

Risk Factors for Male Perpetration and Female Victimization of Intimate Partner Homicide: A Meta-Analysis

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Abstract

Intimate partner homicide (IPH) is a serious problem throughout the world. Research has identified the continued need to examine risk factors for IPH to identify individuals who may be at a greater risk of IPH perpetration or victimization. In this study, we conducted a meta-analysis on risk factors for male IPH perpetration and female IPH victimization. This meta-analysis examined results from 17 studies, which included 148 effect sizes used in the analysis. Primary findings from this research suggest the strongest risk factors for IPH were the perpetrator having direct access to a gun, perpetrator's previous nonfatal strangulation, perpetrator's previous rape of the victim, perpetrator's previous threat with a weapon, the perpetrator's demonstration of controlling behaviors, and the perpetrator's previous threats to harm the victim. Implications for law enforcement personnel, medical professionals, victim advocates, mental health professionals, and other professionals who may be in contact with potential IPH perpetrators and victims are discussed.

Keywords

intimate partner homicide, meta-analysis, risk factors

Intimate partner homicide (IPH) is a serious problem throughout the world. Approximately 13.5% of all homicides worldwide are committed by a current or former intimate partner (Stöckl et al., 2013). When examining gender differences in global IPH victimization, approximately 38.6% of homicides committed against women and 6.3% of homicides committed against men are committed by an intimate partner (Stöckl et al., 2013). Examining rates of IPH in the United States, in 2010, 39% ($n = 1,192$) of homicides committed against women and 3% ($n = 305$) against men were committed by an intimate partner (Catalano, 2013)—which is similar to global rates of IPH. The Centers for Disease Control and Prevention recently released a report that examined homicides from 18 states from 2003 to 2014 and found that over half (55.3%) of the homicides committed against women in the United States involved an intimate partner (Petrosky et al., 2017). These high rates of IPH highlight the importance of examining risk factors related to IPHs. It is important to note that these prevalence rates are of completed homicides and information on attempted homicides is missing from these rates—which would undoubtedly increase the number of individuals who have experienced this type of extreme violence.

One of the most recognized predictors attempted or completed IPH is a previous history of intimate partner violence (IPV) (Block, 2000; Campbell, Glass, Sharps, Laughon, & Bloom, 2007; Campbell et al., 2003; Garcia, Soria, & Hurwitz, 2007). There has been a growing body of research that

examines risk markers for IPV perpetration and victimization (e.g., Cafferky, Mendez, Anderson, & Stith, 2018; Spencer, Cafferky, & Stith, 2016; Spencer et al., 2017; Stith, Smith, Penn, Ward, & Tritt, 2004), yet less is known about the risk factors for IPH. Although previous IPV is regarded as the number one risk factor for IPH (Campbell et al., 2007), research has highlighted the importance of examining risk factors for IPH extensively in order to aid in identifying IPV victims who may be at a greater risk of IPH (Campbell, 1986; Campbell et al., 2003; Nicolaidis et al., 2003; Sheehan, Murphy, Moynihan, Dudley-Fennessey, & Stapleton, 2015). Examining IPH risk factors in populations who have experienced IPV can help professionals in the community (i.e., first responders, victim's advocates, therapists, and those working at domestic violence shelters) identify victims of IPV that are at an increased risk of IPH, which can ultimately aid in the reduction of rates of IPH or attempted IPH.

The proposed study seeks to systemically integrate findings on risk factors for attempted and completed IPH through the use of a meta-analysis. There have been literature reviews on

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the topic of risk factors for IPH (Campbell et al., 2007), but there has yet to be a meta-analytic review of quantitative data on the topic of risk factors for IPH. With less research published on the topic of IPH, due to it being a rarer phenomenon than IPV, it is important to synthesize these results in one comprehensive meta-analysis. Through the use of a meta-analysis, research can “overcome limits of size or scope in individual studies to obtain more reliable information” (Berman & Parker, 2002, p. 1). Since IPH is considered to be a rare event, sample sizes in studies that examine risk factors for IPH perpetration and victimization are often small, thus highlighting the importance of using a meta-analysis to integrate all findings of risk factors for IPH in one, comprehensive study. The purpose of this study is to aid in synthesizing our current knowledge of risk factors for IPH, which can ultimately aid in the identification of, and intervention with, individuals who have been victims or perpetrators of IPV and who may be at a greater risk of IPH perpetration or victimization.

Trends in IPH

It is clear from the literature and the IPH prevalence rates that IPH is a gendered phenomenon. When looking at global homicide rates in general, males make up 80% of homicide victims (United Nations Office on Drugs and Crime [UNODC], 2013). However, when examining IPH victimization, females make up approximately two thirds of IPH victims (UNODC, 2013). Research has also found that women are 6 times more likely to be murdered by an intimate partner than are men (Stöckl et al., 2013). This highlights the importance of examining IPH through a gendered lens, separating males and females and perpetrators and victims.

Research focusing on homicides has historically failed to separate IPH from other types of homicide, although recent research on the topic has recognized the importance of examining IPH as a separate entity (Ioannou & Hammond, 2015). This shift may explain why most of the literature examining IPH trends over time begins in the 1990s. When examining homicide in general, global homicide rates drastically increased between 1970 and 1990 but have continued to decline since the 1990s (Caman, Kristiansson, Granath, & Sturup, 2017; Lappi-Seppälä & Lehti, 2014; UNODC, 2013). However, when examining global IPH trends, it has been found that the decline in IPH does not follow the overall homicide trends, as rates of IPH remain relatively stable (UNODC, 2013). There have been several studies that found a decline in IPH in the United States and other Western countries (Corradi & Stöckl, 2014; Fox & Zawitz, 2007). However, in both the United States and Canada, the overall decline reflects a steady decline in female-perpetrated IPH, but not in male-perpetrated IPH (Dawson, Bunge, & Balde, 2009; Fox & Zawitz, 2007). Research has found previous IPV victimization is a risk factor for female-perpetrated IPH, which supports a theory that female-perpetrated IPH may be the result of self-defense (Serran & Firestone, 2004). Some researchers have suggested that the increase in domestic violence resources

aided in this decrease of female-perpetrated IPH, but not male-perpetrated IPH (Browne & Williams, 1989; Dugan, Nagin, & Rosenfeld, 1999). This suggests that these resources designed to help women leave violent relationships have created an effect where women do not have to resort to murdering abusive intimate partners. This further highlights the gendered nature of IPH and the importance of examining risk factors for IPH perpetration and victimization separately for both males and females.

