995; Johnson, 2011; Johnson & Ferraro, 2000; Tweed & Dutton, 1998; Stanford, Houston, & Baldridge, 2008). One study applied this bimodal classification of aggression in a sample of female perpetrators and found that both impulsive and premeditated aggression types were similar to the results of studies on male perpetrators (Lake & Stanford, 2011).

Correlates of IPV Perpetration. In addition to studying common subtypes of IPV perpetrators, extensive research has been devoted to understanding the variables that serve as common correlates to IPV perpetration. Perpetrators have been found to vary with regard to a history of trauma and abuse, psychopathology, substance use and abuse, criminal history, anger and hostility, and genetic associations, among other variables.

First, numerous studies have found that IPV perpetrators have been exposed to trauma during childhood, including experiencing maltreatment and witnessing parental IPV as a child (Capaldi et al., 2012; Corvo & Johnson, 2013; Ernst et al., 2009; Faulkner, Goldstein, & Wekerle, 2014; Gardner, Moore, & Dettore, 2014; Henrichs, Bogaerts, Sijtsema, & Klerx-van Mierlo, 2015; Lee, Walters, Hall, & Basile, 2013; Maguire et al., 2015; Webermann, Brand, & Chasson, 2014). Moreover, the link between trauma and IPV perpetration has been explained by the neurobiological

consequences of trauma and subsequent impact on cognition, mood, and behavior (Hart & Rubia, 2012).

Research has also repeatedly demonstrated a link between IPV perpetration and mental health issues. Several personality disorders have been associated with perpetration, including antisocial, borderline, histrionic, narcissistic, and dependent personality disorders (Capaldi et al., 2012; Corvo & Johnson, 2013; Okuda et al., 2015). In examining gender differences, one study found similar rates of borderline and antisocial personality traits among men and women in court-mandated batterer treatment (Ross, 2011). In addition to Axis II disorders, IPV perpetrators have been found to struggle with a variety of Axis I disorders, including intermittent explosive disorder (Henrichs, Bogaerts, Sijtsema, & Klerx-van Mierlo, 2015), generalized anxiety disorder, panic disorder, depression, and social anxiety disorder (Shorey, Febres, Brasfield, & Stuart, 2012; Stuart, Moore, Gordon, Ramsey, & Kahler, 2006), as well as post-traumatic stress disorder (PTSD; Maguire et al., 2015; Taft et al., 2015; Stuart et al., 2006). What's more, perpetrators have also been more likely to report unmet treatment need for mental health care (Lipsky, Caetano, & Roy-Byrne, 2011).

Alcohol and drug abuse issues are commonly identified among IPV perpetrators. Systematic reviews have found a significant relationship between alcohol use and IPV (Langenderfer, 2013), as well as cocaine use and IPV (Moore et al., 2008). Studies have reported up to 50% of IPV perpetrators in treatment had a diagnosis of alcohol, cocaine, or cannabis disorders (Kraanen, Scholing, & Emmelkamp, 2012). One systematic review found mixed results in gender differences in alcohol and drug use by perpetrators, with some studies pointing to equal rate of substance abuse, while other studies conclude that male perpetrators are more likely to have alcohol and drug abuse issues (Larsen & Hamberger, 2015). Other correlates identified among perpetrator samples are higher levels of anger, hostility and aggression (Norlander & Eckhardt, 2005; Shorey, Brasfield, Febres, & Stuart, 2011), a history of juvenile delinquency and other non-violent crimes (Capaldi et al., 2012), genetic predisposition (Stuart et al., 2014), and insecure attachment styles (Genest & Mathieu, 2014; Sutton, Simons, Wickrama, & Futris, 2014). Clearly, a variety of differences exist among perpetrators, many of whom suffer from multiple issues, which further compounds and complicates the etiology of IPV perpetration.

SIGNIFICANCE OF THE PROBLEM

Impact of IPV Perpetration on Social Welfare

The costs of IPV exceed $8.3 billion each year, including medical costs, mental health costs, and lost productivity (National Center for Injury Prevention and Control, 2003), which supports the attempts to address its devastating consequences. What's more, this is an underestimate, as approximately one-third of women who have been sexually or physically assaulted seek treatment (Stanford et al.,

20082000). Further, male victims of IPV are often hesitant to seek help (Addis & Mahalik, 2003) due to services not being tailored to men, as well as due to the shame, stigmatization and fear they experience. Thus, often by the time men call the police for assistance, the abuse has reached severe levels (Douglas, Hines, & McCarthy, 2012).

