

Risk Factors for Violence in Adult Heterosexual Non-casual Relationships: An Overview of Reviews

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Abstract

Intimate partner violence (IPV) is a widespread social, public health, and human rights problem. Empirical investigation of IPV risk factors can promote evidence-based assessment tools and effective prevention and intervention. This overview is a pioneering synthesis of systematic reviews (SRs) of IPV risk factors.

Systematic searches for SRs in English reporting a meta-analysis of IPV risk factors in adult heterosexual, non-casual relationships published between January 2011 and June 2021 were conducted in four bibliographic databases: Medline via EBSCO, CINAHL Plus, Scopus, and APA PsycInfo. This search strategy identified 1,027 unique records. Supplementary manual search methods were completed in July 2023. Overall, 17 SRs utilising a meta-analytic approach to investigate IPV risk factors published between 2012 and 2022 were included in the overview.

Risk factors were organised into five key categories: demographic, individual, family of origin, relationship, and social. Overall, 73 unique risk factors relating to perpetrators and 61 relating to victims were identified in the SRs. Just 50 of the 119 coefficients relating to IPV perpetration were reported, by any SR, as statistically significant and of moderate or strong

predictive power; and 39 of these 50 factors related to previous IPV. Only 26 of the 147 coefficients relating to IPV victimisation were both statistically significant and of moderate or strong predictive power, the majority of which (15) were in the relationship violence grouping of risk factors.

The evidence suggests a randomness to IPV. This body of evidence provides some limited direction for policy makers, practitioners, and researchers.

Keywords: Intimate partner violence, adult heterosexual relationships, risk factors, overview, systematic reviews.

The most commonly agreed on definition of intimate partner violence (IPV) is provided by the World Health Organization (WHO): “behaviour within an intimate relationship that causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours” (WHO, 2010 p, 11).

IPV is distinct from the term “domestic violence,” which encompasses violence or abuse by and toward any member of a household (e.g., children, siblings) more generally (Reis et al., 2009; WHO, 2012). IPV focuses on violent and aggressive interactions between romantic partners and can be evident in a wide range of relationship types—for example, adults and minors; marital and cohabitating or dating and noncohabiting partners; and opposite-sex and same-sex relationships (Capaldi et al., 2012; Finneran & Stephenson, 2013). Typically, IPV is recognised and studied as a gendered problem—i.e., as one form of violence against women (WHO, 2012)—although more recent research also explores female-to-male IPV (Downie et al., 2021; Finneran & Stephenson, 2013; Scott-Storey et al., 2023).

IPV is a global and deep-rooted social, public health, and human rights problem that bears aversive short- and long-term effects on individuals (e.g., health, well-being, education, employment), families, community, and society (Ankerstjerne et al., 2022; O’Doherty et al.,

2014; WHO, 2010, 2012). The magnitude and scope of this widespread problem is “of epidemic proportions” (WHO, 2013 p.3). For example, almost one third of women between 15 to 49 years old worldwide who have been in intimate relationship are estimated to be victims of physical or sexual violence by their partner (WHO, 2021). Improving how we respond to IPV is an enduring universal priority (WHO, 2013).

Empirical investigation of risk factors of any social and public health problem, such as IPV, can inform the development of evidence-based assessment tools and effective prevention and intervention services and policies (Alfandari et al., 2022; Birkley & Eckhardt, 2015; Downie, et al., 2021; Gracia et al., 2020; Reis et al., 2009). Researchers in the IPV field have been interested in related risk factors for almost 50 years (Powers & Kaukinen, 2012).

As far as we know, this is the first attempt to provide a comprehensive summary of systematic reviews (SRs) in this field. We sought to complete an exhaustive bibliographic search to locate all relevant SRs, appraise their scientific rigour, synthesise the findings in an easily accessible format, and outline implications for practice, policy, and further research.

Method

Where possible, this overview adhered to Cochrane Collaboration guidelines for overviews of SRs (Pollock et al., 2023). These guidelines were developed for overviews of SRs of interventions, so all aspects of the guidelines could not be implemented. We indicate changes from Cochrane guidelines in the text.

Inclusion and Exclusion Criteria

In pursuit of a quality dataset, we only included peer-reviewed SRs, as suggested by methods commentators (Alfandari et al., 2021). Also, SRs were only included if they reported a meta-analysis of studies that investigated IPV related risk factors. This type of SR fitted well with our aim, because meta-analysis has been recognised as a valuable tool for the

pooling and quantitative analysis of data from multiple studies (Berman & Parker, 2002; Thoma & Eaves, 2016). For practical reasons, the search was limited to publications in English.

SRs were excluded if they: (a) evaluated IPV as a risk factor for other outcomes (e.g., HIV infection); (b) investigated violence or aggression more generally (e.g., violence against women, family violence) or focused on one particular IPV behavioural component (for example, stalking); (c) investigated IPV homicide, which is generally understood to be different from nonlethal IPV and linked to overlapping but essentially different risk factors (Matias et al., 2020; Spencer & Stith, 2020; Stöckl et al., 2013); (d) focused on IPV in casual relationships (dating and non-cohabiting relationships), which are argued to be substantially different from couples who are living together (Birkley & Eckhardt, 2015; Capaldi et al., 2012); (e) related to same-sex relationships, as same-sex IPV is sufficiently different to warrant separation (Baker et al., 2013; Finneran & Stephenson, 2013; Rollè et al., 2018); (f) examined IPV in a target population of refugees, who have particular needs and challenges not applicable to the general population; or (g) investigated IPV among minors and young adults.

Search Strategy

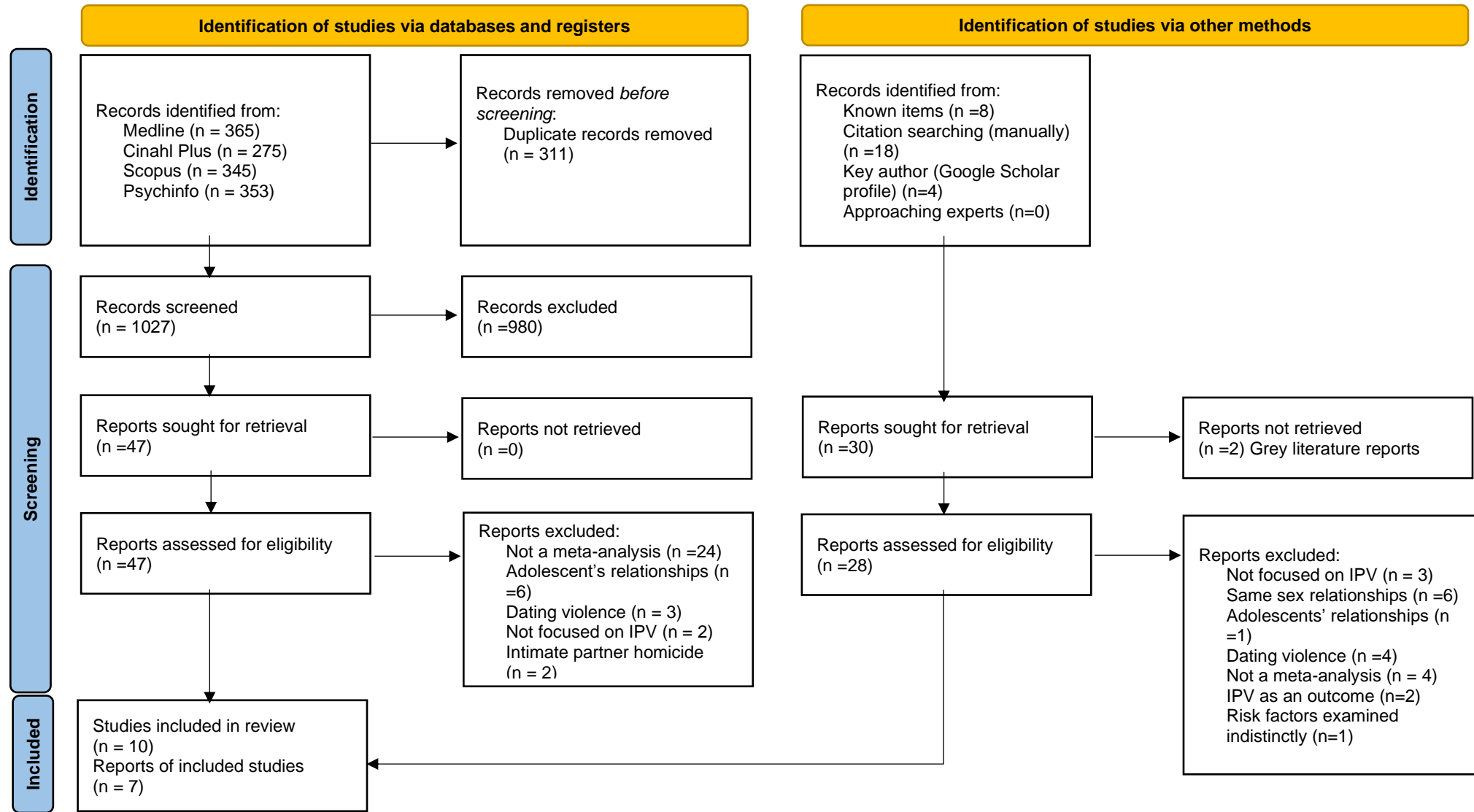
The search strategy was developed by information specialists from University of Hertfordshire, UK. Searches were conducted on four bibliographic databases: Medline via EBSCO, CINAHL Plus, Scopus, and APA PsycInfo. Three concept groups were used to structure the search: (a) IPV, (b) risk factors, and (c) SRs. Terms for IPV were informed by a previous investigation of the IPV literature (McGinn et al., 2016). Terms for SRs were informed by Montori et al., (2005) and Wilczynski et al., (2007) The full search strategy used in Scopus and Medline is presented in Appendix A and Appendix B, respectively.

Review Screening and Selection

The search strategy identified 1,338 records. After removal of duplicates, the titles and abstracts of 1,027 records were exported to Rayyan Qatar Computing Research Institute SR software (Ouzzani et al., 2016). These were independently considered by two reviewers against the inclusion criteria, uncertainties being resolved through discussion between the reviewers. After this initial screening, 47 records were retrieved in full text and their eligibility for inclusion was again considered by two reviewers. Ten SRs were deemed eligible.

In anticipation of finding many eligible SRs, we limited the earliest publication date to January 1, 2011. The search was completed in June 2021. Supplementary search methods were used to enhance the database searches: manual citation search of eligible studies' bibliography lists; a review of items known to the research team; screening the Google Scholar profiles of key authors of eligible studies; and approaching experts in this field. These searches completed in July 2023 resulted in the inclusion of an additional seven SRs. Thus, 17 SRs were included in the current overview. Figure 1 presents the PRISMA flowchart (Page et al., 2021) for the searches described. Details of retrieved SRs that did not meet inclusion criteria and justifications for exclusion are presented in Appendix C.

Figure 1 PRISMA 2020 flow diagram



*Some records did not meet inclusion criteria for multiple reasons. Here only one reason is indicated for the full account see Appendix C.