Theory

Two theories have guided this research. First, male sexual proprietariness theory, in addition to previous studies that have clearly indicated that men are more likely to kill their female intimate partners than are women to kill their male intimate partners, leads to our choice to focus this study of male IPH perpetration and female victimization. The second theory that guided this research is exposure reduction hypothesis which emphasizes the importance of identifying the most important risk factors for IPH, so that victims can be alerted, policies can be changed, and exposure to potential IPH can be reduced. Exposure reduction hypothesis guided our decision to include studies comparing individuals who experienced violence in their relationship with cases of IPH. This was decided in order to gain a better understanding of risk factors that may differentiate individuals who experience IPV in their relationship from those who also have a history of experiencing IPV but eventually perpetrate or become victims of IPH. This may aid in identifying individuals in violent relationships that may be at a greater risk of IPH.

Male Sexual Proprietariness Theory

Male sexual proprietariness theory is an evolutionary psychological perspective that has attempted to explain the gendered nature of IPH (Daly & Wilson, 1988; Wilson & Daly, 1993). According to this theory, the likelihood of violence, as well as IPH, increases when men believe they have a right to control, and believe that they are at risk of losing control, over their female partners' reproductive capacities (Daly & Wilson, 1988; Serran & Firestone, 2004). Wilson and Daly (1993) state that “cues of an imminent threat of loss of sexual exclusivity may be manifested in violent action” (p. 283). This threat of losing sexual exclusivity, or entitlement over their partner's reproductive capacities, could be through suspicions or actual events of infidelity, or the woman wishing to end the relationship entirely. Male sexual proprietariness theory would suggest that risk factors for IPH would be factors related to sexual jealousy and the risk of losing control over one's partner. Previous research has found that sexual jealousy, desire for control over one's partner, estrangement in the relationship, and young age (which is linked to reproductive capabilities) have all been found to be risk factors for male-perpetrated IPH (Serran & Firestone, 2004).

Exposure Reduction Hypothesis

The exposure reduction hypothesis refers to the idea that IPH is the most extreme form of IPV, and IPH often occurs after prolonged violence in a relationship (Reckdenwald & Parker, 2012). Exposure reduction hypothesis views IPH as the end result on a continuum of escalating violent behaviors. This suggests that by shortening the duration in which someone is in contact with a violent partner, decreases the likelihood that IPH will occur (Dugan, Nagin & Rosenfeld, 2003). According to this theory, providing resources that allow victims of IPV to leave abusive relationships, such as protection orders and domestic violence resources, may aid in decreasing rates of IPH (Dugan et al., 2003; Reckdenwald & Parker, 2012).

Previous violence in a relationship is a documented risk factor for IPH (Campbell et al., 2007; Garcia et al., 2007), which corresponds with the exposure reduction hypothesis. However, one critique of this theory is that leaving an abusive relationship has also been found to put individuals at an increased risk of escalated violence and IPH (Campbell et al., 2007; Dutton, 2002; Garcia et al., 2007; Johnson & Hotton, 2003; Stout, 1993; Wilson & Daly, 1993). Proponents of this theory have urged policy changes that would help protect victims leaving a relationship and have found that “more aggressive arrest policies are related to fewer deaths of unmarried intimates” (Dugan et al., 2003, p. 191). This suggests that although leaving an abusive relationship may put individuals at risk of increased violence, with proper resources to protect victims from retaliation, a victim’s decision to leave an abuser could lead to a decrease in IPH rates.

Background on Risk Factors for IPH

Previous research has highlighted the importance of continued focus and attention on identifying risk factors for IPH (Campbell, 1986; Campbell et al., 2003; Nicolaidis et al., 2003; Sheehan et al., 2015). According to Campbell and colleagues (2007), approximately 67–75% of cases of IPH included a history of IPV in the relationship. Although there is a need for continued research on risk factors for IPH, several risk factors have been identified that appear to warrant serious attention when investigating factors that put an individual at risk of IPH victimization or perpetration. Two prominent risk assessment tools for *risk* of future violence are the Danger Assessment (Campbell, Webster, & Glass, 2009) and the Spousal Assault Risk Assessment (SARA; Kropp, Hart, Webster, & Eaves, 1995). Risk factors that overlap between the two measures include escalation of violence (i.e., increased frequency, increased severity of violence, such as strangulation), stalking/violating no contact orders, relationship problems/separation, jealousy, the perpetrator’s substance use, and the perpetrator’s mental health issues including threatening or attempting suicide.

Nonfatal Strangulation

In Campbell and colleagues’ (2007) literature review, nonfatal strangulation was listed as one of the major risk factors for IPH, although this is a topic where further research is needed. Glass and colleagues (2007) conducted a study comparing female victims of completed IPH, attempted IPH, and IPV. In this study, they found that victims of attempted IPH were 6.70 times more likely to have been strangled by the perpetrator compared to victims of IPV and that victims of completed IPH were 7.48 times more likely to have been strangled by the perpetrator compared to victims of IPV. This suggests that nonfatal strangulation should be examined as a risk factor of IPH that could possibly aid in the identification of IPV victims who may be at risk of IPH.

Stalking

Stalking has been hypothesized to be a stronger risk factor for IPH than other types of IPV (Campbell et al., 2007). McFarlane and colleagues (1999) examined stalking behaviors experienced by 208 women who had been murdered or who had experienced attempted murder by an intimate partner. This study found that 76% of IPH victims and 85% of victims of attempted IPH were previously stalked by the perpetrator. In another study, McFarlane, Campbell, and Watson (2002) compared victims of completed and attempted IPH with women who had been abused and found that victims of completed or attempted IPH were more than 2 times more likely to have been stalked by the perpetrator than were women who were abused by their partners.

Separation/Estrangement

It has been established in the literature that relationship estrangement, or separation, is a risk factor for IPH (Campbell et al., 2007; Dutton, 2002; Garcia et al., 2007; Johnson & Hotton, 2003; Stout, 1993; Wilson & Daly, 1993). It is important to note that the increased risk of an occurrence of IPH is for the time period shortly after the separation, with studies reporting that the majority of IPH murders, where estrangement was a factor, occurred the day of the separation or within the first 3 months after the separation (Banard, Vera, Vera, & Newman, 1982; Wilson & Daly, 1993). Although the victim leaving the perpetrator may increase the immediate risk of IPH, research guided by the exposure reduction hypothesis (Reckdenwald & Parker, 2012) suggests that leaving an abusive relationship will decrease the risk of IPH overall (Dugan et al., 2003).