The staggering rate of IPV has significant personal and social outcomes for victims, the children exposed to IPV, and society as a whole (Black et al., 2011). Male and female victims of IPV suffer from a wide range of consequences. Many medical health issues have been documented, such as physical injuries, chronic pain, asthma, activity limitations, joint disease, risk for HIV, heart disease, stroke, and lack of routine checkups with a doctor, poor quality of sleep, disabilities, heart disease and high cholesterol (Breiding, Black, & Ryan, 2008a; Cavanaugh & Gelles, 2005; Carney & Barner, 2012a; Campbell, 2002; Coker et al., 2002; Woods, Kozachik, & Hall, 2010). In addition, victims experience a range of mental health consequences, with high rates of PTSD (Campbell, 2002; Woods, 2005), depression and suicidality (Mueser et al., 2006), anxiety (Goodwin, Chandler, & Meisel, 2004), and high rates of substance misuse and abuse (Breiding, Black, & Ryan, 2008b; Macy & Goodbourn, 2012). Women, in particular, also suffer from unexpected or unwanted pregnancies due to reproductive coercion (Coker, 2007).

With the recognition that males and females are victims of IPV at similar rates, the consequences of male-to-female perpetration are generally more severe and lethal. For instance, approximately one in four women and one in seven men over 18 years of age have been victimized by severe physical violence at the hands of their intimate partner in a lifetime (Breiding, Black, & Ryan, 2008b). Moreover, 13.4% of women compared to 3.54% of men have sustained injuries from IPV incidents (Breiding, Black, & Ryan, 2008b). Lastly, 40% of all female homicides are IPV related, and women are nine times more likely to be murdered by their partners than are men (Stöckl et al., 2013).

Deleterious outcomes associated with children who have witnessed IPV include depression, withdrawn behavior and delinquency (Moylan et al., 2010; Howells & Rosenbaum, 2008), social difficulties and antisocial behavior (Katz, Hessler, & Annest, 2007), chronic sleep problems (Insana, Foley, Montgomery-Downs, Kolko, & McNeil, 2014), and cognitive functioning issues (Graham-Bermann, Howell, Miller, Kwek, & Lilly, 2010). In addition, these children are significantly more likely to experience other forms of child maltreatment and general household dysfunction (Lamers-Winkelman, Willemen, & Visser, 2012). Finally, three meta-analytic studies examined the association between children's exposure to IPV and emotional problems, behavioral problems, and trauma symptoms and found medium effect sizes (Chan & Yeung, 2009; Kitzmann, Gaylord, Holt, & Kenny, 2003; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). There is no dearth in studies that underscore the public health consequences of IPV perpetration and the importance for effective intervention.

Treatment for IPV Perpetrators

Despite the urgent need to address this issue, current standard treatment for IPV perpetrators has a limited evidence base, and there is a need for the development and rigorous testing of new, enhanced interventions (Eckhardt et al., 2013). Batterer intervention programs (BIPs) have commonly relied on the Duluth model, a gender-based, psychoeducational approach, or some variation of cognitive behavioral therapy (CBT; Hamel, 2007), both of which aim to facilitate behavior change through pro-social cognitive transformation (Eckhardt et al., 2013). In taking a one-size-fits-all approach, the IPV treatment field has failed to address the heterogeneous treatment needs of perpetrators who differ markedly from each other in a wide range of areas (Cavanaugh & Gelles, 2005). Many researchers have suggested that tailoring programs to meet the needs of perpetrators with different etiologies of violence may improve treatment efficacy (Moore, Temple, & Stuart, 2007).

