

# Evidence-Based Interventions for Mental Health Consequences of Intimate Partner Violence

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# Contents

Introduction	284
Intimate Partner Violence Prevalence	284
Intimate Partner Violence and Mental Health	285
Depression, Anxiety, and PTSD	286
Severe Mental Illness	286
Other Mental Disorders	287
Interventions for the Mental Health Consequences of IPV	287
IPV Interventions for Women with Mental Disorders	288
Mental Health Interventions for Women Affected by IPV	289
Trial Protocols	297
Quality of Evidence	298
Conclusions	298
Cross-Reference	299
References	299

# Abstract

Intimate partner violence is one of the most prevalent forms of violence against women worldwide and is associated with a wide variety of mental disorders, including depression, anxiety, post-traumatic stress disorder, eating disorders, and psychosis. This chapter reviews the evidence for an association between intimate partner violence and mental disorders, and then summarizes the results of a rapid review of evidence on interventions for the mental health consequences of intimate partner violence. Available research suggests a bidirectional association between intimate partner violence and mental health problems. Although a variety of interventions addressing the mental health consequences of intimate

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partner violence has been described, the literature largely focuses on women with depression or post-traumatic stress disorder. Studies of the mental health effects of intimate partner violence on women with severe mental illness, and studies conducted in mental health settings, remain limited. This chapter concludes with a summary of the strengths, limitations, and gaps in the evidence base, which require urgent research attention.

#### **Keywords**

Intimate partner violence · Domestic violence · Mental health

# Introduction

Intimate partner violence (IPV) is one of the commonest forms of violence against women and is highly prevalent worldwide (World Health Organization 2013a). It is associated with a range of physical and mental health problems, including post-traumatic stress disorder (PTSD), depression, anxiety disorders, eating disorders, and psychosis (Trevillion et al. 2012), and is recognized internationally as an important social determinant of women and children's health (World Health Organization 2016, 2013b; World Psychiatric Association 2017; NICE 2014). This chapter summarizes evidence first, for an association between IPV and mental disorders, and second, for interventions which address the mental health consequences of IPV.

In this chapter, we define IPV as involving any of the following acts perpetrated by a current or former intimate partner: physical violence, where physical force is used intentionally to cause physical harm; sexual violence, which includes any non-consensual sexual activity; psychological abuse, which might involve emotional abuse or controlling behavior; and economic abuse, such as withholding funds or forcing a partner to take out loans in their name (European Institute for Gender Equality 2016). (Although the terms "intimate partner violence" (IPV) and "domestic violence" (DV) are often used interchangeably, this chapter uses IPV to indicate violence perpetrated by current or former partners only and DV to mean violence perpetrated by current or former intimate partners and/or family members.) This definition acknowledges that IPV takes many forms; research suggests that different types of violence commonly co-occur, with women rarely subjected to one form of abuse alone (Bott et al. 2012; Donaldson and Marshall 2005; Jansson 2007). Both women and men experience IPV, but the abuse experienced by women is more likely to be high frequency, to include sexual and severe physical violence, and to result in injury (Walby and Towers 2017).

## Intimate Partner Violence Prevalence

Worldwide, an estimated 30% of ever-partnered women have experienced IPV, with regional estimates ranging from 23% in high-income countries (HICs) to 37% in Africa and the Eastern Mediterranean (World Health Organization 2013a). Data

from national surveys demonstrate that IPV is endemic across a range of geographical and cultural contexts and that there is substantial variation in prevalence between countries. For example, the World Health Organization's multicountry study on women's health and domestic violence surveyed 24,000 women across 10 high-, middle-, and low-income countries: Japan, Brazil, Peru, Thailand, Bangladesh, Tanzania, Namibia, Samoa, Ethiopia, and Serbia and Montenegro (Garcia-Moreno et al. 2006). Thirteen to 61% of ever-partnered women had experienced physical violence from an intimate partner, 6-59% had experienced sexual violence committed by an intimate partner, and 20-75% had experienced at least one instance of psychological abuse from an intimate partner (Garcia-Moreno et al. 2006). Recent national statistics from England and Wales estimate that 26% of women have ever experienced DV, and 8% have experienced DV in the past year; the equivalent estimates for men are 14% and 4%, respectively (Office for National Statistics 2017). Similar figures are reported for the USA: an estimated 25% of women and 11% of men have experienced lifetime IPV that resulted in a negative impact, such as injury, fear, or need to access support services (Smith et al. 2017).