Jealousy

Jealousy, especially sexual jealousy, has been identified as a motive for IPH perpetration (Aldridge & Browne, 2003; Belfrage & Rying, 2004; Campbell et al., 2003). The impact of male jealousy on IPH is guided by male sexual proprietariness theory (Daly & Wilson, 1988; Wilson & Daly, 1993). Jealousy may be related to the offender believing that the victim has

been involved in a perceived or actual affair (Block & Chistakos, 1995; Chimbros, 1998) or due to the victim wanting to leave the relationship (Crawford & Gartner, 1992; Wilson & Daly, 1993). Dobash and colleagues (2007) conducted a study comparing men who had perpetrated IPH to men who perpetrated IPV and found that male perpetrators of IPH were approximately 5 times more likely to have been jealous or possessive at the time of the event compared to men who perpetrated nonlethal violence.

Mental Illness

A history of mental illness by male IPV perpetrators has been linked to IPH (Belfrage & Rying, 2004; Dobash, Dobash, Cavanaugh, & Lewis, 2004; Dutton & Kerry, 1999; Kivisto, 2015; Sharps, Campbell, et al., 2001). Belfrage and Rying (2004) found that 95% of their sample of 164 male IPH perpetrators had at least one mental illness diagnosis, with the most common diagnoses being personality disorders. It is also important to note that when the perpetrator of IPH commits suicide after the murder, it may be more difficult for researchers to examine retrospectively whether or not the perpetrator could be diagnosed with a mental illness.

Substance Abuse

Research has linked IPH perpetration with both alcohol and drug abuse/use (Campbell et al., 2003; Oram, Flynn, Shaw, Appleby, & Howard, 2013). Campbell and colleagues (2003) found that drug use was a stronger predictor of IPH perpetration than alcohol use. However, Dobash and colleagues (2004) found that 37.9% of IPH perpetrators in their sample had problems with alcohol and 14.7% had problems with drug use. Although it may be unclear if drug use or alcohol use are stronger predictors of IPH perpetration, the literature has found a connection between substance abuse and IPH perpetration.

The Present Study

The present study aims to build on previous literature examining risk factors for IPH by systematically integrating quantitative findings regarding IPH risk factors through the use of a meta-analysis. Previous research has identified IPV is a major risk factor for IPH, with approximately 67–75% of cases of IPH having a history of IPV in the relationship (Campbell et al., 2007). This meta-analysis examines additional risk factors for IPH that may help identify individuals who have experienced IPV in their relationship and may be at risk of IPH. This study compares IPV samples and IPH samples to assist in identifying risk factors that may place individuals who are victims or perpetrators of IPV at a greater risk of IPH perpetration or victimization. Another unique contribution of this study will be calculation of overall odds ratios (*ORs*) for the risk factors for IPH, which can help us understand how much these risk factors increase the likelihood of IPH. This study examines IPH risk factors for male perpetration and female victimization due to

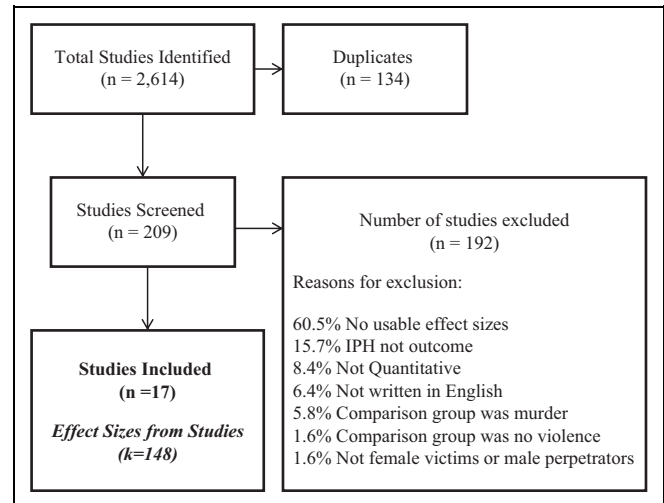


Figure 1. Flowchart of study selection.

the gendered nature of IPH as informed by the male sexual proprietariness theory (Daly & Wilson, 1988; Wilson & Daly, 1993) which guided this study, as well as the lack of studies examining male victimization and female perpetration of IPH.

Method

Literature Search

Studies used in this analysis were identified using standard procedures for gathering bivariate effect sizes for risk factors for IPH perpetration and victimization (Borenstein, Hedges, Higgins, & Rothstein, 2009; Card, 2012). Our search ultimately yielded 17 unique studies and 148 effect sizes. Studies were found through database searches (PsycINFO, ERIC, ProQuest, Sociological Abstracts, Social Sciences Citation Index, Social Services Abstracts, ProQuest Dissertations and Theses, and PubMed) using search terms related to intimate relationships (marital, spouse, husband, intimate partner, wife, dating, boyfriend, girlfriend, or same-sex partner), homicide (homicide, femicide, murder, fatality, IPH, or kill), and risk factors (predictor, risk, factor, marker, pathway, or correlate). The search examined studies from 1980 to May 2017.

Included Studies

Studies were included if they met the following criteria: (a) the outcome variable measured completed or attempted IPH victimization or perpetration, (b) statistical information allowing the calculation of one or more bivariate effect sizes was reported in the study, and (c) the study was written in English. Studies were excluded if the comparison group in the study were non-IPH murders or no abuse comparison samples.

A total of 2,614 studies were identified through database searches (see Figure 1). In the first round of screening, 2,271 studies were excluded based on the original inclusion criteria. This provided 343 studies for further examination. There were 134 duplicates, leaving a total of 209 studies for

further screening. Ultimately, 192 of these studies were excluded. Of these studies, 60.5% of studies were excluded because no usable effect sizes were included in the study ($n = 116$), 15.7% were excluded because IPH or attempted IPH was not the outcome ($n = 30$), 8.4% were excluded because they were not quantitative ($n = 16$), 6.4% were excluded because they were not written in English ($n = 12$), 5.8% were excluded because the comparison group in the study were other types of murders ($n = 11$), 1.6% were excluded because they used individuals who experienced no violence as comparison samples ($n = 3$), and 1.6% were excluded because the examined male victimization or female perpetration of IPH ($n = 3$). The final sample included 17 unique studies, with 79 effect sizes examining male IPH perpetration and 69 effect sizes examining female IPH victimization.