THEORETICAL APPROACHES TO IPV

There have been a wide variety of theoretical developments used to enhance our understanding of IPV perpetration (Bell & Naugle, 2008). These theories have served as a backdrop for understanding the epidemiology, etiology, and treatment of IPV perpetration. In the following section, three widely recognized theories will be reviewed to illustrate the range of theoretical approaches to this social problem: feminist theory, neurobiological theories of trauma, and attachment theory. The key relevant assumptions of each theory will be discussed and followed by a thorough explanation of its application to IPV perpetration. Finally, a brief synthesis of the studies that examines each theory's empirical validity will be provided.

Feminist Theory

Feminist theory is a derivative of the feminist movement and can be defined as the search for equal rights, opportunities, and identities that women believe they should have (Thomas, 1999). One of the key assumptions of feminist theory is that gender is merely a socially constructed concept in which males and females are engaged in a hierarchical socialization process. Socialized behaviors and labels are categorized based on gender, and are subsequently stratified so that male categorization is deemed more valuable, resulting in male privilege (Smith & Hamon, 2012).

Feminist theory is the most widely applied theory to IPV perpetration and seeks to understand partner violence through an examination of the aforementioned sociocultural context in which relationships develop. From this perspective, males' violent behavior toward female partners is a method used to exert power and control over them, and is a direct consequence of living in a patriarchal society that socializes men to dominate over women and ultimately perpetuates the societal oppression of women (Dobash & Dobash, 1979; Pence & Paymar, 2004).

Empirical studies examining the relationship between patriarchal attitudes and IPV have found mixed results. There is some support in the research for the connection between patriarchal views and male IPV perpetration. Studies have found higher rates of physical violence perpetration by men with sexist attitudes toward women (Forbes, Adams-Curtis, Pakalka, & White, 2006), husbands with traditional views of sex roles (Santana, Raj, Decker, La Marche, & Silverman, 2006), and in relationships in which husbands' and wives' have a greater discrepancy in acceptance of patriarchal views (Leonard & Senchak, 1996). Other studies report a significant relationship between IPV perpetration and control-seeking behaviors, masculinity, and positive attitudes toward violence (Graham-Kevan & Archer, 2008; Próspero, 2008; Whitaker, 2013). A recent, large-scale study examined lifetime physical IPV perpetration across eight countries and found that having permissive attitudes toward violence against women and inequitable gender attitudes was associated with a higher likelihood of physical IPV perpetration by males (Fleming et al., 2015). Further, in another recent study, men were found to be over four times more likely than women to perpetrate IT, a type of IPV defined as a pervasive pattern of control (Johnson, Leone, & Xu, 2014). However, researchers have challenged the conclusions of Johnson, Leone, and Xu (2014). Studies have shown that male and female perpetrators have similar motivations for their abuse (Langhinrichsen-Rohling, Selwyn, & Rohling, 2012) and that the rates of perpetrators who engage in violence as a means to control their partners are similar for males and females (Jasinski et al., 2014).

The vast majority of BIPs for perpetrators are grounded in feminist theory, with the overarching goal to address men's domineering and patriarchal attitudes. The most well-known BIP has been the Domestic Abuse Intervention Project in Duluth, Minnesota (Schmidt et al., 2007), which is a gender-based, psychoeducational group treatment model embodied in a feminist analysis of IPV that links perpetration to male power, control, and privilege. This has been one of the most widely disseminated interventions for decades (Eckhardt et al., 2013). The group curriculum for these programs is centered on eight themes that promote gender equality, respect, and nonviolence. During group sessions, facilitators provide education based on these themes through a variety of techniques that challenge patriarchal views, and abusive and controlling behavior (North Carolina Domestic Violence Commission, 2013). Within these programs, the Power and Control Wheel is a commonly used paradigm that depicts the cycle of abuse in which perpetrators intentionally victimize their partners through an overarching pattern of power and control. The Power and Control Wheel details the tactics used by perpetrators to control their partners and include using coercion and threats, intimidation, emotional abuse, isolation, minimizing, children, male privilege, and economic abuse, as well as denying and blaming. The Equality Wheel is a contrast of the Power and Control Wheel and provides a description of the changes needed for perpetrators to progress from an abusive relationship to a nonabusive one (Heyman, Foran, & Wilkinson, 2013). Most state laws and guidelines that regulate BIPs have adopted the key components of feminist theory to understand and address the treatment needs of perpetrators (Maiuro & Eberle, 2008).