Quality Appraisal

SRs can be biased in various ways. We evaluated the general quality of SRs using AMSTAR Assessment of Multiple Systematic Reviews (AMSTAR 2) tool (Pollock et al., 2023; Shea et al., 2017) as appropriate, following previous overviews of risk factors (Andersen et al., 2011; Kamper et al., 2016). AMSTAR2 is an established quality appraisal tool for SRs recommended by the Cochrane Collaboration (Pollock et al., 2023). Because it was designed for evaluating SRs of experimental studies, some modifications were required to implement it in the current study, which mainly involved SRs of correlational studies. Thus, three AMSTAR2 items were dropped from our assessment: (a) appropriately applying PICO (population, intervention, comparison group, and outcomes) in the SR which is commonly used in intervention studies as an organising framework for the study question; (b) reporting sources of funding which is relevant for commercially sponsored intervention studies; and (c) using appropriate methods for statistical combination of results which is particularly relevant for SRs that include randomised controlled trials or non-randomised studies of interventions.

For each AMSTAR2 criterion, SRs received one of four ratings: “yes” (primary reviewers applied this mechanism of rigour, such as completing a comprehensive literature search); “no” (SRs do not appear to have done this); “partial yes” (for example, the literature search was comprehensive but with an exception); or “uncl” (primary reviewers did not provide the information, such as not reporting if two authors determined the eligibility of studies for inclusion). Shea et al., (2017) offer guidelines on grading SRs as high, moderate, low, or critically low quality. Because SRs of correlational studies have a fundamentally different purpose from SRs of experimental studies, we did not use this grading framework. We graded SR quality as follows:

- Low quality: three or more critical AMSTAR2 items not achieved

- Moderate quality: two critical AMSTAR2 items not achieved
- High quality: one critical AMSTAR2 item not achieved.

Data Extraction

Data extraction followed Cochrane Collaboration guidelines (Pollock et al., 2023) on data extraction for an overview. The descriptive characteristics of SRs and their primary studies were extracted: (a) descriptive information, such as number of included studies, date range of included studies, and types of IPV investigated (e.g., physical or emotional); (b) information about primary studies, including country of publication and study design; (c) search strategies, including number and name of databases and sources searched, date of last search, and supplementary searching strategies; (d) population, including number of participants and their characteristics, such as sex, age, perpetrator or victim, comorbidities (e.g., HIV-positive, traumatic brain injury), and setting (clinical or non-clinical sample); (e) risk factors investigated in relation to either perpetrator or victim, including number and name of risk factors, and moderators when investigated; and (f) methodological quality (i.e., quality score based on modified AMSTAR2 rating) and limitations.

Data Synthesis

In this overview, we summarised extant evidence rather than seeking an answer to a new review question about a specific topic in existing SRs (e.g., subpopulation of participants). Accordingly, outcome data were summarized—i.e., presented exactly as reported in the underlying SRs—rather than reanalysed in attempt to combine findings from included SRs in a new statistical fashion (Pollock et al., 2023). Therefore, SR findings are reported in this overview without conversion to a common metric. Many included SRs presented the strength of the relationship between risk factors and IPV perpetration or victimisation as a correlation coefficient: mean r . If SRs referred simply to r , instead of mean r , we assumed that they were presenting an average of primary study r values. Some SRs

presented the strength of risk factor relationships as odds ratios; these are simply reiterated, in accordance with Cochrane guidance (Becker & Oxman, 2011).

Patient and Public Involvement

Patients and members of the public were not involved in this study.

Results

This overview included 17 SRs that used a meta-analysis approach to investigate IPV risk factors and which were published between 2012 and 2022. Due to incomplete reference lists of the primary studies included in these meta-analyses, it was impossible to evaluate the degree of overlap in primary studies across SRs accurately. We calculated that the body of evidence summarised here is based on at least 789 unique studies published between 1988 and 2021, many of which were referenced in multiple SRs included in this overview. The total number of studies, not accounting for overlaps, was 2,140.

Quality Appraisal Results

Using the modified AMSTAR2 tool and grading framework, all 17 SRs were evaluated as low quality. Evaluation outcomes using the modified AMSTAR2 tool are detailed in Appendix D. Twelve of the 17 SRs conducted a statistical test for publication bias. Two SRs found evidence of potential publication bias related to combat exposure (Spencer et al., 2020) and anger, shame, antisocial personality disorder, and somatic symptoms (Spencer et al., 2022).

Characteristics of Included SRs

SRs varied greatly in the type and amount of data provided about primary studies included in the meta-analysis. Additionally, nine SRs did not report all or some of the primary studies analysed (that is, after personal communications with the current authors).

Table 1 summarises the main characteristics of the included SRs.

Table 1 Characteristics of included systematic reviews and primary studies (n=17)

ID	Reviews' characteristics	Studies' characteristics	Population	Risk factors investigated (by perpetrator/victim)	Comments
14	Farrer et al., (2012) 6 studies Studies date range: 1989 to 2006	Countries of investigation: New Zealand (n=1), USA (n=5) Study design: cross-sectional (n=6)	222 participants IPV offenders 53.6% Diagnosed with traumatic brain injury Male perpetrators Mean age 29.7-34.9 years	1 risk factor Perpetrator: traumatic brain injury history	Quality score ¹ : Low 83% of studies were conducted in the USA 100% of studies were cross-sectional
20	Kane & Bornstein (2016) 17 studies Studies date range: 1988-2014 IPV type: MFPV		2,982 participants Male perpetrators Mean age 20.5- 46.8 years Clinical (perpetrator in treatment) and nonclinical sample	1 risk factor Perpetrator: interpersonal dependency or dependent personality disorder Moderators: dependency measure, IPV measure, sample type (clinical/non-clinical), perpetrator's age	Quality score: Low
24	Love et al., (2020) 149 studies Studies date range: 1980-2016 IPV type: physical, MFPV	Studies design: cross-sectional (n=149)	Male perpetrators, female victims Clinical (e.g., women's shelter, a batterer's intervention program, emergency room) and nonclinical	2 risk factors ² Perpetrator: power in the relationship, stalking perpetration	Quality score: Low 100% of studies were cross-sectional

¹ Quality score is based on AMSTAR2 (modified) rating. For the complete AMSTAR2 (modified) evaluation see appendix D.

² Only the two risk factors that were clearly related by the authors to either the perpetrator or victim were extracted from this systematic review.

26	<p>Mallory et al., (2016)</p> <p>291 studies</p> <p>Studies date range:1980-2012</p> <p>IPV type: physical, MFPV</p>	<p>Country of investigation: Albania (n=1), Australia (n=4), Bolivia (n=2), Brazil (n=1), Cambodia (n=1), Canada (n=18), Chile (n=1), China (n=1), Dominican Republic (n=1), Egypt (n=1), Ethiopia (n=2), Holland (n=1), Hong Kong (n=4), India (n=5), Indonesia (n=1), Iran (n=2), Iraq (n=1), Israel (n=2), Jordan (n=1), Kenya (n=1), Mexico (n=1), Myanmar (n=1), New Zealand (n=2), Nicaragua (n=2), Nigeria (n=2), Pakistan (n=1), Palestine (n=1), =Peru (n=2), Philippines (n=1) Rwanda (n=1), Singapore (n=1), South Africa (n=5), Spain (n=1), Sri Lanka (n=1), Syria (n=1), Thailand (n=1), Turkey (n=3), Uganda (=1), Ukraine (n=1), USA (n=210), multiple samples (n=2)</p>	<p>225,822 participants</p> <p>Male perpetrators, female victims</p> <p>Clinical and nonclinical</p>	<p>11 risk factors</p> <p>Perpetrator: age, education, income, employment status, drug misuse, alcohol misuse, abused as a child, witness parental IPV, emotional IPV perpetration in relationship, controlling behaviours in relationship, relationship satisfaction</p> <p>Moderators: cultural group (US, non-US individualist countries, collectivist countries)</p>	<p>Quality score: Low</p> <p>72% of studies were conducted in the USA</p>
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30	<p>Oram et al., (2014)</p> <p>17 studies</p> <p>Studies date range: 1994-2012</p> <p>IPV type: physical, MFPV, FMPV</p>	<p>Countries of investigation: New Zealand (n=2), South Africa (n=1), UK (n=1), Ukraine(n=1), USA (n=12)</p> <p>Studies design: cross-sectional (n=7)</p>	<p>72,585 participants</p> <p>Male perpetrators, female perpetrators</p> <p>Clinical and nonclinical</p>	<p>5 risk factors³</p> <p>Perpetrator: depression, anxiety disorder, panic disorder, PTSD, social phobia</p>	<p>Quality score: Low</p> <p>71% of studies were conducted in the USA</p> <p>41% of studies were cross-sectional</p>
37	<p>Smith-Marek et al., (2016)</p> <p>370 studies</p> <p>Studies date range: 1984-2012</p> <p>IPV type: physical, MFPV, FMPV</p>		<p>515,893 participants</p> <p>Military and civilians</p> <p>Male perpetrators, female perpetrators</p> <p>Clinical and nonclinical</p>	<p>12 risk factors</p> <p>Perpetrator: age, education, income, PTSD, depression, stress, alcohol misuse, abused as a child, length of relationship, relationship satisfaction, emotional IPV perpetration, social support</p> <p>Moderators: group membership (military/civilian), gender</p>	<p>Quality score: Low</p>
39	<p>Spencer et al., (2019)</p> <p>367 studies</p> <p>IPV type: physical, MFPV</p>	<p>Countries of investigation: Albania(n=1), Australia(n=5), Bolivia (n=2), Brazil (n=1), Cambodia(n=1), Canada(n=27), China(n=6), Dominican Republic(n=1), Ethiopia(n=2), Haiti(n=1), Holland(n=1), India(n=5), Indonesia(n=1), Iran(n=3), Iraq(n=1), Israel(n=3), Jordan(n=2), Kenya(n=1), Malawi(n=1),</p>	<p>Not reported</p>	<p>29 risk factors</p> <p>Perpetrator: age, education, income, employment status, marital status, mental health problems, borderline personality disorder, depression, PTSD, trauma, anger, self-esteem, drug misuse, alcohol misuse, substance misuse, violent towards nonfamily members, prior arrest, approval of violence, abused as a child, witness parental IPV, length of relationship, controlling behaviours, relationship dissatisfaction, jealousy, caused previous injury, emotional IPV perpetration, previous physical IPV perpetration, sexual IPV perpetration, emotional IPV victimisation</p>	<p>Quality score: Low</p> <p>75% of studies were conducted in the USA</p>

³ Only the 5 factors that included meta-analysis outcomes were extracted from this systematic review.