Nationally representative surveys also report a high prevalence of IPV among women with mental disorders (Jonas et al. 2014). In the USA, the National Epidemiologic Survey on Alcohol and Related Conditions (a household survey of 34,653 residents) reported high lifetime IPV prevalence estimates for women diagnosed with PTSD (29%), bipolar disorder (27%), panic disorder (23%), generalized anxiety disorder (22%), and depression (16%) (Grant and Goldstein 2011). Surveys conducted in psychiatric settings also indicate high IPV prevalence among women accessing mental health services (Oram et al. 2013). A Swedish survey of adult female mental health service users (n = 1382) found that, since 16 years of age, 25% of women had experienced IPV perpetrated by a current partner and 23% by a previous partner (Bengtsson-Tops et al. 2005). Few studies assess the extent to which mental health service users are at increased risk of IPV. However, the Adult Psychiatric Morbidity Survey (a household survey of 7461people resident in England) reported significantly increased odds of lifetime IPV among women with common mental disorders compared to those without (adjusted odds ratio 4.4, 95%) confidence interval 3.2-6.1) (Jonas et al. 2014). One UK-based survey identified twice the odds of IPV than the general population, among female mental health service users (adjusted odds ratio 2.7, 95% confidence interval 1.7-4.0) (Khalifeh et al. 2015).

## **Intimate Partner Violence and Mental Health**

Studies conducted in a range of settings support an association between IPV and mental health problems. (We use "mental health problems" to refer broadly to psychiatric disorders and "mental disorders" when referring to diagnoses made using validated scales, instruments, or specialist clinical assessment. Some included studies use "serious mental illness" (SMI) to distinguish disorders associated with more chronic functional impairment (usually, schizophrenia, schizoaffective disorder, bipolar affective disorder, and, sometimes, severe depression), from disorders which (in many but not all cases) have a wider spectrum of severity and functional impairment, often called common mental disorders (CMDs), including anxiety disorders and less severe depression.) High prevalence and risk of IPV have been demonstrated across diagnoses, including depression, anxiety disorders, and PTSD (Devries et al. 2013; Trevillion et al. 2012), perinatal mental disorders (Howard et al. 2013), eating disorders (Bundock et al. 2013; Jonas et al. 2014), psychotic disorders (Jonas et al. 2014), and alcohol and substance use disorders (Devries et al. 2014). Although the majority of research has been cross-sectional, growing evidence suggests a causal relationship between IPV and mental disorders. A meta-analysis found, for example, that the severity of IPV is associated with the severity of depression and PTSD and that rates of depression decrease with time since cessation of violence (Golding 1999). A more recent systematic review found that frequency of IPV was associated with risk of depression and PTSD and that severity of IPV was associated with anxiety symptoms (Lagdon et al. 2014). The relationship between IPV and mental health appears to be bidirectional; that is, IPV increases the risk of mental disorder, and mental disorder increases vulnerability to IPV. Systematic reviews show, for example, both that IPV is associated with subsequent depressive symptoms and alcohol use disorders (Devries et al. 2013, 2014) and that depressive symptoms and alcohol use disorders predict later IPV (Devries et al. 2013, 2014).

## **Depression, Anxiety, and PTSD**

The majority of research investigating IPV and mental disorders focuses on depression, anxiety, or PTSD (Trevillion et al. 2012). Systematic reviews have demonstrated high prevalence and increased risk of lifetime and past year IPV among women with these disorders. For example, Trevillion and colleagues report pooled odds ratios for past year IPV of 3.3 (95% CI 2.4–4.7) for women with diagnosed depression, in comparison to women with no mental disorder, and 2.9 (95% CI 1.8–4.7) among women with diagnosed anxiety disorders. The same review reported that the pooled odds ratio for lifetime IPV among women with diagnosed PTSD was 7.3 (95% CI 4.5 = 12.0), in comparison to women with no mental disorder (Trevillion et al. 2012). Although the majority of studies included in this systematic review reported physical IPV, later research from Sweden found that experiencing any one of physical, sexual, or psychological IPV was associated with depressive symptoms in women (Lövestad et al. 2017).

## Severe Mental Illness

The prevalence and risk of IPV among women with severe mental illnesses such as schizophrenia, schizoaffective, and bipolar affective disorders have been less wellstudied than in women with common mental disorders. However, the limited evidence suggests a similar pattern. For example, Wave 2 of the USA National Epidemiologic Survey on Alcohol and Related Conditions (which recruited 25,626 married, recently married, and partnered adults) reported that bipolar I (AOR = 2.5, 95% CI 1.4–4.2) and bipolar II (adjusted odds ratio = 2.6, 95% CI 1.0–6.5) (Odds ratios were adjusted for race, age, education, individual income, family income, employment status, marital status, and sexual orientation.) affective disorders were associated with increased risk of past year IPV (Okuda et al. 2011). As described above, a UK survey of mental health service users found increased odds of IPV compared to the general population (Khalifeh et al. 2015). Service users had predominantly affective or non-affective psychoses and had been in contact with community mental health teams for 1 year or more. The survey used questions from the British Crime Survey, allowing comparison with a matched contemporaneous general population control. Past year prevalence of IPV was significantly higher among mental health service users than among controls (17%) and 7%, as was lifetime prevalence (62% and 30%). Odds of past year and lifetime IPV were increased approximately two- and threefold, respectively, among patients versus general population controls (Khalifeh et al. 2015).