However, as rates of perpetration are similar for male and female perpetrators, females are being increasingly arrested and ordered by the court to participate in BIPs (Dowd, Leisring, & Rosenbaum, 2005; Larsen & Hamberger, 2015). This highlights the questions about the effectiveness of these programs for women both because many BIPs (e.g., the Duluth model) assume patriarchy and male dominance to be the source of the problem of violent behavior (Stuart, Temple, & Moore, 2007) and because BIPs already appear to have a limited impact on violent behavior among males (Eckhardt et al., 2013). While there are few studies that have examined the effectiveness of BIPs with female perpetrators, one study found that more than a third of BIP participants dropped out of the program, with no gender differences in dropout rates (Hamel, Ferreira, & Buttell, 2015).

Neurobiological Theories of Trauma

Neurobiological theories of trauma place emphasis on past negative experiences as being the primary influence of aggressive behavior. According to Heyman, Foran, and Wilkinson (2013), the assumptions of this theory are that individuals who have endured traumatic experiences in childhood subsequently undergo physiological changes that place them at a heightened risk for violent behavior. All humans have innate, evolutionary perceptual and behavioral systems that allow them to respond to danger for survival purposes, commonly known as the fight-or-flight response. However, the systems that facilitate being alert and responsive to danger cues are plastic and malleable to environmental circumstances and changes. Accordingly, when a child experiences prolonged exposure to a dangerous, traumatic environment, their neural pathways adapt in order to cope with the environmental stress, resulting in hyperarousal and hypervigilant responses even when danger is no longer present (Heyman, Foran, & Wilkinson, 2013). The fight-or-flight stress response is mediated by the hypothalamic–pituitary–adrenal (HPA) axis, which is a system of interrelated structural regions and neuromodulators in the brain (Lupien & McEwen, 1997). Trauma early in life primes the HPA axis, causing an individual to hyperrespond to acute stressors in their environment (Cohen, Perel, Debellis, Friedman, & Putnam, 2002). However, researchers report that priming is a long-term consequence of exposure to trauma and prolonged hyperactivity of the HPA axis, and often will not be evident until a substantial amount of time has passed since the traumatic experiences occurred (Goenjian et al., 1996). This provides a plausible account for how IPV perpetration in adulthood could be explained by traumatic experiences that occurred early in life.

Studies have repeatedly linked IPV perpetration to childhood trauma (Capaldi et al., 2012; Gardner et al., 2014; Henrichs, Bogaerts, Sijtsema, & Klerx-van Mierlo, 2015; Lee et al., 2013; Maguire et al., 2015; Webermann et al., 2014). Researchers who support the neurobiological conditioning perspective believe the link between IPV perpetration and childhood trauma can be explained by the neurobiological impact of trauma on aggressive behavior. There is a large body of research

delineating the neurobiological consequences of trauma and subsequent impact on cognition, mood, and behavior. Studies have found an association between trauma exposure and the abnormal development of the HPA axis, in which there is an overproduction of the stress hormone, cortisol, that can negatively impact various systems in the body and has been linked to disease and PTSD (Miller, Chen, & Zhou, 2007; Wessa, Rohleder, Kirschbaum, & Flor, 2006). Further, studies have reported a link between trauma and structural differences in global volume, prefrontal cortex, hippocampus, amygdala, corpus callosum, anterior cingulate cortex, cerebellum, parietotemporal regions, and white matter tracts of the brain (Hart & Rubia, 2012). Functional differences that occur in trauma-exposed brains include inhibited communication between the prefrontal cortex and the amygdala, which makes it difficult to manage stress and impulse (Koenigs & Grafman, 2009). Overall, neurobiological consequences of trauma have been shown to impact several areas of functioning among victims that include difficulties with executive functioning, cognitive processing, emotional or behavioral regulation, and arousal control (Solomon & Heide, 2005).