		Mexico(n=2), Nicaragua(n=2), Nigeria(n=3), Pakistan(n=1), Peru(n=3), Rwanda(n=1), South Africa(n=6), Spain(n=2), Sri Lanka(n=1), Syria(n=1), Thailand(n=1), Turkey(n=3), Uganda(n=1), Ukraine(n=1), USA(n=276)		Moderator: countries income inequality (low/high) measured by the GINI index	
41	Spencer, Stith, & Cafferky (2019) 391 studies Studies date range:1980-2016 Physical IPV, MFPV, FMPV		Male victims, female victims Clinical and nonclinical	52 risk factors Perpetrator: controlling behaviours, power in relationship Victim: age, education, income, employment status, marital status, number of children, religiosity, physical health problems, mental health problems, borderline personality disorder, antisocial personality disorder, anxiety, depression, PTSD, trauma, threatens to harm self, stress, financial stress, anger, fear, impulsivity, self-esteem, anxious attachment, avoidant attachment, secure attachment, blames self, drug misuse, alcohol misuse, substance misuse, prior arrest, approval of violence, traditional gender roles, abused as a child, witness parental IPV, length of relationship, separation, demand/withdraw relationship patterns, accused of infidelity, relationship dissatisfaction, conflict resolution skills, communication skills, Jealousy, previous injury, emotional IPV perpetration, previous physical IPV perpetration, history of spouse abuse, emotional IPV victimisation, sexual IPV victimisation, stalking victimisation, social support Moderator: gender	Quality score: Low

42	<p>Spencer et al., (2020)</p> <p>503 studies</p> <p>Studies date range:1980-2018</p> <p>IPV type: physical MFPV, FMPV</p>		<p>Male perpetrators, female perpetrators</p>	<p>63 risk factors</p> <p>Perpetrator: age, education, income, employment status, marital status, number of children, religiosity, physical health problems, mental health problems , borderline personality disorder, antisocial personality disorder, narcissism, depression, PTSD, trauma, anxiety, threatens to harm self, stress, financial stress, anger, internal locus of control, external locus of control, impulsivity, self-esteem, empathy, anxious attachment, avoidant attachment, disorganised attachment, secure attachment, coping skills, drug misuse, alcohol misuse, substance misuse, violent toward nonfamily members, physically abusing own children, prior arrest, combat exposure, access to weapons, approval of violence, traditional gender roles, abused as a child, witness parental IPV, length of relationship, length of time living together, verbal arguments, demand/withdraw relationship patterns, perpetrator's controlling behaviour, perpetrator's infidelity, perpetrator's power in the relationship, relationship satisfaction, jealousy, conflict resolution skills, communication skills, caused previous injury, emotional IPV perpetration, previous physical IPV perpetration, physical IPV victimization, threatens to harm partner, stalking perpetration, emotional IPV victimisation, sexual IPV perpetration, sexual IPV victimisation, social support</p> <p>Moderator: gender</p>	<p>Quality score: Low</p>
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44	Tenkorang et al., (2020) 12 studies Studies date range :2002-2018	Countries of investigation: East African countries (n=1), Nigeria(n=3), South Africa(n=5), Tanzania(n=2), Togo(n=1), Zimbabwe(n=1) Studies design: cross-sectional (n=8), RCT (n=1), cohort (n=2), case control (n=1)	HIV-positive women in sub-Saharan Africa Female victims Mostly clinical sample (HIV clinics in the hospitals)	5 risk factors Perpetrator: alcohol misuse Victim: education, employment status, marital status, history of spouse abuse	Quality score: Low 67% of studies were cross-sectional
50	Smith-Marek et al., (2015) 124 studies Studies date range: 1987-2012 IPV type: physical		305,601 participants Male perpetrators, male victims, female perpetrators, female victims Clinical and nonclinical sample	2 risk factors Perpetrator: abused as a child, witness parental IPV Victim: abused as a child, witness parental IPV Moderators: gender of child victim, gender of parent perpetrator	Quality score: Low
53	Cafferky et al., (2016) 285 studies Studies date range:1979-2013	Countries of investigation: Albania (n=1), Australia (n=3), Bolivia (n=1), Brazil (n=1), Cambodia (n=1), Canada (n=19), China (n=2), Dominican Republic (n=1), Ethiopia (n=2), Haiti (n=1), Holland (n=1), Hong Kong (n=2), India (n=5), Indonesia (n=1), Iraq (n=1), Japan (n=1), Jordan (n=1), Kenya (n=1), Malawi (n=1), Mexico (n=1), Mozambique (n=1), Myanmar (n=1), New	627,726 participants Male perpetrators, male victims, female perpetrators, female victims Clinical and nonclinical sample	3 risk factors Perpetrator: drug misuse, alcohol misuse, substance use (drug misuse and alcohol misuse) Victim: drug misuse, alcohol misuse, substance use (drug misuse and alcohol misuse) Moderators: gender, drug type (various illicit drugs), measure type (use Vs frequency), sample type (clinical Vs nonclinical)	Quality score: Low 72% of studies were conducted in the USA

		Zealand (n=5), Nicaragua (n=1),Nigeria (n=3), Norway (n=2), Peru (n=2), Philippines (n=1), Puerto Rico (n=1), Rwanda (n=1), South Africa (n=6), Spain (n=1), Sri Lanka (n=1), Sweden (2), Tanzania (n=1), Thailand (n=1), Turkey (n=2), Uganda (n=1), Ukraine (n=1), USA(n=204)			
54	Nikparvar et al., (2021) 14 studies Studies date range:2005-2018 IPV type: physical, MFPV	Country of investigation: Iran Studies design: cross-sectional (n=14)	Female victims	16 risk factors Perpetrator: age, education, employment status, drug misuse, abused as a child Victim: age, education, income, employment status, pregnancy, physical health problems, mental health problems, depression, length of relationship, psychological IPV victimisation, living in a patriarchal household	Quality score: Low 100% of studies were cross-sectional
55	Keilholtz et al., (2022) 148 studies IPV type: physical, MFPV, FMPV	Studies design: cross-sectional studies (n=133), longitudinal studies (n=15)	Male perpetrators, male victims, female perpetrators, female victims Clinical and nonclinical sample	7 risk factors Perpetrator: income, employment status, physical health problems, mental health distress, stress, work stress, relational distress Victim: income, employment status, physical health problems, mental health distress, stress, relational distress Moderator: gender	Quality score: Low 90% of studies were cross-sectional

56	<p>Kelly et al., 2021</p> <p>101 studies</p> <p>Studies date range: 1980-2017</p> <p>IPV type: physical, MFPV</p>	<p>Country of investigation: USA (n=101)</p>	<p>74,869 participants</p> <p>Black and white women</p> <p>Male perpetrators, female victims</p> <p>Clinical and nonclinical sample</p>	<p>12 risk factors</p> <p>Perpetrator: depression, alcohol misuse, emotional IPV perpetration, stalking perpetration, sexual IPV perpetration</p> <p>Victim: PTSD, drug misuse, alcohol misuse, substance misuse, abused as a child, emotional IPV victimisation, social support</p> <p>Moderator: race (black/white)</p>	<p>Quality score: Low</p> <p>100% of studies were conducted in the USA</p>
57	<p>Mootz et al., 2022</p> <p>51 studies</p> <p>Studies date range:1998-2021</p> <p>IPV type: physical, MFPV</p>	<p>Countries of investigation: Ethiopia (n=4), Democratic republic of Congo (n=2), Ghana (n=2), Kenya (n=6), Malawi (n=2), Mozambique (n=1), Nigeria (n=8), Rwanda (n=1), Swaziland (n=1), South Africa (n= 16), Tanzania (n=3), Togo (n=1), Uganda (n=3)</p> <p>Studies design: cross-sectional (n=50), longitudinal (n=1)</p>	<p>176,820 participants</p> <p>Male perpetrators, female victims</p>	<p>28 risk factors</p> <p>Perpetrator: age, employment status, education, cohabitating (not married), marital status, drug misuse, alcohol misuse, abused as a child, witness parental IPV, controlling behaviours, emotional IPV perpetration, sexual IPV perpetration</p> <p>Victim: age, education, employment status, income, marital status, number of children, religiosity, rural residence, depressive symptoms, PTSD, drug misuse, alcohol misuse, approval of violence, abused as a child, witness parental IPV, length of relationship</p>	<p>Quality score: Low</p> <p>98% of studies were cross-sectional</p>
59	<p>Spencer et al., 2022</p> <p>181 studies</p> <p>IPV type: emotional, MFPV, FMPV</p>	<p>Countries of investigation: international (n=74), USA (n = 107)</p>	<p>195,749 participants</p> <p>Diversity of race (e.g., White, Black, Hispanic or Latina/Latino, Asian, Native American or Alaskan Native).</p> <p>Male perpetrators, male victims, female perpetrator, female victims</p>	<p>27 risk factors</p> <p>Perpetrator: psychological distress, emotional dysregulation, borderline personality disorder, antisocial personality disorder, psychopathy, narcissism, depressive symptoms, PTSD, trauma, anxiety symptoms, anger</p> <p>Victim: physical health problems, sexually transmitted infection, somatic symptoms, physical pain, psychological distress, emotional dysregulation, borderline personality disorder,</p>	<p>Quality score: Low</p> <p>59% of studies were conducted in the USA</p>

				antisocial personality disorder, psychopathy, anxiety symptoms, depressive symptoms, PTSD, trauma, threatens to harm self, anger, sham Moderators: gender, violence directionality (perpetration /victimisation)	
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Note: FMPV= female to male partner violence, MFPV= male to female partner violence, OCD=obsessive compulsive disorder, PTSD= post traumatic stress disorder

As shown in Table 1, most SRs (13) focused on physical IPV (Cafferky et al., 2016; Keilholtz et al., 2022; Kelly et al., 2022; Love et al., 2020; Mallory et al., 2016; Mootz et al., 2023; Nikparvar et al., 2021; Oram et al., 2014; Smith-Marek et al., 2015, 2016; Spencer & Mendez et al., 2019; Spencer et al., 2019, 2020), one focused on emotional IPV (Spencer et al., 2022), one encompassed physical, sexual, and psychological IPV (Tenkorang et al., 2021). Nine SRs investigated IPV initiated by male perpetrators toward female victims (Farrer et al., 2012; Kane & Bornstein, 2016; Kelly et al., 2022; Love et al., 2020; Mallory et al., 2016; Mootz et al., 2023; Nikparvar et al., 2021; Spencer & Mendez et al., 2019; Tenkorang et al., 2021) and eight examined IPV conducted by female perpetrators toward male victims (Cafferky et al., 2016; Keilholtz et al., 2022; Oram et al., 2014; Smith-Marek et al., 2015, 2016; Spencer et al., 2019, 2020, 2022). Ten SRs reported on the countries in which primary studies were conducted. One SR focused on studies in Iran (Nikparvar et al., 2021), one on U.S. studies (Kelly et al., 2022), and two on African studies (Mootz et al., 2023; Tenkorang et al., 2021). In the remaining six SRs, 59% to 83% of primary studies were conducted in the United States (Cafferky et al., 2016; Farrer et al., 2012; Mallory et al., 2016; Oram et al., 2014; Spencer & Mendez et al., 2019; Spencer et al., 2022).