Coding Procedures

Recommended coding procedures were followed in this study (Card, 2012; Hunter & Schmidt, 2004). A 19-item code sheet was used by the research team to gather information from each study included in the analysis. Information gathered from the study included the sample size from the study, the gender of the perpetrator and/or victim, the country where the data were collected, if the study examined homicide and/or attempted homicide, who the comparison sample in the study was, if homicides in the study were described as self-defense, and statistical information that allowed for the calculation of bivariate effect sizes. All studies included in the analysis were cross-coded by two separate research team members, one of which was the project leader, with a 99.27% agreement rate. When there were discrepancies in the coding, the research team members met and came to an agreement on the correct coding (Hawkins, Blanchard, Baldwin, & Fawcett, 2008). Comprehensive Meta-Analysis 3.0 software (Borenstein, Hedges, Higgins, & Rothstein, 2014) was used to enter data and analyze effect sizes for IPH perpetration and victimization.

Statistical Approach and Analyses

A random-effects approach was used in this meta-analysis. A random-effects approach is used when it would seem theoretically appropriate to assume that there were real population differences between studies. Since samples in the studies used in this meta-analysis came from different countries around the world, came from different time periods, and had different samples, it would be theoretically sound to assume that there were population differences between studies. The random-effects approach also accounts for within-study and between-study variance, which also allows for greater generalizability of the results obtained in this meta-analysis (Card, 2012).

One potential problem that all meta-analyses face is the “file drawer problem,” which refers to the fact that insignificant studies often go unpublished and thus are not able to be used in the study (Hunter & Schmidt, 2004). To combat this limitation, standard tests were conducted in order to evaluate the

potential impact that publication biases could have on our effect sizes. First, Duval and Tweedie’s (2000) trim and fill test was conducted to analyze any asymmetrical distributions of effect sizes included in the current meta-analysis. Duval and Tweedie’s trim and fill test uses a funnel plot to evaluate whether there is an asymmetrical distribution in the studies included in the meta-analysis, and then imputes and plots any potential missing studies onto the funnel plot (Duval & Tweedie, 2000). Next, fail-safe N s for each risk factor were calculated to examine the number of potential missing studies with insignificant findings needed to pull the mean effect size above the significance level of $p < .05$ (Rosenthal, 1979). The recommended number of studies for the classic fail-safe N is determined by multiplying the number of effect sizes by 5 and then adding 10 to that number (Rosenthal, 1979). If the classic fail-safe N exceeds this number, it can be determined that the effect size for that particular risk factor is robust against publication bias. Lastly, Orwin’s fail-safe N s were calculated in order to test the number of potential missing studies with an effect size of $r = .00$ needed to reduce the mean effect size of each risk factor in the study below the lower limit of what is a small effect size of $r = .10$ (Cohen, 1992; Orwin, 1983).

Comprehensive Meta-Analysis 3.0 software (Borenstein et al., 2014) was used to analyze the effect sizes for male IPH perpetration and female IPH victimization. Only bivariate effect sizes were used in the analysis (such as unadjusted OR s, correlations, and independent groups’ means and standard deviations). Unadjusted OR s were calculated to examine which risk factors increased the odds of IPH at the highest levels. Unadjusted OR s were calculated for the following risk factors for male IPH perpetration that had three or more effect sizes: abused the victim while she was pregnant, controlling behaviors, direct access to guns, having less than a high school education, jealousy, mental health issues, previously strangled the victim, previously raped the victim, previously stalked the victim, prior criminal charges, substance use, threatened the victim with a weapon, threatened to harm the victim, unemployment, violence toward nonfamily members, and young age. The unadjusted OR s were calculated for risk factors of female IPH victimization that had three or more effect sizes: children from a previous relationship, children with the perpetrator, employed, higher level of income, having less than a high school education, length of relationship with the perpetrator, married to the perpetrator, separation from the perpetrator, substance use, and young age. In addition to the unadjusted OR s, the confidence intervals were calculated for each risk factor, which provides the range in which the mean effect size could fall 95% of the time within the studies in the analysis.

Results

Study Characteristics

A total of 17 studies with 148 effect sizes were used in the current analysis (see Table 1 for details). Studies included in the analysis examined risk factors for male perpetration or

Table 1. Study Characteristics by Risk Factor.

Risk Factor	Study	Sample Size	Intimate Partner Homicide (IPH) Only or Combined Attempted and Completed IPH	Odds Ratio				
Perpetrator risk factors								
	Abused victim while pregnant	Campbell et al. (2003) Glass, Laughon, Rutto, Bevacqua, and Campbell (2008) Koziol-McLain et al. (2006) McFarlane, Campbell, and Watson (2002)	1,126 76 575 687	Homicide only Homicide only Homicide only Combined	4.62 3.24 3.71 3.72			
Controlling behaviors	Campbell et al. (2003) Dobash, Dobash, Cavanaugh, and Medina-Ariza (2007) Glass, Laughon, Rutto, et al. (2008)	1,126 228 76	Homicide only Homicide only Homicide only	5.96 5.09 4.10				
	Koziol-McLain et al. (2006)	575	Homicide only	5.59				
	Direct access to guns	Alford (1995) Campbell et al. (2003) Glass, Laughon, Rutto, et al. (2008) Koziol-McLain et al. (2006) Wiltsey (2008)	98 1,126 76 575 218	Homicide only Homicide only Homicide only Homicide only Homicide only	2.95 68.06 30.55 5.56 9.79			
Employed	Campbell et al. (2003) Campbell, Webster, and Glass (2009) Cunha and Goncalves (2016) Cunha and Goncalves (2016b) Dobash et al. (2007) Koziol-McLain et al. (2006) Sharps, Campbell, et al. (2001) Wiltsey (2008)	1,126 828 172 187 228 575 2,280 218	Homicide only Combined Homicide only Combined Homicide only Homicide Only Combined Homicide only	0.31 0.34 1.36 1.51 0.53 0.32 0.38 0.80				
	Jealousy	Alford (1995) Campbell et al. (2003) Echeburua, Fernandez-Montalvo, de Corral, and Lopez-Goni (2009) Glass, Laughon, Rutto, et al. (2008) Koziol-McLain et al. (2006)	98 1,126 1,081 76 575	Homicide only Homicide only Combined Homicide only Homicide only	0.58 3.05 2.58 3.08 3.40			
		Education (low)	Cunha and Goncalves (2016) Cunha and Goncalves (2016b) Dobash et al. (2007) Echeburua et al. (2009) Koziol-McLain et al. (2006) Sharps, Campbell, et al. (2001)	172 187 228 1,081 575 2,280	Homicide only Combined Homicide only Combined Homicide only Combined	1.05 1.38 1.04 1.27 3.58 2.37		
			Mental health issues	Cunha and Goncalves (2016) Dutton and Kerry (1999) Echeburua et al. (2009) Eke, Hilton, Harris, Rice, and Houghton (2011) Koziol-McLain et al. (2006)	172 140 1,081 146 575	Homicide only Homicide only Combined Homicide only Homicide only	0.96 0.72 1.45 1.47 1.38	
	Nonfatal strangulation			Campbell et al. (2003) Dobash et al. (2007) Glass, Laughon, Rutto, et al. (2008) Glass, Laughon, Campbell, et al. (2008) Koziol-McLain et al. (2006)	1,126 228 76 737 575	Homicide only Homicide only Homicide only Homicide only Homicide only	11.77 3.27 4.36 7.48 9.92	
				Perpetrated stalking	Campbell et al. (2003) Koziol-McLain et al. (2006) McFarlane, Campbell, and Watson (2002) McFarlane, Campbell, and Watson (2002)	1,126 575 687 821	Homicide only Homicide only Combined Combined	4.19 3.94 3.23 2.62
					Prior criminal charges	Alford (1995) Campbell et al. (2003) Cunha and Goncalves (2016) Dobash et al. (2007) Eke et al. (2011) Koziol-McLain et al. (2006)	98 1,126 172 228 146 575	Homicide only Homicide only Homicide only Homicide only Homicide only Homicide only