# **Other Mental Disorders**

Fewer data are available on the prevalence and risk of IPV among women diagnosed with other mental disorders, but cross-sectional studies conducted in a variety of countries and settings have reported associations. For example, a cross-sectional study conducted in Pakistan found that women with obsessive-compulsive disorder (OCD) were at increased risk of lifetime IPV compared to those without any mental disorder (OR 6.4; 95% CI 2.0–33.2) (Ayub et al. 2009). Similarly, a nationally representative household survey conducted in England found that women with eating disorders had increased risk of IPV than control participants, both in the past year (OR 5.6; 95% 3.2–9.7) and throughout their lifetime (OR 4.1; 95% CI 2.5–6.6) (Jonas et al. 2014).

## Interventions for the Mental Health Consequences of IPV

We performed a rapid review of evidence on interventions to address the mental health consequences of IPV. (We searched MEDLINE, using a combination of free-text and Medical Subject Heading (MeSH) terms, for studies about IPV, mental health problems, and interventions, on 15 January 2018. We supplemented this search by screening reference lists of relevant reviews (Oram et al. 2017; Trevillion 2013; Tirado-Muñoz et al. 2014; Jahanfar et al. 2013; Warshaw et al. 2013; Oram and Howard 2013; Arroyo et al. 2017). We screened the titles and abstracts of 750 papers, and the full-texts of 87. We included 36 papers in this review.) Rapid reviews are increasingly used to provide swift appraisals of research evidence, exercising condensed systematic review methods (Khangura et al. 2012). Papers were included

which reported either on interventions aiming to address IPV in people with mental disorders or interventions aiming to address mental disorders in people affected by IPV. Furthermore, study samples were required to include women who had experienced IPV and measure at least one mental health outcome using a standardized and validated screening or diagnostic instrument.

Mental health interventions for survivors of IPV typically target women with diagnoses of PTSD and/or depression and often exclude those experiencing more severe mental health problems (Howard et al. 2010). For this reason, we distinguish between – and describe separately – interventions designed to address experiences of IPV among people with diagnosed mental disorders and mental health interventions designed for women affected by IPV, which typically target PTSD and depression. The rapid review identified 3 interventions addressing experiences of IPV among people with mental disorders (section "IPV Interventions for Women with Mental Disorders"), 36 mental health interventions designed for people affected by IPV (section "Mental Health Interventions for Women Affected by IPV"), and 5 study protocols for interventions relevant to section "Trial Protocols."

# **IPV Interventions for Women with Mental Disorders**

The three interventions which addressed experiences of IPV among women with mental disorders were all conducted in HICs: one in the UK (Trevillion et al. 2014) and two in the USA (Frueh et al. 2009; Lu et al. 2009); all three recruited participants from mental health services.

#### **Advocacy Interventions**

One IPV advocacy intervention for people with diagnosed mental disorders was identified. Advocacy interventions are typically based around models of empowerment, with advocates aiming to support survivors to understand and make sense of their situations, achieve goals which they have set, and discuss potential solutions to challenges (Rivas et al. 2015). Common advocacy activities include providing legal, financial, and housing advice, safety planning, assisting survivors to access community resources, and providing continued support and informal counseling.

"Linking Abuse and Recovery through Advocacy" (LARA) was a pilot trial of a domestic violence advocacy intervention for survivors in contact with mental health services, which included participants with depression, schizophrenia, bipolar affective, and other disorders. The intervention aimed to both improve outcomes for survivors (including the frequency and severity of violence, safety behaviors, unmet needs, and quality of life) and raise clinicians' awareness, knowledge, and readiness to respond to domestic violence (Trevillion et al. 2014). The study included 35 women: 28 recruited from community mental health teams assigned to the intervention arm and 7 from teams assigned to the control arm. Of 28 intervention participants, 21 consented to receive domestic violence advocacy and received a mean of 7 1-h meetings and 28 20-min telephone conversations with domestic

violence advocates. Results indicated a greater reduction in domestic violence incidents, unmet needs and social isolation among women in the intervention arm, and greater satisfaction with their overall quality of life, than was observed for control participants.