Eight SRs reported on primary studies' research designs; they were predominantly cross-sectional (Farrer et al., 2012; Keilholtz et al., 2022; Love et al., 2020; Mootz et al., 2023; Nikparvar et al., 2021; Oram et al., 2014; Spencer et al., 2020; Tenkorang et al., 2021), this undermines any assumptions of causality (Nikparvar et al., 2021; Oram et al., 2014; Spencer et al., 2020; Tenkorang et al., 2021). The other nine SRs made no reference to longitudinal or cross-sectional primary studies. Only three SRs reported on the tools used to assess IPV and risk factors in primary studies (Kane & Bornstein, 2016; Oram et al., 2014; Tenkorang et al., 2021). In addition, six SRs reported more generally on limitations of measurements tools for IPV and risk factors used in primary studies, such as lacking

validation, being oversimplified (e.g., involving a single item or ignoring crucial aspects such as context and severity), or being prone to social desirability response bias (Cafferky et al., 2016; Farrer et al., 2012; Keilholtz et al., 2022; Nikparvar et al., 2021; Oram et al., 2014; Smith-Marek et al., 2016).

IPV Risk Factors

We developed five key categories (some with sub-categories) of risk factors from the SRs, as follows, and used this as a framework for our analysis:

1. Demographic risk factors (e.g., age, education, income, marital status)
2. Individual risk factors, encompassing six subcategories:
 - a. Physical health (e.g., health problems, somatic symptoms)
 - b. Mental health (e.g., depression, PTSD, stress)
 - c. Psychological functioning (e.g., attachment style, impulsivity)
 - d. Drug, alcohol, or substance misuse
 - e. Violence and crime (e.g., violent toward nonfamily members, prior arrest)
 - f. Attitudes (e.g., approval of violence, traditional gender roles)
3. Family of origin risk factors (e.g., being abused as a child, witnessing parental IPV as a child)
4. Relationship risk factors, including three subcategories:
 - a. Relationship status (e.g., length of relationship, separation)
 - b. Relationship dynamic (e.g., controlling behaviour, communication)
 - c. Violence in the relationship (e.g., caused previous injury, stalking)
5. Social risk factors (e.g., social support, living in a patriarchal household)

Risk Factors Relating to IPV Perpetrators

The current overview identified 73 unique risk factors relating to perpetrators. Slightly more than half (41) were individual characteristics, which mainly related to mental

health conditions (18) and psychological functioning (11). The second broad category of risk factors was relationship features (21), particularly characteristics of relationship dynamics (10) and violent relational behaviours (nine).

The most frequently investigated risk factors were alcohol use (examined in eight SRs) and being abused as a child (seven SRs). Six SRs examined the perpetrator's age, employment status, experience of depression, drugs misuse, and emotional or psychological IPV perpetration. Table 2 summarises these SRs' meta-analysis results in relation to IPV perpetrators' risk factors.

Table 2 Risk factors for IPV perpetration: summary of findings

Risk Factors for Perpetration	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity I^2
Demographic risk factors				
Perpetrator's age (older)	26	$r = -0.10^{**}$	-0.17, -0.02	-
	37	$r = -0.12^{***}$	-	-
	39(h)	$r = -0.08^*$	-0.14, -0.01	-
	39(l)	$r = -0.15^{***}$	-0.18, -0.13	-
	42	$r = -0.10^{***}$	-0.11, -0.09	-
	54	$r = -0.05$	-0.16, 0.06	-
	57	$r = 0.00$	-0.00, 0.00	-
Education (higher)	26	$r = -0.16^{***}$	-0.19, -0.13	-
	37	$r = -0.06^{***}$	-	-
	39(h)	$r = -0.08$	-0.16, 0.01	-
	39(l)	$r = -0.14^{***}$	-0.17, -0.10	-
	42	$r = -0.14^{***}$	-0.15, -0.12	-
	54	$r = -0.44$	-0.79, -0.13	-
	26	$r = -0.21^{***}$	-0.3, -0.12	-

Risk Factors for Perpetration	Review ID	Mean r / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity I^2
Income (higher)	37	$r = -0.13^{***}$	-	-
	39(h)	$r = -0.12$	-0.33, 0.10	-
	39(l)	$r = -0.22^{***}$	-0.30, -0.14	-
	42	$r = -0.17^{***}$	-0.201, -0.13	-
	55	$r = -0.20^{***}$	-0.15, -0.25	-
Employment status (employed is greater than unemployed)	26	$r = -0.09^*$	-0.16, 0.01	-
	39(h)	$r = -0.04$	-0.11, 0.03	-
	39(l)	$r = -0.04$	-0.09, 0.01	-
	42	$r = -0.07^{***}$	-0.09, -0.05	-
	54	$r = -0.30$	-0.57, 0.03	-
	55	$r = -0.10^{***}$	-0.06, -0.14	-
	57	$r = 0.01$	-0.06, 0.08	-
Cohabiting (not married)	57	$r = 0.31^{***}$	0.15, 0.45	-
Marital status (married or divorced)	39(h)	$r = 0.01$	-0.17, 0.18	-
	39(l)	$r = -0.05$	-0.14, 0.06	-
	42	$r = -0.04$	-0.09, 0.01	-
	57	$r = -0.01$	-0.20, 0.20	-
Number of children	42	$r = 0.08^{***}$	0.04, 0.13	-
Religiosity	42	$r = -0.07^{***}$	-0.09, -0.05	-
Individual risk factors				
Physical health				
Physical health problems	42	$r = 0.11^{**}$	0.03, 0.18	-
	55	$r = 0.11^{**}$	0.04, 0.18	-

Risk Factors for Perpetration	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity I^2
Traumatic brain injury (TBI)	14	53.6% of IPV offenders had TBI, in comparison to estimates of between 10 and 28.5% in the general population.		
Mental health				
Mental health problems	39(h)	$r = 0.14$	-0.19, 0.44	-
	39(l)	$r = 0.22^{**}$	0.09, 0.35	-
	42	$r = 0.27^{***}$	0.20, 0.34	-
Mental health/ psychological distress	55	$r = 0.27^{***}$	0.22, 0.35	-
	59	$r = 0.01$	-0.01, 0.04	-
Emotional dysregulation	59	$r = 0.29^{***}$	0.23, 0.35	-
Borderline personality disorder	39(h)	$r = 0.38^{***}$	0.26, 0.48	-
	39(l)	$r = 0.34^{***}$	0.21, 0.64	-
	42	$r = 0.34^{***}$	0.29, 0.39	-
	59	$r = 0.42^{***}$	0.32, 0.52	-
Antisocial personality disorder	42	$r = 0.27^{***}$	0.22, 0.32	-
	59	$r = 0.25^{***}$	0.16, 0.29	-
Psychopathy	59	$r = 0.23^{**}$	0.08, 0.38	-
Interpersonal dependency/ dependent personality disorder	20(c)	$r = 0.05^*$	$Z = 2.27$	-
	20(n)	$r = 0.19^{***}$	$Z = 3.60$	-
	20(s)	$r = 0.84^{***}$	$Z = 4.01$	-
Narcissism	42	$r = 0.26^{***}$	0.17, 0.34	-
	59	$r = 0.41^{***}$	0.19, 0.59	-
Depression or depressive symptoms	30(m)	OR=2.83 nr	2.45, 3.27	60.2%*
	30(f)	OR=2.44 nr	2.13, 2.81	67.7%*
	37	$r = 0.19^{***}$	-	-
	39(h)	$r = 0.24^*$	0.05, 0.42	-
	39(l)	$r = 0.21^{***}$	0.16, 0.27	-

Risk Factors for Perpetration	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity I^2
	42	$r = 0.22^{***}$	0.18, 0.26	-
	56(b)	$r = 0.25^{**}$	0.10, 0.35	-
	56(w)	$r = 0.18^{***}$	0.08, 0.29	-
	59	$r = 0.23^{***}$	0.14, 0.31	-
PTSD	30m	OR 1.81 nr	1.02, 3.22	29.8%
	37	$r = 0.23^{***}$	-	-
	39(h)	$r = 0.29^{**}$	0.11, 0.45	-
	39(l)	$r = 0.26^{***}$	0.20, 0.33	-
	42	$r = 0.21^{***}$	0.18, 0.24	-
	59	$r = 0.25^{***}$	0.20, 0.30	-
Trauma	39(h)	$r = 0.30^{***}$	0.20, 0.40	-
	39(l)	$r = 0.06$	-0.05, 0.17	-
	42	$r = 0.18^{***}$	0.10, 0.25	-
	59	$r = 0.12^{***}$	0.06, 0.18	-
Anxiety	30(m)	OR =3.18 ns	2.28, 4.44	78.4% ^{***}
	30(f)	OR =2.38 ns	1.92, 2.96	57.1%
	42	$r = 0.16^{***}$	0.12, 0.21	-
	59	$r = 0.22^{**}$	0.06, 0.37	-
Panic disorder	30(m)	OR =2.47 nr	1.71, 3.55	39.3%
	30(f)	OR =1.88 nr	1.43, 2.46	70.5%
Social phobia	30(m)	OR =2.79 nr	2.41, 3.22	90.3% ^{***}
	30(f)	OR =2.33 nr	2.05, 2.65	90.5% ^{***}
Threatens to harm self	42	$r = 0.10^{**}$	0.04, 0.16	-
Stress	37	$r = 0.16^{***}$	-	-
	42	$r = 0.16^{***}$	0.10, 0.21	-
	55	$r = 0.16^{***}$	0.13, 0.20	-

Risk Factors for Perpetration	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity <i>I</i> ²
Financial stress	42	<i>r</i> =0.11**	0.03, 0.18	-
Work stress	55	<i>r</i> =0.10*	0.01, 0.19	-
Psychological functioning				
Anger	39(h)	<i>r</i> =0.23***	0.11, 0.34	-
	39(l)	<i>r</i> =0.34***	0.29, 0.39	-
	42	<i>r</i> =0.32***	0.28, 0.36	-
	59	<i>r</i> =0.27***	0.23, 0.31	-
External locus of control	42	<i>r</i> =0.26*	0.04, 0.45	-
Internal locus of control	42	<i>r</i> =-0.25***	-0.35, -0.14	-
Impulsivity	42	<i>r</i> =0.21***	0.16, 0.27	-
Self-esteem (higher)	39(h)	<i>r</i> =-0.11	-0.28, 0.06	-
	39(l)	<i>r</i> =-0.11*	-0.21, -0.00	-
	42	<i>r</i> =-0.14***	-0.15, -0.12	-
Empathy	42	<i>r</i> =-0.14*	-0.26, -0.02	-
Anxious attachment	42	<i>r</i> =0.16***	0.12,0.21	-
Avoidant attachment	42	<i>r</i> =0.13***	0.07, 0.19	-
Disorganized attachment	42	<i>r</i> =0.11**	0.04, 0.18	-
Secure attachment	42	<i>r</i> =-0.11**	-0.19, -0.04	-
Coping skills	42	<i>r</i> =-0.20***	-0.25, -0.15	-
Drug/ alcohol/ substances misuse				
Drug misuse	26	<i>r</i> =0.26***	0.21, 0.30	-
	39(h)	<i>r</i> =0.32***	0.20, 0.42	-
	39(l)	<i>r</i> =0.24***	0.20, 0.27	-
	42	<i>r</i> =0.25***	0.21, 0.28	-
	53	<i>r</i> =0.23***	0.20, 0.26	89.9%ns
	54	<i>r</i> =0.27***	0.15, 0.39	-