(continued)

Table 1. (continued)

Risk Factor	Study	Sample Size	Intimate Partner Homicide (IPH) Only or Combined Attempted and Completed IPH	Odds Ratio
Perpetrated forced sex	Campbell et al. (2003)	1,126	Homicide only	7.60
	Dobash et al. (2007)	228	Homicide only	23.11
Substance abuse	Echeburua et al. (2009)	1,081	Combined	2.72
	Koziol-McLain et al. (2006)	575	Homicide only	7.63
	Campbell et al. (2003)	1,126	Homicide only	3.24
	Cunha and Goncalves (2016)	172	Homicide only	0.48
	Dobash et al. (2007)	228	Homicide only	0.87
	Echeburua et al. (2009)	1,081	Combined	2.06
	Koziol-McLain et al. (2006)	575	Homicide only	3.10
	Sharps, Campbell, et al. (2001)	2,280	Combined	2.61
Threatened to harm victim	Alford (1995)	98	Homicide only	1.46
	Campbell et al. (2003)	1,126	Homicide only	16.31
	Echeburua et al. (2009)	1,081	Combined	1.71
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	9.49
	Koziol-McLain et al. (2006)	575	Homicide only	14.71
	McFarlane, Campbell, and Watson (2002)	687	Combined	4.58
	McFarlane, Campbell, and Watson (2002)	821	Combined	4.56
	Wiltsey (2008)	218	Homicide only	2.08
Threatened with a weapon	Echeburua et al. (2009)	1,081	Combined	3.36
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	6.71
	Koziol-McLain et al. (2006)	575	Homicide only	23.30
	McFarlane, Campbell, and Watson (2002)	821	Combined	6.74
	Wiltsey (2008)	218	Homicide only	5.67
Violent toward others	Cunha and Goncalves (2016)	172	Homicide only	0.62
	Echeburua et al. (2009)	1,081	Combined	1.66
	Koziol-McLain et al. (2006)	575	Homicide only	2.21
Young age	Campbell et al. (2003)	1,126	Homicide only	1.83
	Cunha and Goncalves (2016)	172	Homicide only	2.48
	Cunha and Goncalves (2016b)	187	Homicide only	1.95
	Echeburua et al. (2009)	1,081	Combined	0.92
	Koziol-McLain et al. (2006)	575	Homicide only	1.87
Victim risk factors	Campbell et al. (2009)	828	Combined	1.49
	Cunha and Goncalves (2016)	172	Homicide only	0.75
	Taylor and Nables (2009)	743	Homicide only	1.09
Children from previous relationship	Campbell et al. (2003)	1,126	Homicide only	2.98
	Koziol-McLain et al. (2006)	575	Homicide only	3.02
	Taylor and Nables (2009)	743	Homicide only	0.95
	Wiltsey (2008)	218	Homicide only	1.49
Employed	Alford (1995)	98	Homicide only	2.80
	Campbell et al. (2003)	1,126	Homicide only	0.98
	Campbell et al. (2009)	828	Homicide only	0.86
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	0.23
	Glass, Laughon, Campbell, et al. (2008)	737	Homicide only	1.20
	Koziol-McLain et al. (2006)	575	Homicide only	1.00
	McFarlane, Campbell, and Watson (2002)	687	Combined	0.58
	McFarlane, Campbell, and Watson (2002)	821	Combined	0.56
	Sharps, Campbell, et al. (2001)	2,280	Combined	0.84
	Taylor and Nables (2009)	743	Homicide only	0.49
Higher income level	Campbell et al. (2003)	1,126	Homicide only	0.47
	Koziol-McLain et al. (2006)	575	Homicide only	0.87
	Taylor and Nables (2009)	743	Homicide only	0.85
Length of relationship	Campbell et al. (2003)	1,126	Homicide only	1.63
	Cunha and Goncalves (2016)	172	Homicide only	1.13
	McFarlane, Campbell, and Watson (2002)	687	Combined	1.67
	McFarlane, Campbell and Watson (2002)	821	Combined	0.53

(continued)

Table 1. (continued)