Finally, a connection has been established between the studies that correlate childhood trauma with IPV perpetration and the studies that correlate childhood trauma with neurobiological consequences, namely, support in the research specifically for trauma-induced neurobiological deficits leading to IPV perpetration in adolescence (Wolfe, Wekerle, Scott, Straatman, & Grasley, 2004) and adulthood (Faulkner, Goldstein, & Wekerle, 2014; Taft, Schumm, Orazem, Meis, & Pinto, 2010; Wekerle et al., 2009). However, despite this research, to date there appear to be no BIPs that address trauma exposure or utilize trauma-informed interventions.

Attachment Theory

The premise of attachment theory is that the quality of a child's relationship with their primary caregiver has a profound influence on a child in multiple life domains, which is theorized to be stable throughout the lifespan. Attachment theory emphasizes how an individual's early experiences with their caregiver will shape their general expectations about the trustworthiness and reliability of significant others in their life (Bowlby, 1973). Based on their Strange Situation procedure, (Ainsworth, Blehar, Waters, and Wall (1978), along with later researchers Main and Solomon (1990), expanded on Bowlby's work in attachment through the classification of specific attachment styles that develop as a consequence of how infants experience and respond to caregiver separation: secure attachment, insecure-ambivalent attachment, insecure-avoidant attachment, and disorganized attachment. In sum, infants are categorized as secure if their distress is effectively relieved after reunion with their primary caregiver, whereas infants are categorized as insecure if they either ignore their caregiver when they return (insecure-avoidant) or they concurrently seek and resist their caregiver when they return (insecure-ambivalent). Lastly, infants are disorganized if they do not fit into any one category and exhibit disorientation based

on apparent fear, such as asymmetric or jerky movements, freezing, or disassociation (Main & Solomon, 1990).

Following the Strange Situation procedure, studies found high rates of stability of attachment styles over the infancy period (Main & Weston, 1981; Waters, 1978) and through early childhood (Main & Cassidy, 1988) among low-risk samples. The stability of disorganized attachment was not included in these earlier studies since it was a category added by Main and Solomon (1990) afterward, but a meta-analysis of studies on this particular category indicated that disorganized attachment was stable across the infancy period (van Ijzendoorn, Schuengel, & Bakermans-Kranenburg, 1999). Research has also indicated that attachment style is stable beyond infancy, into childhood and even adulthood. One meta-analysis found that attachment security is moderately stable across the first 19 years of life (Chris Fraley & Fraley, 2002). Further, ample attention has been given to how attachment styles manifest in adulthood. One of the most commonly used classifications of adult attachment is Bartholomew and Horowitz (1991) typology, which includes secure, fearful, preoccupied, and dismissive. Resembling the classification of Ainsworth et al. (1978) attachment styles with infants, secure attachment is the most adaptive, with the other three being insecure attachments of various sorts.

Attachment theory can be used as a conceptual lens to examine IPV perpetration (McClellan & Killeen, 2000). Individuals with insecure attachment styles, specifically those with fearful or preoccupied attachment, may rely on destructive means, such as violence, to restore a sense of security in the relationship (Bowlby, 1984; Bartholomew & Horowitz, 1991; Pistole, 1994). Embedded within this relational dynamic are the emotions of jealousy and anger, which can arise when a partner perceives a real or imagined threat. Bowlby (1988) purports that people with insecure attachment styles often find situations that are innocuous to be threatening in some way and, consequently, demonstrate angry and jealous behavior toward their partner. For these individuals, anger, hostility, and separation anxiety are simply behavioral expressions of their ultimate fear of abandonment (Bowlby, 1973). Thus, IPV perpetrators with insecure attachment utilize poor coping skills, such as violence, in a conscious or unconscious attempt to prevent feared abandonment.

With consideration to the conceptual analysis of how violent tactics can be used to cope with issues arising from insecure attachment, it is not surprising that a growing body of research has identified attachment style as a potential risk factor for IPV perpetration. Studies have found higher levels of insecure attachment styles among violent perpetrators compared to non-violent perpetrators, including preoccupied and fearful (Dutton, Saunders, Starzomski, & Bartholomew, 1994), as well as preoccupied and dismissing (Babcock, Jacobson, Gottman, & Yerington, 2000; Henderson, Bartholomew, Trinke, & Kwong, 2005). Studies have confirmed that perpetrators with insecure attachment styles have difficulty regulating emotions like anger and hostility and, thus, use maladaptive methods like violence to manage their fears of abandonment (Allison, Bartholomew, Mayseless, & Dutton, 2008; Dutton et al., 1994; Genest & Mathieu, 2014). Contrarily, research has consistently found a strong relationship between secure adult

attachment, and better communication patterns and conflict-resolution styles, as well as a greater degree of trust within relationships (Babcock et al., 2000). Further, there is support that insecure attachment can serve as a mediator between PTSD and IPV perpetration among war veterans (Kar & O'Leary, 2013).