Risk Factors for Perpetration	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity <i>I</i> ²
	57	<i>r</i> =0.28****	0.12, 0.43	-
Alcohol misuse	26	<i>r</i> =0.24****	0.19, 0.28	-
	37	<i>r</i> =0.19**	-	-
	39(h)	<i>r</i> =0.24****	0.19, 0.28	-
	39(l)	<i>r</i> =0.22****	0.20, 0.24	-
	42	<i>r</i> =0.21****	0.20, 0.23	-
	44	OR =2.41**	1.26, 4.63	81.0%***
	53	<i>r</i> =0.20****	0.19, 0.22	91.6%ns
	56(b)	<i>r</i> =0.23****	0.10, 0.35	-
	56(w)	<i>r</i> =0.22****	0.17, 0.27	-
	57	<i>r</i> =0.27****	0.23, 0.30	-
Substance misuse (drugs and alcohol misuse)	39(h)	<i>r</i> =0.25****	0.14,0.35	-
	39(l)	<i>r</i> =0.22****	0.15, 0.29	-
	42	<i>r</i> =0.22****	0.20, 0.23	-
	53	<i>r</i> =0.22****	0.20, 0.24	96.0%
Violence and crime				
Violent toward nonfamily members	39(h)	<i>r</i> =0.20****	0.09, 0.30	-
	39(l)	<i>r</i> =0.33****	0.26, 0.39	-
	42	<i>r</i> =0.28****	0.22, 0.33	-
Physically abusing own children	42	<i>r</i> =0.17****	0.14, 0.19	-
Prior arrest	39(h)	<i>r</i> =0.25*	0.05, 0.43	-
	39(l)	<i>r</i> =0.27****	0.18, 0.35	-
	42	<i>r</i> =0.26****	0.17, 0.34	-
Combat exposure	42	<i>r</i> =0.09*	0.01, 0.16	-
Access to weapons	42	<i>r</i> =0.24**	0.09, 0.38	-

Risk Factors for Perpetration	Review ID	Mean r / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity I^2
Attitudes				
Approval of violence	39(h)	$r = 0.26^{**}$	0.10, 0.40	-
	39(l)	$r = 0.33^{***}$	0.23, 0.43	-
	42	$r = 0.03^{***}$	0.17, 0.34	-
Traditional gender roles	42	$r = 0.20^{***}$	0.11, 0.28	-
Family of origin risk factors				
Abused as a child	26	$r = 0.23^{***}$	0.19, 0.26	-
	37	$r = 0.21^{***}$	-	-
	39(h)	$r = 0.23$	-0.57, 0.81	-
	39(l)	$r = 0.31^*$	0.02, 0.56	-
	42	$r = 0.22^{***}$	0.19, 0.25	-
	50	$r = 0.22^{***}$	0.19, 0.25	-
	54	$r = 0.20^*$	0.08, 0.32	-
	57	$r = 0.36^{***}$	0.25, 0.46	-
Witness parental IPV	26	$r = 0.27^{***}$	0.17, 0.37	-
	39(h)	$r = 0.22$	-0.42, 0.71	-
	39(l)	$r = 0.30^*$	0.01, 0.54	-
	42	$r = 0.22^{***}$	0.19, 0.25	-
	50	$r = 0.24^{***}$	0.20, 0.27	-
	57	$r = 0.37^{***}$	0.26, 0.47	-
Relationship risk factors				
Relationship status				
Length of relationship	37	$r = -0.11^{***}$	-	-
	39(h)	$r = 0.01$	-0.17, 0.19	-

Risk Factors for Perpetration	Review ID	Mean r / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity I^2
	39(l)	$r = -0.15^{***}$	-0.20, -0.09	-
	42	$r = -0.11^{***}$	-0.16, -0.07	-
Length of time living together	42	$r = -0.16^{***}$	-0.21, -0.11	-
Relationship dynamics				
Verbal arguments	42	$r = 0.43^{***}$	0.29, 0.55	-
Demand-withdraw relationship patterns	42	$r = 0.37^{***}$	0.26, 0.47	-
Perpetrator's controlling behavior	26	$r = 0.37^{***}$	0.28, 0.44	-
	39(h)	$r = 0.28^{***}$	0.13, 0.42	-
	39(l)	$r = 0.37^{***}$	0.28, 0.45	-
	41(f)	$r = 0.31$	0.19, 0.43	-
	42	$r = 0.30^{***}$	0.24, 0.36	-
	57	$r = 0.30^{***}$	0.22, 0.39	-
Perpetrator's infidelity	42	$r = 0.22^{***}$	0.14, 0.29	-
Perpetrator's power in the relationship	24(c)	$r = 0.29^{***}$	0.15, 0.42	-
	24(n)	$r = 0.11^*$	0.03, 0.20	-
	41(f)	$r = 0.25^*$	0.00, 0.46	-
	41(m)	$r = 0.09$	-0.15, 0.33	-
	42	$r = 0.18^{***}$	0.10, 0.25	-
Relationship satisfaction	26	$r = -0.22^{***}$	-0.31, -0.12	-
	37	$r = -0.24^{***}$	-	-
	39(h)	$r = -0.12^{***}$	-0.19, -0.05	-
	39(l)	$r = -0.26^{***}$	-0.29, -0.24	-
	42	$r = -0.25^{***}$	-0.27, -0.22	-
Jealousy	39(h)	$r = 0.16^{**}$	0.07, 0.26	-
	39(l)	$r = 0.27^{***}$	0.18, 0.35	-

Risk Factors for Perpetration	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity I^2
	42	$r = 0.24^{***}$	0.17, 0.31	-
Conflict resolution skills	42	$r = -0.17^{***}$	-0.23, -0.12	-
Communication skills	42	$r = -0.24^{***}$	-0.33, -0.16	-
Relational distress	55	$r = 0.29^{***}$	0.22, 0.35	-
Violence in relationship				
Caused previous injury	39(h)	$r = 0.69^{***}$	0.46, 0.83	-
	39(l)	$r = 0.56^{***}$	0.43, 0.67	-
	42	$r = 0.58^{***}$	0.50, 0.65	-
Emotional/ psychological IPV perpetration	26	$r = 0.52^{***}$	0.40, 0.61	-
	37	$r = 0.53^{***}$	-	-
	39(h)	$r = 0.43^{***}$	0.34, 0.51	-
	39(l)	$r = 0.53^{***}$	0.05, 0.56	-
	42	$r = 0.53^{***}$	0.50, 0.56	-
	56(b)	$r = 0.72^{***}$	0.62, 0.79	-
	56(w)	$r = 0.53^{***}$	0.43, 0.61	-
	57	$r = 0.57^{***}$	0.44, 0.67	-
Previous physical IPV perpetration	39(h)	$r = 0.55^{***}$	0.34, 0.72	-
	39(l)	$r = 0.64^{***}$	0.53, 0.73	-
	42	$r = 0.42^{***}$	0.34, 0.49	-
Physical IPV victimization	42	$r = 0.52^{***}$	0.46, 0.59	-
Threatens to harm partner	42	$r = 0.49^{***}$	0.33, 0.61	-
Stalking perpetration	24(c)	$r = 0.45^{***}$	0.33, 0.56	-
	24(n)	$r = 0.46^{***}$	0.32, 0.57	-
	42	$r = 0.47^{***}$	0.37, 0.57	-
	56 (b)	$r = 0.49^{***}$	0.43, 0.55	-

Risk Factors for Perpetration	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval / Z score	Heterogeneity I ²
Emotional IPV victimization	39(h)	<i>r</i> =0.50***	0.44, 0.55	-
	39(l)	<i>r</i> =0.44***	0.39, 0.48	-
	42	<i>r</i> =0.44***	0.36,0.51	-
Sexual IPV perpetration	39(h)	<i>r</i> =0.45*	0.13, 0.69	-
	39(l)	<i>r</i> =0.40***	0.30, 0.49	-
	42	<i>r</i> =0.40***	0.28, 0.51	-
	56(b)	<i>r</i> =0.38***	0.25, 0.50	-
	56(w)	<i>r</i> =0.23***	0.15, 0.31	-
	57	<i>r</i> =0.40**	0.11, 0.63	-
Sexual IPV victimization	42	<i>r</i> =0.44*	0.01, 0.73	-
Social risk factors				
Social support	37	<i>r</i> =-0.06**	Not reported	-
	42	<i>r</i> =-0.07***	-0.10, -0.03	-

Note: **p*<0.05, ***p*<0.01, ****p*<0.001, b= black sample, c= clinical sample; h=high income inequality countries; f=female sample; l= low income countries income; nr=test of significance not reported; s=secondary sources (law enforcement or physician data); m=male sample; n=non-clinical sample; PTSD= post traumatic stress disorder; w=white sample.

As shown in Table 2, although 119 (79%) of the 151 coefficients were statistically significant, only 50 (42%) were of moderate or strong predictive power (mean *r* from 0.30 to 0.49 was considered moderate; a mean *r* exceeding 0.49 was considered strong; Cohen, 1988). Twenty-nine of 30 coefficients relating to previous violence in relationships were moderate or strong predictors of IPV perpetration. Five of six coefficients relating to perpetrators' controlling behaviour had moderate predictive power. Only one meta-analysis provided coefficients for relationships characterised by verbal arguments or demand-withdraw dynamics, and these factors were also found to have moderate predictive power.

Risk Factors Relating to IPV Victims

Less research has focused on risk factors for IPV relating to victims; SRs in this overview identified 61 unique risk factors. Regarding the spread of risk factors among categories, the same pattern found in relation to perpetrators emerged. Slightly more than half of all risk factors (32) involved individual characteristics and focused on mental health conditions (13) and psychological functioning (nine), followed by relationship features (16), particularly relationship dynamics and relational violent behaviours (seven each).

In terms of risk factors most frequently investigated in relation to IPV victims, victims' employment status and experience of depression were most common, investigated in five SRs. Also, four SRs examined victims' education, income, physical health problems, PTSD, drug and alcohol misuse, being abused as a child, witnessing parental IPV, and length of relationships. Table 3 summarises these SRs' meta-analysis results in relations to IPV victims' risk factors.