Risk Factor	Study	Sample Size	Intimate Partner Homicide (IPH) Only or Combined Attempted and Completed IPH	Odds Ratio	
Education (low)	Alford (1995)	98	Homicide only	17.93	
	Campbell et al. (2003)	1,126	Homicide only	2.28	
	Campbell et al. (2009)	828	Combined	2.24	
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	2.44	
	Koziol-McLain et al. (2006)	575	Homicide only	2.26	
	McFarlane, Campbell, and Watson (2002)	687	Combined	2.26	
	McFarlane, Campbell, and Watson (2002)	821	Combined	2.30	
	Sharps, Campbell, et al. (2001)	2,280	Combined	2.40	
Married to perpetrator	Taylor and Nables (2009)	743	Homicide only	2.00	
	Alford (1995)	98	Homicide only	0.55	
	Campbell et al. (2009)	828	Combined	1.40	
	Cunha and Goncalves (2016)	172	Homicide only	1.27	
	Cunha and Goncalves (2016b)	187	Combined	0.96	
	Dobash et al. (2007)	228	Homicide only	0.79	
	Eke et al. (2011)	146	Homicide only	2.47	
	Koziol-McLain et al. (2006)	575	Homicide only	1.52	
Separated from perpetrator	Taylor and Nables (2009)	743	Homicide only	0.57	
	Campbell et al. (2003)	1,126	Homicide only	3.09	
	Campbell et al. (2009)	828	Combined	4.69	
	Dobash et al. (2007)	228	Homicide only	2.37	
	Echeburua et al. (2009)	1,081	Combined	1.38	
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	1.63	
	Koziol-McLain et al. (2006)	575	Homicide only	3.89	
	McFarlane, Campbell, and Watson (2002)	687	Combined	1.65	
Substance abuse	McFarlane, Campbell, and Watson (2002)	821	Combined	1.54	
	Wiltsey (2008)	218	Homicide only	2.66	
	Alford (1995)	98	Homicide only	6.95	
	Campbell et al. (2003)	1,126	Homicide only	2.36	
	Koziol-McLain et al. (2006)	575	Homicide only	2.30	
	Sharps, Campbell, et al. (2001)	2,280	Combined	2.05	
	Young age	Alford (1995)	98	Homicide only	2.02
		Campbell et al. (2003)	1,126	Homicide only	1.81
Glass, Laughon, Rutto, et al. (2008)		76	Homicide only	0.67	
Glass, Laughon, Campbell, et al. (2008)		737	Homicide only	3.19	
Koziol-McLain et al. (2006)		575	Homicide only	1.81	
McFarlane, Campbell, and Watson (2002)		687	Combined	2.33	
McFarlane et al. (2002)		821	Combined	2.58	
Taylor and Nables (2009)		743	Homicide only	1.75	
Wiltsey (2008)	218	Homicide only	1.03		

female victimization of completed or attempted IPH. From all studies, there is a combined sample size of 10,143. Most of the studies are from peer-reviewed academic journals ($n = 15$) and the other studies are dissertations ($n = 2$). The majority of the studies are located in the United States ($n = 11$), and the rest are from international samples ($n = 6$), which included Canada, Portugal, Spain, and Britain. For most of the studies, the outcome is IPH ($n = 14$), and in the rest of the studies, the outcome is a combined sample of IPH and attempted IPH ($n = 6$). All studies examined female victims of IPH and/or male perpetrators of IPH.

Analyses of Publication Bias

In order to combat the “file drawer problem” that impacts all meta-analyses (Hunter & Schmidt, 2004), Duval and Tweedie’s

trim and fill test (Duval & Tweedie, 2000), the classic fail-safe N test (Rosenthal, 1979), and Orwin’s fail-safe N test (Orwin, 1983) were utilized to evaluate the possibility of publication biases impacting the significant results in this meta-analysis. All risk factors were found to be robust against publication bias, with the exception of the perpetrator’s employment and the perpetrator’s mental health issues (see Table 2). This is predominately due to the fact that these risk factors are weaker than the other risk factors examined in this meta-analysis, making them more vulnerable to potential publication bias.

Risk Factors for Male IPH Perpetration

The risk factor that increased the odds of IPH occurring the *most* was the perpetrator’s direct access to guns, meaning that

Table 2. Duval and Tweedie’s Trim and Fill (Random Effects), Classic Fail-Safe *N*, and Orwin’s Fail-Safe *N* Tests for Risk Factors for Intimate Partner Homicide.

Risk Factor	<i>k</i>	Trim and Fill	Classic	Orwin’s Fail-Safe <i>N</i>
		Imputed Studies	Fail-Safe <i>N</i>	<i>r</i> to .10
Male perpetration				
Abused victim while pregnant	4	1	93	11
Age (young age)	5	1	36	3
Controlling behaviors	4	2	187	15
Direct access to guns	5	0	263	22
Education (low)	6	1	48	5
Employed ^a	8	0	10	4
Jealousy	5	1	91	9
Mental health issues ^a	5	1	10	0
Perpetrated nonfatal strangulation	5	2	395	23
Perpetrated stalking	4	2	184	9
Raped victim/perpetrated forced sex	4	1	208	15
Substance abuse	6	0	206	9
Threatened to harm victim	8	1	1,041	27
Threatened victim with a weapon	5	2	295	20
Female victimization				
Children from previous relationship	4	1	35	7
Education (low)	9	3	399	13
Separated from partner	9	0	527	15
Substance abuse	4	2	219	12

^aIndicates risk factors were not robust against possible publication bias.

the perpetrator had guns in their home or could readily access a gun (*OR* = 11.17, *p* < .001; see Table 3). The perpetrator’s direct access to guns increased the likelihood of IPH compared to IPV by 11 times. If the perpetrator had previously threatened the victim with a weapon (*OR* = 7.36, *p* < .001) or if the perpetrator had previously nonfatally strangled the victim (*OR* = 7.23, *p* < .001), the likelihood of IPH increased by approximately 7 times. If the perpetrator had forced the victim to have sex with him (*OR* = 5.44, *p* < .001), the likelihood of IPH increased by over 5 times. Other significant risk factors for IPH included the perpetrator’s controlling behaviors (*OR* = 4.25, *p* < .001), if the perpetrator previously threatened to harm the victim (*OR* = 4.83, *p* < .001), if the perpetrator abused the victim while she was pregnant (*OR* = 3.93, *p* < .001), if the perpetrator had stalked the victim (*OR* = 3.13, *p* < .001), and if the perpetrator exhibited jealous behaviors (*OR* = 2.32, *p* < .01). The perpetrator’s substance abuse, which includes both drug and alcohol abuse, increased the likelihood of IPH by 85% (*OR* = 1.85, *p* < .001). If the perpetrator had less than a high school education (*OR* = 1.70, *p* < .05), the likelihood of IPH increased by 70%. If the perpetrator was younger in age (*OR* = 1.68, *p* < .01), the likelihood of an IPH increased by 68%, and

Table 3. Risk Factors for Male Perpetration and Female Victimization of Intimate Partner Homicide.