Finally, studies have found that individuals with borderline personality organization (BPO) have repeatedly demonstrated both insecure attachment and violence toward partners. Dutton (1995) describes individuals with BPO as people who behave abusively while concurrently seeking intimacy and experiencing a fear of abandonment (as cited in Heyman, Foran, & Wilkinson, 2013). Critchfield, Levy, Clarkin, and Kernberg (2008) studied the relationship between anxious and avoidant attachment, and hostility and aggression among individuals with a Borderline Personality DisorderBPD diagnosis and found significant correlations between insecure attachment, hostility and anger. In addition, a systematic review assessed 13 studies on attachment and BPD, and found that every one demonstrated a strong association between BPD and insecure attachment (Agrawal, Gunderson, Holmes, & Lyons-Ruth, 2004).

Clearly, there is support for the relationship between attachment and IPV perpetration. In terms of treatment, some literature has pointed to the combination of CBT with psychodynamic therapy in order to change attachment-based maladaptive cognitive schemas developed in childhood that are experienced again in current relationships (Lawson, Kellam, Quinn, & Malnar, 2012). In addition, some have suggested the option of couples therapy to address these attachment issues (Oka, Sandberg, Bradford, & Brown, 2014), although this depends on the nature of the IPV, as couples therapy used with severe aggression is highly contraindicated due to victim-safety issues (Stith, Rosen, McCollum, & Thomsen, 2004). However, there is still a need for more attention to interventions that can address the struggles associated with insecure attachment.

CONCLUSION

Each of these theories possesses unique strengths in its application to IPV perpetration and has varying degrees of empirical validation. Still, no single theory can sufficiently encapsulate all facets of perpetrator etiology and treatment. In the same way that each of these theories adequately conceptualizes and addresses vital components of IPV perpetration, they also each fail to address other important elements. Below, key limitations of each theory will be discussed.

Theoretical Limitations

Feminist Theory. Feminist theory primarily focuses on the cultural, structural, and societal factors that contribute to IPV perpetration, and fails to address individual factors such as history of child maltreatment, trauma, attachment style, anger-trait issues, mental health status, substance-abuse issues, poverty, and socioeconomic

status, among others. As previously discussed, many of these individual-level factors have received ample empirical support, which gives credence to the inclusion of these contributing factors into any theoretical framework that attempts to explain violence toward an intimate partner. In addition, as this theory has been used solely to explain male perpetration of females, it neglects to address perpetration in same-sex couples (Bell & Naugle, 2008) and female perpetration of males (Black et al., 2011). The failure to incorporate female perpetration within this model is of particular concern, given the aforementioned established prevalence of female perpetration (Centers for Disease Control and Prevention, 2015). Further, the feminist model has had limited impact on IPV treatment. Systematic reviews have concluded that the majority of studies report no significant differences in BIPs, which are grounded in feminist theory, compared to comparison groups (Babcock, Green, & Robie, 2004; Eckhardt et al., 2013). The few studies that do report significant differences have major methodological flaws reported in many of them (Eckhardt et al., 2013). For these reasons, it has been stated that feminist theory has a limited scope in its ability to provide a comprehensive explanation of IPV perpetration (Bell & Naugle, 2008).

Neurobiological Theories of Trauma. Neurobiological theories of trauma focus primarily on factors at the individual level, as it is based on the assumption that trauma causes structural and functional changes in the brain, increasing an individual's propensity for violent behavior. While there is considerable empirical support for this theory (Hart & Rubia, 2012), it only provides an explanation for perpetrators who have been exposed to trauma. There are still individuals who perpetrate IPV and report no history of child maltreatment or other type of trauma exposure. In addition, this theory does not provide a sole explanation for violent behavior, as there are also many individuals who have been exposed to trauma during childhood but have not perpetrated IPV. Thus, it is quite plausible that among perpetrators with a trauma history, there are still other factors that contribute to their perpetration. Taken together, like the feminist theory, this theory is also limited in that it does not provide a comprehensive account for why an individual uses violence against an intimate partner.