Table 3 Risk factors for IPV victimization: summary of findings

Risk Factors of Perpetrator	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval	Heterogeneity, I^2
Demographic risk factors				
Victims' age (older)	41(f)	$r=-0.04^{***}$	-0.05, -0.03	-
	41(m)	$r=-0.14^{***}$	-0.17, -0.11	-
	54	$r=0.03$	-0.10, 0.16	-
	57	$r=-0.00$	-0.00, 0.00	-
Education (higher)	41(f)	$r=-0.09^{***}$	-0.12, -0.06	-
	41(m)	$r=-0.06$	-0.13, 0.01	-
	44	OR=1.43	0.89, 2.31	61%
	54	$r=-0.54^*$	-0.70, -0.10	-
	57	$r=0.02$	-0.03, 0.07	-
Income (higher)	41(m)	$r=-0.13$	-0.30, 0.05	-
	54	$r=-0.29^{***}$	-0.40, -0.16	-
	55	$r=-0.06^{***}$	-0.04, -0.08	-
	57	$r=0.03$	-0.03, 0.08	-
	41(f)	$r=-0.02$	-0.05, 0.15	-

Risk Factors of Perpetrator	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval	Heterogeneity, I^2
Employment status (employed is greater than unemployed)	41(m)	$r=-0.02$	-0.10, 0.06	-
	44	OR=0.67	0.41, 1.11	56%
	54	$r=-0.36$	-0.70, 0.12	-
	55	$r=-0.05^{**}$	-0.02, -0.08	-
	57	$r=0.02$	-0.03, 0.06	-
Marital status (married or divorced/ single)	41(f)	$r=-0.10^*$	-0.19, -0.02	-
	41(m)	$r=-0.02$	-0.15, 0.10	-
	44	OR=0.94	0.44, 2.02	82% ^{**}
	57	$r=-0.14$	-0.32, 0.05	-
Number of children	41(f)	$r=0.07$	0.02, 0.12	-
	57	$r=0.04^*$	0.02, 0.07	-
Pregnancy	54	$r=0.07$	-0.30, 0.43	-
Religiosity	41(f)	$r=-0.05$	-0.11, 0.01	-
	57	$r=-0.09$	-0.23, 0.05	-
Rural Residence	57	$r=0.08^{***}$	0.04, 0.11	-
Individual risk factors				
Physical health				
Physical health problems	41(f)	$r=0.06$	-0.01, 0.12	-
	54	$r=0.31^*$	0.07, 0.52	-
	55	$r=0.11^{***}$	0.05, 0.16	-
	59	$r=0.15^{***}$	0.10, 0.21	-
Sexually transmitted infection	59	$r=-0.04$	-0.52, 0.46	-
Somatic symptoms	59	0.10^*	0.02, 0.18	-
Physical pain	59	0.23^*	0.02, 0.42	-
Mental health				
Mental health problems	41(f)	$r=0.14^*$	0.03, 0.25	-
	41(m)	$r=0.11$	-0.07, 0.28	-
	54	$r=0.40^*$	0.16, 0.59	-
Mental health/ psychological distress	55	$r=0.22^{***}$	0.17, 0.26	-
	59	$r=0.26^{***}$	0.23, 0.29	-
Emotional dysregulation	59	$r=0.13$	-0.10, 0.34	-
Borderline personality disorder	41(f)	$r=0.20^{***}$	0.11, 0.29	-
	41(m)	$r=0.27^{***}$	0.18, 0.36	-
	59	$r=0.28^{***}$	0.15, 0.40	-
Antisocial personality disorder	41(f)	$r=0.23^{***}$	0.13, 0.32	-
	41(m)	$r=0.22^{***}$	0.13, 0.31	-
	59	$r=0.13^*$	0.03, 0.23	-
Psychopathy	59	$r=0.07$	-0.04, 0.13	-

Risk Factors of Perpetrator	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval	Heterogeneity, I^2
Anxiety symptoms	41(m)	$r=0.16^{***}$	0.07, 0.25	-
	59	$r=0.30^{***}$	0.22, 0.37	-
Depression or depressive symptoms	41(f)	$r=0.29^{***}$	0.24, 0.32	-
	41(m)	$r=0.18^{***}$	0.11, 0.25	-
	54	$r=0.51^{***}$	0.38, 0.63	-
	57	$r=0.26^{***}$	0.14, 0.36	-
	59	$r=0.28^{***}$	0.24, 0.32	-
PTSD	41(f)	$r=0.34^{***}$	0.28, 0.40	-
	41(m)	$r=0.29^{**}$	0.10, 0.45	-
	56(b)	$r=0.49^{***}$	0.44, 0.54	-
	56(w)	$r=0.20^{***}$	0.15, 0.26	-
	57	$r=0.45^{***}$	0.23, 0.62	-
	59	$r=0.32^{***}$	0.28, 0.37	-
Trauma	41(f)	$r=0.04$	-0.20, 0.27	-
	59	$r=0.19^{***}$	0.12, 0.25	-
Threatens to harm self	41(f)	$r=0.39^{***}$	0.32, 0.46	-
	59	$r=0.36^{***}$	0.23, 0.48	-
Stress	41(f)	$r=0.16^{***}$	0.10, 0.21	-
	41(m)	$r=0.24^{***}$	0.11, 0.37	-
	55	$r=0.15^{***}$	0.10, 0.19	-
Financial stress	41(f)	$r=0.15^*$	0.00, 0.28	-
Psychological functioning				
Anger	41(f)	$r=0.21^{***}$	0.13, 0.28	-
	41(m)	$r=0.22^{**}$	0.08, 0.35	-
	59	$r=0.18^{***}$	0.09, 0.26	-
Fear	41(f)	$r=0.29^{***}$	0.19, 0.39	-
Impulsivity	41(f)	$r=0.07^{**}$	0.02, 0.13	-
	41(m)	$r=0.13^{***}$	0.08, 0.18	-
Self-esteem (higher)	41(f)	$r=-0.05$	-0.18, 0.08	-
Anxious attachment	41(f)	$r=0.20^{***}$	0.08, 0.32	-
Avoidant attachment	41(f)	$r=0.14$	-0.01, 0.29	-
Secure attachment	41(f)	$r=0.16$	-0.01, 0.31	-
Blames self	41(f)	$r=0.06$	-0.06, 0.17	-
Shame	59	$r=0.16^*$	0.03, 0.29	-
Drug/ alcohol/ substances misuse				
Drug misuse	41(f)	$r=0.25^{***}$	0.21, 0.28	-
	41(m)	$r=0.21^{***}$	0.15, 0.26	-
	53	$r=0.23^{***}$	0.20, 0.25	87.34ns
	56(b)	$r=0.27^{***}$	0.18, 0.37	-
	56(w)	$r=0.16^{***}$	0.09, 0.24	-
	57	$r=0.22^{**}$	0.09, 0.34	-

Risk Factors of Perpetrator	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval	Heterogeneity, I^2
Alcohol misuse	41(f)	$r=0.19^{***}$	0.17, 0.21	-
	41(m)	$r=0.14^{***}$	0.11, 0.18	-
	53	$r=0.18^{***}$	0.15, 0.19	88.81ns
	56(b)	$r=0.27^{***}$	0.19, 0.34	-
	56(w)	$r=0.15^{***}$	0.09, 0.21	-
	57	$r=0.21^{***}$	0.16, 0.26	-
Substance misuse (drugs and alcohol misuse)	41(f)	$r=0.22^{***}$	0.17, 0.26	-
	53	$r=0.20^{***}$	0.18, 0.22	93.87ns
	56(b)	$r=0.21^{***}$	0.12, 0.30	-
Violence and crime				
Prior arrest	41(f)	$r=0.07$	-0.03, 0.16	
Attitudes				
Approval of violence	41(f)	$r=0.17^{***}$	0.05, 0.15	-
	57	$r=0.08$	-0.00, 0.17	-
Traditional gender roles	41(f)	$r=0.08^{***}$	0.05, 0.11	-
Family of origin risk factors				
Abused as a child	41(f)	$r=0.23^{***}$	0.21, 0.25	-
	41(m)	$r=0.15^{***}$	0.11, 0.19	-
	50(f)	$r=0.23^{***}$	0.21, 0.25	
	50(m)	$r=0.14^{***}$	0.10, 0.18	
	56(b)	$r=0.27^{***}$	0.15, 0.28	-
	56(w)	$r=0.26^{***}$	0.19, 0.33	-
	57	$r=0.26^{***}$	0.12, 0.40	-
Witness parental IPV	41(f)	$r=0.20^{***}$	0.17, 0.23	-
	41(m)	$r=0.17^{***}$	0.11, 0.24	-
	50(f)	$r=0.21^{***}$	0.18, 0.24	
	50(m)	$r=0.21^{***}$	0.13, 0.28	
	57	$r=0.22^{***}$	0.10, 0.34	-
Relationship risk factors				
Relationship status				
Length of relationship	41(f)	$r=-0.04$	-0.09, 0.02	-
	41(m)	$r=-0.00$	-0.13, 0.12	-
	54	$r=-0.01$	-0.11, 0.09	-
	57	$r=0.05$	-0.04, 0.14	-
Separation	41(f)	$r=0.21^*$	0.03, 0.38	-
Relationship dynamics				
Demand-withdraw relationship patterns	41(f)	$r=0.32^{***}$	0.21, 0.41	-
Accused of infidelity	41(m)	$r=0.14^*$	0.03, 0.25	-

Risk Factors of Perpetrator	Review ID	Mean <i>r</i> / pooled Odds Ratio	Confidence Interval	Heterogeneity, I^2
Relationship dissatisfaction	41(f)	$r=0.27^{***}$	-0.31, -0.26	-
	41(m)	$r=0.23^{***}$	-0.29, -0.16	-
Conflict resolution skills	41(f)	$r=-0.07$	-0.23, 0.10	-
Communication skills	41(f)	$r=-0.17^*$	-0.47, -0.17	-
Jealousy	41(f)	$r=0.23^*$	0.04, 0.40	-
Relational distress	55	$r=0.31^{***}$	0.24, 0.37	-
Violence in relationship				
Previous injury	41(f)	$r=0.54^{***}$	0.39, 0.66	-
	41(m)	$r=0.64^{***}$	0.39, 0.80	-
Emotional IPV perpetration	41(f)	$r=0.41^{***}$	0.37, 0.45	-
	41(m)	$r=0.42^{***}$	0.37, 0.46	-
Previous physical IPV perpetration	41(f)	$r=0.56^{***}$	0.47, 0.64	-
	41(m)	$r=0.49^{***}$	0.36, 0.59	-
History of spouse abuse	41(f)	$r=0.27^{**}$	0.09, 0.44	-
	41(m)	$r=0.49^{***}$	0.22, 0.67	-
	44	OR=6.67** *	2.34, 19.02	91%***
Stalking victimization	41(f)	$r=0.40^{***}$	0.31, 0.48	-
Emotional IPV victimization	41(f)	$r=0.51^{***}$	0.46, 0.55	-
	41(m)	$r=0.53^{***}$	0.40, 0.65	-
	54	$r=0.61^{***}$	0.44, 0.73	-
	56(b)	$r=0.54^{***}$	0.50, 0.58	-
	56(w)	$r=0.54^{***}$	0.53, 0.55	-
Sexual IPV victimization	41(f)	$r=0.44^{***}$	0.38, 0.48	-
	41(m)	$r=0.22$	-0.01, 0.42	-
Social risk factors				
Social support	41(f)	$r=-0.03$	-0.09, 0.02	-
	41(m)	$r=-0.08$	-0.20, 0.04	-
	56(b)	$r=-0.19^*$	-0.01, -0.36	-
Living in a patriarchal household	54	$r=0.23^*$	0.01, 0.42	-

Note: * $p<0.05$, ** $p<0.01$, *** $p<0.001$; b= black sample, f = female sample, m = male sample, PTSD = post traumatic stress disorder; w= white sample

As shown in Table 3, although 106 (72%) of the 147 coefficients were statistically significant, only 26 (18%) were of moderate or strong predictive power. Of the 26 coefficients that were both statistically significant and of moderate or strong predictive

power, most were arguably symptoms of victimisation: 15 were in the relationship violence grouping of risk factors, four related to PTSD, one related to relational distress, and one related to demand–withdraw relationships. The only coefficients that were less clearly symptomatic of being a victim were threats to self-harm (two coefficients), depression (one coefficient), mental health (one coefficient), and higher education (one coefficient).