Risk Factor	<i>k</i>	<i>OR</i>	95% CI
Male perpetration			
Direct access to guns	5	11.17***	[4.31, 28.94]
Threatened victim with a weapon	5	7.36***	[2.99, 18.11]
Perpetrated nonfatal strangulation	5	7.23***	[4.61, 11.34]
Raped victim/perpetrated forced sex	4	5.44***	[2.79, 10.61]
Controlling behaviors	4	5.60***	[4.41, 7.13]
Threatened to harm victim	8	4.83***	[2.61, 8.97]
Abused victim while pregnant	4	3.93***	[2.99, 5.18]
Perpetrated stalking	4	3.13***	[2.58, 3.81]
Jealousy	5	2.58***	[1.81, 3.70]
Substance abuse	6	1.85***	[1.19, 2.86]
Less than high school education	6	1.70*	[1.11, 2.62]
Young age	5	1.68***	[1.25, 2.25]
Violent toward nonfamily members	3	1.53	[0.94, 2.48]
Prior criminal charges	6	1.32	[0.84, 2.05]
Mental health issues	5	1.30*	[1.06, 1.61]
Employed	8	0.50***	[0.36, 0.70]
Female victimization			
Substance abuse	4	2.56***	[1.78, 3.67]
Less than a high school education	9	2.45***	[2.02, 2.99]
Separated from perpetrator	9	2.33***	[1.64, 3.30]
Children from previous relationship	4	2.29***	[1.48, 3.53]
Young age	9	1.30	[0.96, 1.77]
Children with perpetrator	5	1.17	[0.80, 1.71]
Length of relationship with perpetrator	4	1.17	[0.89, 1.54]
Married to perpetrator	8	0.84	[0.52, 1.38]
Employed	10	0.82	[0.65, 1.04]
Higher income level	3	0.71	[0.48, 1.03]

Note. *k* = number of effect sizes; *OR* = unadjusted odds ratio of the effect size; CI = confidence interval.

Boldface identifies statistical significance: **p* < .05. ***p* < .01. ****p* < .001.

the perpetrator’s history of mental health problems (*OR* = 1.30, *p* < .01) increased the likelihood of an IPH by 30%. If the male was employed, the likelihood of IPH decreased by 50% (*OR* = 0.50, *p* < .001). Having a history of violence toward nonfamily members and prior criminal charges were not significant risk factors for male IPH perpetration.

Risk Factors for Female IPH Victimization

The following risk factors for female IPH victimization all increased the likelihood of IPH compared to IPV by over 2 times: if the victim had less than a high school education (*OR* = 2.67, *p* < .001), if the victim was separated from the perpetrator (*OR* = 2.59, *p* < .001), if the victim abused substances (*OR* = 2.58, *p* < .001), and if the victim had children from a previous relationship/not sired by the abuser (*OR* = 2.37, *p* < .001). Having children with the perpetrator, the victim being younger in age, the length of the relationship with the perpetrator, being married to the perpetrator, and having a high

level of income were not significant risk factors for female IPH victimization.

Discussion

This meta-analysis examined risk factors for male IPH perpetration and female IPH victimization. This study compared IPH perpetrators and victims versus IPV perpetrators and victims to examine risk factors that may put individuals who have experienced violence in their relationship at a greater risk of IPH. The risk factor that increased the likelihood of IPH the highest was if the male perpetrator had direct access to guns. Other significant risk factors for male IPH perpetration included if he had previously threatened the victim with a weapon, had previously strangled the victim, had threatened to harm the victim, had perpetrated forced sex, exhibited controlling behaviors, had threatened to harm the victim, abused the victim while she was pregnant, previously stalked the victim, was jealous, abused substances, had less than a high school education, was younger in age, had anger problems, and had a history of mental health issues. This meta-analysis also found that if the perpetrator was employed, the likelihood of IPH decreased. The perpetrator having a history of violence toward nonfamily members or having prior criminal charges were not significant risk factors for IPH perpetration.

If the female victim had less than a high school education, was separated from the perpetrator, abused substances, and/or had children from a previous relationship the likelihood of IPH increased. Being younger in age, having children with the perpetrator, the length of the relationship with the perpetrator, being married to the perpetrator, being employed, and having a higher income were not significant risk factors for IPH victimization. It is also important to note that overall, perpetrator risk factors were more strongly related to an increase in the odds of an IPH occurring compared to victim risk factors. This suggests that it may be more important to examine *and intervene with* factors related to the perpetrator than the victim when assessing for the potential occurrence of an IPH.

One of the major findings from this study is that when comparing male IPV offenders to male IPH offenders, having direct access to a gun increased the likelihood of IPH by more than 11 times or over 1,000%. This number warrants serious attention. Previous research has identified previous IPV as one of the most important risk factors for IPH (Campbell et al., 2007), and results from this study support the importance of making sure IPV perpetrators do not have access to guns. According to 18 U.S.C. § 922(g)(9), an individual who has been convicted of a misdemeanor-level crime of domestic violence is prohibited from possessing, shipping, transporting, or receiving ammunition or firearms. Results from this study support the necessity of enforcing this law. *Previous research has found an association between limiting IPV perpetrators' access to firearms and a reduction in IPH* (Vigdor & Mercy, 2006; Zeoli & Webster, 2010; Zeoli, Malinski & Brenner, 2017). Limiting potential IPH offenders' access to lethal means by

enforcing laws prohibiting IPV perpetrators from owning guns is a way to decrease incidences of IPH.

According to exposure reduction hypothesis, providing resources that allow victims of IPV to leave abusive relationships may also aid in decreasing rates of IPH (Dugan et al., 2003; Reckdenwald & Parker, 2012). The importance of the exposure reduction hypothesis is supported by our findings. Many of the risk factors for IPH that increased the likelihood of IPH by the highest percentages are instances of certain acts of previous violence toward the victims, such as threatening to harm the victim, threatening the victim with a weapon, perpetrating nonfatal strangulation, perpetrating forced sex, perpetrating stalking, and if perpetrator previously abused the victim while she was pregnant. Previous research has found that survivors of attempted IPH generally underestimated the dangerousness of the situation (Farr, 2002; Nicolaidis et al., 2003). Many victims of attempted homicide did not think their partner was capable of trying to kill them. These IPV-related risk factors for IPH highlight the importance of law enforcement personnel, first responders, victim advocates, and mental health professionals knowing the seriousness of these risk factors and educating survivors of IPV of the dangerousness of the situation they are currently in as means to potentially reduce the likelihood of IPH. Nonfatal strangulation is a risk factor of particular concern, as there may not be any external signs of strangulation (such a bruising) or the victim may not remember what had happened due to a lack of oxygen during the attack (Wilbur et al., 2001). Another explanation for the importance of nonfatal strangulation as an IPH risk factor of particular concern is that compared to women who had not been strangled by an intimate partner, women who were strangled by an intimate partner were more likely to report other significant risk factors for IPH in their relationship, such as sexual violence and the perpetrator threatening them with a weapon (Messing, Patch, Wilson, Kelen, & Campbell, 2018). It is necessary that helping professionals who are working with survivors of IPV assess whether or not they had been strangled and educate survivors of the seriousness of the situation they are or were in. This also suggests the importance of serious consequences for perpetrators of strangulation, as well as other forms of IPV, who may be escalating in their level and frequency of violence.