Attachment Theory. Similar to neurobiological theories of trauma, attachment theory focuses on individual-level factors. As such, attachment theory fails to provide a complete explanation of IPV. Many individuals who have insecure attachment styles do not go on to perpetrate IPV. For instance, while some studies have found high rates of IPV among people with a borderline personality disorder diagnosis, there are still people who struggle with this disorder and do not perpetrate. Moreover, attachment theory neglects other potential considerations beyond the internal working models of relationships, such as how other individual factors like biology or environmental factors like patriarchy and imitation affect behavior (McClellan & Killeen, 2000). As stated with the two previous theories, attachment theory only addresses

one potential contributing factor of IPV perpetration, and is not multifaceted in its explanation.

Theoretical Refinement and Practical Application

Heyman, Foran, and Wilkinson (2013), in their thorough analysis of IPV theories, propose that new theoretical directions should be more comprehensive; should acknowledge and incorporate the heterogeneity of IPV causes, degrees of severity, and trajectories; and should be more ecological in recognizing the multilevel forces that influence IPV. Accordingly, an ecological model of risk factors for IPV perpetration will be proposed as an initial step toward the design and refinement of a more integrated perspective on IPV perpetration. This new model is derived from a combination of Bronfenbrenner (1979) Nested Ecological Model and Belsky's (1980) Ecological Model of Child Maltreatment. Bronfrenbrenner's model holds that the environment is an interactive set of systems that are "nested" within one another, and include the microsystem, mesosystem, exosystem, and macrosystem. Further, the relationship between a person and environment is a dynamic process where each exhibits influence over the other (Bronfenbrenner, 1979). Belsky (1980) adapted this model and applied it to child maltreatment, in which different risk factors of child maltreatment are organized by levels: ontogenic, microsystem, exosystem, and macrosystem (Belsky, 1980). The ontogenic level allowed for the inclusion of developmental and other individual factors of influence.

The ecological model of risk for IPV perpetration is based on the components of both these theories, and is an attempt to incorporate the influential forces from multiple system levels to understand the risk factors for violent behavior toward an intimate partner. Under the ecological model of risk for IPV perpetration, the personal-sphere, micro-sphere, meso-sphere, and macro-sphere levels are all nested within one another, with each system containing potential risk factors for IPV perpetration. The personal-sphere includes the developmental history of the individual and takes into account individual-level factors, such as biological, psychological, and cognitive influences that serve as risk factors for perpetration. Examples include genetic predisposition, neurobiological impact of trauma, mental health, substance use, early attachment, and cognitive development. The micro-sphere considers the family and other intimate social contexts as potential risk factors for IPV perpetration, such as witnessing IPV as a child; childhood physical, emotional, or sexual abuse and neglect; parental substance abuse; sibling abuse; an insecure attachment to a primary caregiver; IPV victimization; and other traumatic experiences. Other relationship dynamics relevant to this sphere that occur within family systems could include high conflict relationships, which can predict IPV (Capaldi et al., 2012), or open or closed boundaries between family members, which can lead to enmeshed or rigid family systems, respectively (Minuchin, 1974; Olson, 2000). Next, the meso-sphere includes community and organizational factors that could contribute to violent behavior toward a partner. Examples of risk factors within this sphere