Discussion

This is the first overview we know of that summarises SRs of IPV risk factors. It is timely given the volume of material retrieved.

Limitations of This Overview

Thirteen of the 17 meta-analytic reviews of IPV risk factors included in this overview were produced by researchers at one university, being published across eight journals. Only four of these contained a full list of included primary studies. Hence, it is not possible to determine how often particular primary study findings were used in separate SRs.

Overlapping SRs are problematic because they create a picture of uniform findings across the evidence base when the SRs might be replications, largely built on the same primary study data. If the same literature search was used for multiple SRs of IPV risk factors, albeit with nuances in focus, the benefits of synthesising SRs is reduced. Acknowledging the level of shared authorship and lack of transparency relating to primary studies overlaps in many SRs reported here, we are forced to point out that any uniformity in the SR findings we have brought together is of little consequence.

This overview was confined to risk factors regarding IPV perpetration or victimisation. We did not include an overview of SRs relating to protective factors for victims or linked to the cessation of IPV perpetration. These related areas of interest have attracted much less research (Gerino et al., 2018 and McGinn et al., 2021 offer summaries). We excluded non-English SRs; thus, we do not know if we missed relevant material. Finally,

in relation to potential limitations, this overview focused on adult noncasual heterosexual relationships only.

Strengths of This Overview

This overview of systematic reviews was pioneering in piloting a way of applying Cochrane Collaboration methodology for overviews of reviews (developed for studies of the effectiveness of interventions) to studies of risk factors. This presented challenges in the search methodology and required some adaptation of the AMSTAR quality appraisal criteria.

In addition to providing an easily accessible summary of findings from this body of research, we perceive two particular strengths. The taxonomy of risk factor groupings offered in this overview brings a level of clarity to this wide-ranging field of enquiry on different types of risk factors considered to date. This overview also facilitates a critical appraisal of the usefulness of this type of research in the quest to address and prevent IPV most effectively, which is more difficult without this bird's-eye view.

Implications for Practice

Considering the amount of work gathering and synthesising these data and now, in this paper, summarising the fruits of that work, the potential usefulness of this research is a disappointment.

Some findings were reasonably consistent across SRs, but they are of little use to practitioners. For example, findings confirmed the common understanding that alcohol and drug misuse are strongly correlated with IPV perpetration. This was found to be a heavily researched topic. Twenty-one coefficients summarised in this overview reflected the most consistent finding: Alcohol and drugs misuse is a statistically significant but weak predictor of IPV perpetration. When considering that alcohol and drugs misuse are likely to be symptomatic of IPV perpetration and victimisation, it is difficult to see what direction for preventive practice lies in that finding.

Treatment programmes for perpetrators have been built around various understandings of IPV causation: inappropriate belief systems, inappropriate thought processing and mental health conditions, and particular relationship dynamics, to name a few. But programme designers will find little support for an emphasis on any one factor summarised in Table 2. Arguably, the current summary lends support to interventions that are bespoke to individual perpetrators (McGinn et al., 2021; McGinn, Taylor, McColgan, & Lagdon, 2016). Without targetable risk factors that have strong predictive power for further violence and are common to a large proportion of the IPV population, it is more prudent to consider each case as it comes. In this way, perpetrators who have bipolar personality disorder, which had at least moderate predictive value in some SRs (see Table 2), might be more likely to receive appropriate interventions.

For those working on preventing victimisation, this overview provides some evidence of a cultural dimension to the risk of experiencing IPV. Four of the five meta-analyses on education status provided weak evidence. One provided a strong, statistically significant finding. Notably, this SR examined 14 Iranian studies (Nikparvar et al., 2021), underlining the importance of the intersection of IPV, culture, and education. This SR also found that income had a moderate inverse correlation with IPV, in contrast to the three other SRs that analysed income.

Considering the victimisation findings without the Iranian SR, the dataset is characterised by findings of weak predictive power. Factors found to have moderate predictive power (mean $r > 0.3$) provide scant direction for policymakers because they are generally accepted as symptomatic of being an IPV victim: anxiety, PTSD, threats to self-harm, demand–withdraw relationship, relational distress, and as expected, most factors filed under “relationship violence” (see Table 3). Evidence supports common understandings of problematic relationship dynamics: jealousy and accusations of infidelity, relationship

dissatisfaction, poor conflict resolution skills, and poor communication skills. But it should be noted that in statistical terms, these were only weakly associated with IPV victimisation. Other factors associated with being victimised, such as witnessing parental violence, alcohol and drug abuse, not having a job, and having little or no education, were supported. But these also had weak predictive power. Considering factors with strong predictive value, being a victim of IPV often means being a victim of a perpetrator's emotional abuse and a high likelihood of having been injured by a partner. These are clear findings but clearly, these are also types of abuse. There is little direction here for practitioners working with victims.

Research “Because We Can” Versus Research That Advances Knowledge

Readers based in academic institutions are aware of the importance of publishing research papers. The pressure to publish can interfere with some agreed fundamentals of social science research, fundamentals underscored in the universally accepted format of our study reports. After we offer the background and context of our research, we state the rationale for our study. We are forced to consider how our study advances the extant evidence base. In relation to IPV, we posit that study rationales are necessarily related to informing policymakers, practitioners, and future researchers about how we can support and protect victims and change perpetrators. The rationales provided for most SRs included in this overview were not focused in this way.

Although this might appear uncharacteristically harsh in an academic context, in a practice context it is appropriate. How might we convince an IPV victim that time has been well spent conducting a systematic, meta-analytic comparison of the strength of associations of risk markers between clinical and nonclinical samples? What is the utility in a paper solely purposed to point out differences in the strength of risk factors for IPV perpetration and victimisation? What aspect of practice or policy will this actually inform? SRs included here also described small differences in the strength of risk factors when comparing low-income

and high-income populations, male and female victims, and civilian or military populations.

It is difficult to see the empirical value of these nuances. We can see no way of using this knowledge in practice or policy development.

The proliferation of analyses and reanalysis of risk factors is surprising given the lack of progress regarding fundamental questions in this field, such as: How can IPV perpetrator behaviour be changed? What can protect victims, including children forced to live with IPV? One way to refocus the efforts of researchers in this field might be to emphasise the importance of coproduction. Coproducing research with practitioners, victims, and perpetrators may ensure relevance in the real world including answering these fundamental questions. Table 4 summarises the key points in terms of practice, policy, and research discussed above.

Table 4 Implications for practice, policy, and research from the body of research on risk factors for violence in heterosexual relationships

Key points to consider in terms of practice, policy, and research	
key message to policy makers	The potential usefulness of the type of research included in this overview in the quest to end IPV is very limited.
key message to practitioners	There is little direction in this body of research for practitioners working with perpetrators and victims. It is more prudent to consider each case as it comes.
key message to researchers	Studies that rigorously evaluate the effectiveness of work with victims and perpetrators, as well as coproducing research with practitioners, victims, and perpetrators should be prioritised.

Conclusions

For a time, in the 1980s, things appeared straightforward in this field: *'men batter women because they are socialised to do so by patriarchal societies, and they can be changed using educative groupwork'*. When such programmes were evaluated properly, they were found to have little or no success in changing violent men, and it became more evident that some women also perpetrate IPV. The findings summarised here highlight the wide range of factors, including perpetrators' attitudes, social factors, and psychological functioning which may be risk factors for perpetration and victimisation. A key message is the seeming randomness of this type of violence, with identified risk factors generally having limited predictive power. No evidence here suggests that any subset of a population will not experience or perpetrate IPV to some degree. Policymakers, practitioners, and researchers may need to accept such limitations in identifying useful, proven risk factors for inclusion in IPV screening tools. Studies that rigorously evaluate the effectiveness of work with victims and perpetrators should be prioritised over this type of research.

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Appendix A Full search strategy used for Scopus

(((TITLE-ABS-KEY ("who batter*" OR batterer*)) OR TITLE-ABS-KEY (((marri* OR marital OR couple* OR relational OR relationship OR wives OR wife* OR husband* OR spous*) PRE/3 (violen* OR abus* OR homicide OR maltreatment OR aggress* OR conflict OR assault* OR hostile* OR fight* OR haras* OR stalk*))) OR TITLE-ABS-KEY ((partner PRE/3 (violen* OR abus* OR homicide OR maltreatment OR aggress* OR conflict OR assault* OR hostile* OR fight* OR haras* OR stalk*))) OR TITLE-ABS-KEY ((domestic PRE/3 (violence OR abus* OR homicide OR maltreatment OR aggress* OR assault* OR hostile* OR fight* OR haras* OR stalk*))) OR TITLE-ABS-KEY (ipv) AND NOT TITLE-ABS-KEY ("polio vaccin*" OR "inpatient variability") AND NOT TITLE-ABS-KEY (dating OR college OR campus OR famil* OR neglect OR undergrad* OR "same sex" OR "same gender" OR transgender OR queer OR survivors OR "child bride" OR "child marriage")))

AND

((TITLE-ABS-KEY ("predisposing factor*") OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 factor*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 harm) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 correlat*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 associat*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 behav*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 violen*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 abus*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 motivat*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 aggress*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 classific*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 categor*) OR TITLE-ABS-KEY ((risk OR predict*) PRE/5 analysis) OR TITLE-ABS-KEY (predict* PRE/5 model*) OR TITLE-ABS-KEY (predict* PRE/5 risk) OR TITLE-ABS-KEY (predict* PRE/5 conflict) OR TITLE (likelihood OR actuarial) OR ABS (likelihood OR actuarial) OR TITLE-ABS-KEY ("risk marker*")))

AND

((TITLE (review OR meta-analy* OR synthesis OR systematic OR theor* OR narrative OR "evidence-base*") OR ABS (review OR meta-analy* OR synthesis OR systematic OR theor* OR narrative) OR TITLE-ABS-KEY (state PRE/2 knowledge) OR TITLE-ABS-KEY (state PRE/2 knowledge)))

AND NOT

((TITLE-ABS-KEY (child* OR youth OR perinatal OR teen* OR student* OR adolescent* OR "young people" OR "sex work*") OR TITLE-ABS-KEY (protocol OR "screening tool*" OR "screening instrument*" OR disease OR cancer OR survey OR cohort OR animal)))