We also identified several risk factors associated with male sexual proprietariness theory (Daly & Wilson, 1988; Wilson & Daly, 1993) as significant risk factors for IPH. If the perpetrator is controlling toward the victim, is sexually jealous of the victim, is stalking the victim, has perpetrated forced sex; if the woman has children from a previous relationship; or if she is separated from the perpetrator, it is important to take the potential for IPH very seriously. This level of control and jealousy may increase the likelihood of the occurrence of IPH, and it is imperative to warn the victim of the potential dangerousness of the situation. Also, it is important for professionals to take these signs seriously when working with or in contact with IPV perpetrators. This also highlights the importance of providing safe ways for women to exit abusive relationships. Although research has found that separation is a risk factor for IPH, as did this study, previous research

suggests that the risk of IPH decreases after 3 months of leaving the abuser (Banard et al., 1982; Wilson & Daly, 1993). Research still supports that leaving an abusive relationship will decrease the long-term risk of IPH (Dugan et al., 2003) and providing safe ways to exit abusive relationships is necessary to help protect women leaving abusive relationships.

The factors examined in this meta-analysis that were not significant risk factors for IPH may be just as important for helping professionals to be aware of. Our study found that many of the factors that were related to the relationship between the perpetrator and victim (i.e., length of relationship, if the perpetrator and victim were married, and whether or not the victim and perpetrator had children together) were not significant risk factors for IPH. This suggests that IPH may occur in all types of relationships (i.e., short- and long-term relationships, married and dating relationships, as well as whether or not the couple had children); and it is important that those working with potential perpetrators and victims do not stereotype who may be more at risk due to their relationship characteristics. Although demographic characteristics were significant risk factors for male IPH perpetration, age, employment status, and income level were not significant risk factors for female IPH victimization. This may indicate that examining the perpetrator's demographic factors may be more important than examining the potential female victim's demographic factors or that IPH impacts women from all social classes and statuses. It is also important to note that the perpetrator's prior criminal charges or if they were violent toward nonfamily members were not statistically significant risk factors for IPH. Again, this suggests that law enforcement personnel, medical professionals, victim advocates, or mental health professionals must not believe that an individual may be at less risk to perpetrate IPH due to a lack of criminal or violent history.

The results from this study offer support for risk factors identified in *recognized* risk assessment tools currently being used in the field. The Danger Assessment (Campbell et al., 2009) identifies owning a gun, separation, threatening to harm victim, unemployment, having a child from a previous relationship, perpetration of forced sex/rape, nonfatal strangulation, perpetrator substance use, controlling behaviors, jealousy, perpetrator abusing victim while she was pregnant, and stalking as risk factors to assess for, all of which our meta-analysis found to be significant risk factors for male-perpetrated IPH. The Spouse Abuse Risk Assessment (SARA) (Kropp et al., 1995) identifies relationship problems (which can include separation), employment problems, perpetrator substance use, perpetrator mental illness, sexual assault, jealousy, threats of harm or death, escalation of assault (which can include nonfatal strangulation), and past violations of "no contact" orders (which could be considered stalking), all of which were found to be significant risk factors in this meta-analysis.

Implications for Practice, Policy, and Research

The results from this meta-analysis can aid in informing practitioners of many different disciplines regarding the strength of risk

factors for IPH that are most commonly found in the empirical literature. However, it is still *critically* important that practitioners and professionals incorporate their own professional judgment when conducting risk assessments (Kropp, 2008). Researchers have pointed out that there may be risk factors *commonly referred to in case studies and narratives* that may be difficult to empirically test for, and have not been examined through quantitative studies, which highlights the importance of practitioners and professionals balancing assessment of risk factors with empirical support and using professional discretion *when* assessing for risk of violence or homicide (Douglas & Kropp, 2002; Kropp & Cook, 2013). Structured professional judgment *is* an approach to risk assessment that combines the importance of professionals' and practitioners' *professional* judgment/discretion combined with a focus on empirically supported risk factors (Douglas & Kropp, 2002; Kropp, 2008; Messing & Thaller, 2015). The results from this meta-analysis can aid professionals in identifying empirically supported risk factors for IPH, but professional discretion is still needed in risk assessment.

Limitations and Future Research

The major limitation of this study is the lack of studies we were able to include in this meta-analysis, as well as the limited number of effect sizes found for each risk factor. This suggests the continued need to research risk factors for IPH. The majority of the studies excluded in our analysis were excluded because they did not use comparison samples in their studies, which did not allow for us to examine true risk factors of IPH. Future research would benefit from the use of comparison samples in order to truly examine what would put individuals at a greater risk of IPH, rather than reporting solely on prevalence rates. Also, there were several risk factors of interest identified for this meta-analysis that we were not able to be included due to not having three or more effect sizes to analyze. This suggests that future research may benefit from examining less known risk factors for IPH to determine whether there are other possible important risk factors missing from the current literature. There were also several risk factors included on the Danger Assessment (Campbell et al., 2009) and the SARA (Kropp et al., 1995) that we did not find enough effect sizes for to include in the analysis, which would be of interest to examine in future research. Lastly, this analysis only examined bivariate relationships between risk factors and IPH. Future research would benefit from continued examination of covariates and how risk factors may relate to one another, or how certain combinations of risk factors may increase the risk of IPH perpetration or victimization.

Conclusion

This was the first meta-analysis conducted examining risk factors for male IPH perpetration and female IPH victimization. Results from this study found that the perpetrator's direct access to guns was the risk factor that increased the likelihood of IPH by the highest percent. Other significant risk factors of male IPH perpetration included: threatening the victim with a

weapon, perpetrating nonfatal strangulation, perpetrating forced sex, controlling behaviors, threatening to harm the victim, abusing the victim while pregnant, stalking, jealousy, substance abuse, having less than a high school education, perpetrator's young age, and a history of mental health issues. Significant risk factors for IPH victimization were substance abuse, having less than a high school education, separation, and having children from a previous relationship. Overall, it is necessary for policy makers who develop gun-related laws when there has been an IPV conviction, law enforcement personnel, first responders, medical professionals, mental health professionals, and victim advocates understand risk factors for IPH. This may aid in identifying individuals who have experienced IPV in their relationship and may be at a greater risk of perpetrating or being victims of IPH and may prevent future IPH.


Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The funding for the publication was received from Family Process Institute

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