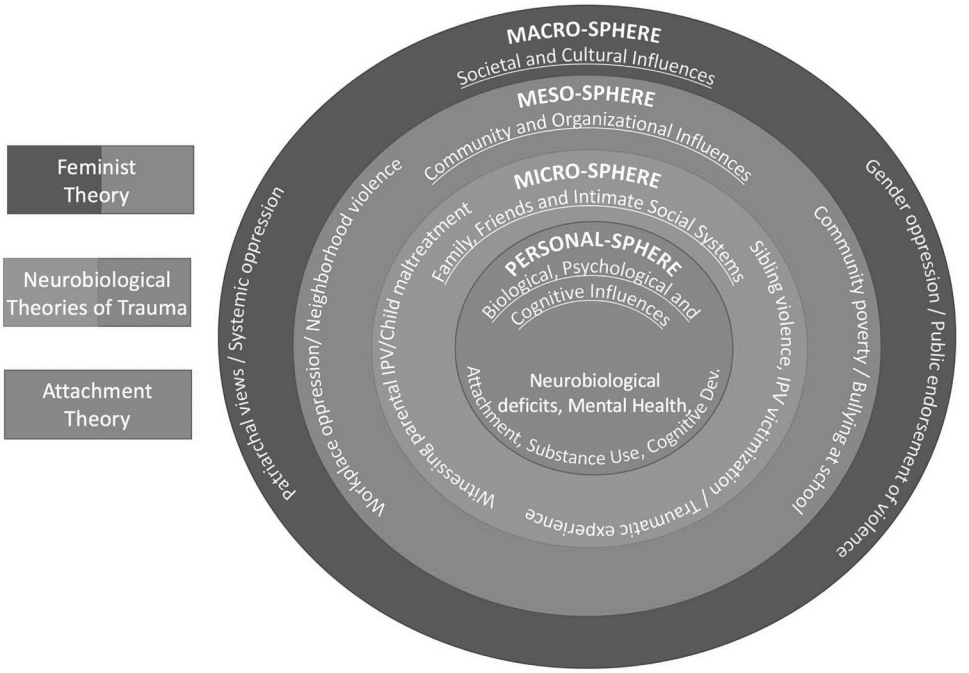

Figure 1. An ecological model of risk factors for intimate partner violence perpetration.

are neighborhood violence, community poverty, and workplace oppression. Finally, the macro-sphere level takes into account the potential macro level, sociocultural influences of IPV perpetration. These include patriarchy, societal acceptance of violence, and systemic oppression. See Figure 1 for a diagram of this conceptual model.

Each of these systems contains multiple potential risk factors for IPV perpetration. All systems interact with and impact one another. This proposed model provides a new, comprehensive approach to understanding IPV perpetration by incorporating key aspects of several theories that have been used to explain aggressive behavior. Feminist theory could be used to explain risk factors within the macro-sphere and meso-sphere, as its key assumption is that violent behavior toward women is a consequence of patriarchal views within society, communities, and cultures. Social learning theory provides a framework for understanding the risk factors within the micro-sphere, since this theory purports that IPV perpetration is a result of witnessing violence within the family context. Neurobiological theories of trauma provide an explanation for risk factors in both personal-sphere and micro-sphere, as neurobiological deficits are a result of the interaction between environmental stressors, such as family trauma, and personal-level factors, such as brain functioning. Finally, attachment theory conceptually addresses risk factors within the personal-sphere and micro-sphere, as it asserts that perpetration is a consequence of poor attachment between the individual and their primary caregiver during childhood, which has led to an insecure attachment style.

It is important to note that the intention of this model is not to oversimplify, and thus limit, current theories so that they may fit neatly into a single sphere. Rather, as illustrated above, any given theory may delineate risk factors within one or more spheres. The recognition of the interaction between different system levels further promotes this model, as the overarching goal is to represent multiple systemic influences of IPV perpetration in order to accurately depict the complex forces involved. This model has implications for treatment, as it allows for a focus on multiple contributing factors simultaneously on all system levels. With this approach, treatment could more comprehensively address the heterogeneity of IPV perpetration.

FUTURE DIRECTIONS

Human behavior is complex and, thus, there is no single solution when it comes to the etiology and treatment of any particular social problem. Research has clearly demonstrated that perpetrators come from a wide range of backgrounds and with a vast array of potentially contributing factors to their violent behavior (Cavanaugh & Gelles, 2005). While many of the theories that have attempted to understand and explain IPV perpetration have succeeded in addressing some part of the problem, they have all failed to sufficiently capture the complexity of perpetrators. It is imperative that we develop more comprehensive theories to increase our understanding and subsequently develop treatment that can adhere to the many differences among perpetrators by addressing their specific needs.

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