AND (EXCLUDE (DOCTYPE, "ch") OR EXCLUDE (DOCTYPE, "bk") OR EXCLUDE (DOCTYPE, "cp") OR EXCLUDE (DOCTYPE, "no") OR EXCLUDE (DOCTYPE, "sh") OR EXCLUDE (DOCTYPE, "ed") OR EXCLUDE (DOCTYPE, "er") OR EXCLUDE (DOCTYPE, "Undefined")) AND (LIMIT-TO (PUBYEAR,

2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR
LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR
LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR
LIMIT-TO (PUBYEAR , 2012) OR
LIMIT-TO (PUBYEAR , 2011))

Appendix B Full search strategy used Medline via EBSCO

S2 9	S25 NOT S28 Limiters - Date of Publication: 20110101-20211231	(365)
S2 8	S26 OR S27	(7,324,407)
S2 7	TI protocol	(74,333)
S2 6	TI "child marriage" OR "child bride" OR survivors OR "same sex" OR "same gender" OR transgender OR teen* OR adolescent* OR college OR undergrad* OR dating OR child* OR youth OR perinatal OR family OR neglect	(7,263,202)
S2 5	S15 AND S23 AND S24	(2,048)
S2 4	TI (review or meta-analy* or synthesis OR systematic OR theor* OR narrative OR "evidence-base*" OR (state N2 knowledge)) OR AB (review or meta-analy* or synthesis OR systematic OR theor* OR narrative OR "evidence-base*" OR (state N2 knowledge))	(3,696,149)
S2 3	S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22	(2,061,585)
S2 2	TI actuarial OR AB actuarial	(19,619)
S2 1	TI likelihood OR AB likelihood	(159,911)
S2 0	TI (risk* N6 (factor* OR harm* OR correlate* OR associat* OR behav* OR violen* OR abus* OR motivat* OR aggress* OR classfi* OR categor* OR analysis)) OR AB (risk* N6 (factor* OR harm* OR	(1,086,195)

	correlate* OR associat* OR behav* OR violen* OR abus* OR motivat* OR aggress* OR classfi* OR categor* OR analysis))	
S1 9	TI (predict* N6 (factor* OR correlate* OR associat* OR risk OR harm OR behav* OR aggress* OR violen* OR abus* OR conflict)) OR AB (predict* N6 (factor* OR correlate* OR associat* OR risk OR harm OR behav* OR aggress* OR violen* OR abus* OR model* OR conflict))	(459,080)
S1 8	TI "predisposing factor*" OR AB "predisposing factor*"	(18,425)
S1 7	TI "risk marker*" OR AB "risk marker*"	(6,578)
S1 6	(MH "Risk Factors")	(893,128)
S1 5	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S13 OR S14	(47,849)
S1 4	TI (“female-perpetrated” OR “male perpetrated”) N3 (violen* OR abus* OR homicide OR maltreat* OR aggress* OR conflict OR assault* OR hostile* OR fight* OR threat* OR haras* OR stalk*) OR AB (“female-perpetrated” OR “male perpetrated”) N3 (violen* OR abus* OR homicide OR maltreatment OR aggress* OR conflict OR assault* OR hostile* OR fight* OR threat* OR haras* OR stalk*)	(89)
S1 3	S11 NOT S12	(4,436)
S1 2	(MH "Poliovirus Vaccine, Inactivated")	(3,047)
S1 1	S10 NOT S2	(6,451)
S1 0	IPV	(10,137)
S9	TI ((marri* OR marital OR couple* OR relational OR relationship OR wives OR wife* OR husband*) N3 (violen* OR abus* OR homicide OR	(14,296)

	maltreatment OR aggress* OR conflict OR assault* OR hostile* OR fight* OR threat* OR harass* OR stalk*) OR AB ((marri* OR marital OR couple* OR relational OR relationship OR wives OR wife* OR husband*) N3 (violence* OR abus* OR homicide OR maltreatment OR aggress* OR conflict OR assault* OR hostile* OR fight* OR threat* OR harass* OR stalk*))	
S8	TI partner N3 (violence* OR abus* OR homicide OR maltreatment OR aggress* OR conflict OR assault* OR hostile* OR fight* OR threat* OR harass* OR stalk*) OR AB partner N3 (violence* OR abus* OR homicide OR maltreatment OR aggress* OR conflict OR assault* OR hostile* OR fight* OR threat* OR harass* OR stalk*)	(12,121)
S7	TI domestic N3 (violence OR abus* OR homicide OR maltreatment OR aggress* OR conflict OR assault* OR hostile* OR fight* OR threat* OR harass* OR stalk*) OR AB domestic N3 (violence OR abus* OR homicide OR maltreatment OR aggress* OR conflict OR assault* OR hostile* OR fight* OR threat* OR harass* OR stalk*)	(7,620)
S6	(MH "Battered Men")	(295)
S5	TI ("who batter*" OR batterer*) OR AB ("who batter*" OR batterer*)	(417)
S4	TI ("who batter*" OR batterer*) OR AB ("who batter*" OR batterer*)	(2,686)
S3	(MH "Spouse Abuse")	(7,493)
S2	(MH "Intimate Partner Violence")	(3,952)
S1	(MH "Domestic Violence") AND (marri* OR marital OR couple* OR relational OR relationship OR wife* OR wife* OR husband* OR spous*)	(2,575)

Appendix C Retrieved reviews excluded from the overview

No	Source	Author	Reason for exclusion
1	Database search	Alebel et al., 2018	Not focused on IPV (includes other types of family violence such as by uncle or stepfather)
2	Database search	Alhalal et al., 2021	Not a meta-analysis (narrative synthesis)
3	Database search	Ali et al., 2015	Not a meta-analysis (narrative synthesis)
4	Citation search	Bacchus et al., 2018	IPV examined as outcomes
5	Known items	Beyer et al., 2015	Not a meta-analysis (narrative synthesis)
6	Database search	Birkley and Eckhardt, 2015	Dating violence
7	Citation search	Birkley et al., 2016	Not focused on IPV (includes other types of relationship malfunctioning)
8	Citation search	Buitelaar et al., 2015	Not a meta-analysis (narrative synthesis)
9	Citation search	Buller et al., 2014	Same-sex relationships
10	Database search	Bundock et al., 2013	Dating violence
11	Citation search	Capaldi et al., 2012	Dating violence and adolescents' relationships
12	Database search	Clare et al., 2021	Not a meta-analysis (narrative synthesis)
13	Database search	Collison and Lynam, 2021	Adolescents' relationships
14	Known items	Costa et al., 2015	Not a meta-analysis (narrative synthesis)
15	Database search	Cummings et al., 2013	Not a meta-analysis (qualitative/thematic synthesis)
16	Database search	de Bruijn and de Graaf, 2016	Not a meta-analysis (narrative synthesis)
17	Citation search	Devries et al., 2013	Dating violence
18	Database search	Devries et al., 2014	Dating violence and adolescents' relationships
19	Database search	Dowling et al., 2016	Dating violence and adolescents' relationships
21	Database search	Gerino et al., 2018	Not a meta-analysis (qualitative/thematic synthesis)
22	Database search	Gilchrist et al., 2019	Not a meta-analysis (qualitative/thematic synthesis)
23	Citation search	Godbout et al., 2019	Same-sex relationships and dating violence
24	Database search	Harden et al., 2019	Not a meta-analysis (qualitative/thematic synthesis)

25	Database search	James et al., 2013	Adolescents' relationships
26	Database search	Kadir Shahar et al., 2020	Not a meta-analysis (narrative synthesis)
27	Database search	Kazzaz et al., 2019	Not a meta-analysis (narrative synthesis)
28	Key author's Google Scholar profile	Keilholtz, et al 2023	Same-sex relationships
29	Known items	Kimber et al., 2018	Risk factor not sufficiently distinctive
30	Known items	Kimmes et al., 2019	Same-sex relationships
31	Database search	Kuijpers et al., 2011	Not a meta-analysis (qualitative/thematic synthesis)
32	Database search	Lausi et al., 2021	Not a meta-analysis (qualitative/thematic synthesis)
33	Citation search	Lee et al, 2022	Not a meta-analysis (narrative synthesis)
34	Citation search	Li et al., 2014	IPV examined as outcome
35	Citation search	Li et al., 2019	Dating violence
36	Database search	Mackay et al., 2018	Not a meta-analysis (qualitative/thematic synthesis)
37	Database search	Mancera et al., 2017	Not a meta-analysis (qualitative/thematic synthesis)
38	Database search	Matias et al., 2020	Intimate partner homicide
39	Database search	Mojahed et al., 2021	Not a meta-analysis (narrative synthesis)
40	Citation search	Muluneh et al., 2021	Includes violence against women in general
42	Database search	Ørke et al., 2018	Not a meta-analysis (narrative synthesis)
43	Database search	Özcan et al., 2016	Not focused on IPV (includes other types of family violence such as by father, male siblings, male offspring)
44	Database search	Rioli et al., 2017	Not a meta-analysis (narrative synthesis)
45	Database search	Robertson et al., 2020	Same-sex relationships and includes children and adolescents
46	Known items	Saunders et al., 2021	Adolescents' relationships
47	Database search	Schreiber and Salivar, 2021	Not a meta-analysis (narrative synthesis)

48	Database search	Shamu et al., 2011	Adolescents' relationships
49	Database search	Spencer et al., 2016	Not a meta-analysis (report on three risk factors that significantly differed between female and male)
50	Citation search	Spencer et al., 2019	Same-sex relationships
51	Key author's Google Scholar profile	Spencer et al., 2021	Same-sex relationships and dating violence
52	Database search	Spencer and Stith, 2020	Intimate partner homicide
53	Database search	Taylor et al., 2013	Not a meta-analysis (qualitative/thematic synthesis)
54	Citation search	Trevillion et al., 2012	Not focused on IPV (includes other types of family violence such as by non-partner)
55	Citation search	Vanderende et al., 2012	Dating violence and adolescents' relationships
56	Database search	West, 2016	Not a meta-analysis (narrative synthesis)
57	Database search	Yakubovich et al., 2018	Dating violence
58	Database search	Zeppegno et al., 2019	Not a meta-analysis (narrative synthesis)

Data extraction in duplicate	Uncl	Uncl	Uncl	Uncl	Partial Yes	Yes	Yes	Yes	Yes	Uncl	Partial Yes	Partial Yes	Partial Yes	Yes	Yes	Partial Yes	Yes
List of excluded studies (Critical)	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Detail of included studies	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	No	No	No	Partial Yes	Partial Yes	No
Risk of Bias (RoB): appropriate technique used on individual studies (Critical)	No	No	No	No	Yes	No	No	No	No	Yes	No	No	No	No	No	No	No
Meta-analysis – assess RoB	Partial Yes	Partial Yes	Partial Yes	Partial Yes	Yes	No	No	No	No	Yes	No	No	No	No	No	No	No