#### **CBT-Informed Interventions**

Cognitive behavioral therapy (CBT) applies a psychological model, which focuses on how individuals' thoughts and beliefs affect their feelings and actions. Interventions informed by CBT typically address how the person's thoughts, feelings, and behaviors interact, developing practical strategies to address "thinking traps" which precipitate and perpetuate psychiatric symptoms.

We identified two uncontrolled before-and-after studies examining the use of CBT for PTSD in people with bipolar affective disorder, major depressive disorder, schizophrenia (Lu et al. 2009), and schizoaffective disorder (Frueh et al. 2009). Although neither paper recruited participants based on experience of IPV, author correspondence (Trevillion 2013) indicated that IPV was reported by 40 (Lu et al. 2009) to 50% of participants (Frueh et al. 2009). Lu and colleagues evaluated manualized individual CBT, delivered to 19 participants, of whom 11 were women, comprising breathing retraining, psychoeducation, and cognitive restructuring. They found statistically significant improvements in PTSD and depressive symptoms (sustained at three and 6-month follow-up) among the 14 participants who completed at least 6 sessions, of whom 6 were female. Frueh and colleagues evaluated a manualized CBT intervention, delivered to 20 participants, of whom 15 were female. The intervention was provided as four group sessions followed by eight twiceweekly individual sessions, comprising education, anxiety management therapy, social skills training, and exposure therapy. They too found significant improvements in PTSD symptoms (sustained at 3-month follow-up) among the 13 participants who completed therapy, of whom 12 were female.

#### Mental Health Interventions for Women Affected by IPV

The rapid review yielded 36 studies which reported interventions addressing mental health problems among women who were either still experiencing IPV or had left a violent intimate relationship. They included CBT-informed interventions, mind-body interventions, and a variety of other models delivered in group and individual formats.

As expected, interventions focused predominantly on PTSD (n = 24) (Studies used a range of scales to measure PTSD symptoms, and some used two. The commonest were the CAPS clinician-administered PTSD scale (Blake et al. 1990), a version of the self-report PCL PTSD checklist (Blanchard et al. 1996: eight studies), and the self-report PDS Post-traumatic Diagnostic Scale (Foa et al. 1997: four studies)) and/or depression (n = 27) (Depression was also measured using a range of scales, but a version of the self-report Beck Depression Inventory (Beck et al. 1988, 1996) was used in 18 studies); anxiety symptoms (n = 6) and substance misuse (n = 5) were measured by a smaller proportion of studies. Most studies excluded participants with comorbid diagnoses of severe mental illness.

All studies were conducted in HICs: the USA (26), Greece (two), Hong Kong (two), and Spain, Denmark, and Scotland (one each). The majority of randomized controlled trials (RCTs) focused on depression and/or PTSD. Identified non-randomized studies comprised uncontrolled trials, quasi-experimental, and feasibility studies.

## **CBT-Informed Interventions**

#### **Randomized Controlled Trials**

Five RCTs were identified which evaluated interventions based on principles of CBT. These were the individually delivered HOPE (Helping to Overcome PTSD through Empowerment: Johnson et al. 2011, 2016) program, CTT-BW (Cognitive Trauma Therapy: Kubany et al. 2003, 2004), CPT (Cognitive Processing Therapy: Iverson et al. 2011a, b; Resick et al. 2008), PATH (Psychological Advocacy Towards Healing: Ferrari et al. 2018), and one group CBT intervention (Crespo and Arinero 2010).

HOPE (Johnson et al. 2011, 2016), based on principles of CBT and psychoeducation about both IPV and mental health, provided women in domestic violence shelters with an "empowerment toolbox." This covered coping strategies for personal safety, managing symptoms, and improving relationships, which participants learned to use to address PTSD symptoms. Up to 12 sessions, each lasting 60-90 min, were delivered over 8 weeks. The RCT compared HOPE and standard shelter services (SSS) with SSS alone, which provided case management, a supportive environment, and parenting and support groups. Participants had experienced at least one incident of IPV in the month before shelter admission and met diagnostic criteria for partner violence-related PTSD or sub-threshold PTSD. In a total sample of 70, HOPE was associated with significant reductions in depressive symptoms, emotional numbing, effortful avoidance, and arousal (Johnson et al. 2011). In a second study, with a sample of 60, HOPE was associated with significant reductions in PTSD and depressive symptoms (Johnson et al. 2016). While the first study found less revictimization at 6-month follow-up, this was not replicated in the second study.

*CTT-BW* (Kubany et al. 2003, 2004) also applied PTSD and IPV-focused CBT techniques, over 8 to 11 90-min sessions. The model comprised in-depth violence and trauma history taking, psychoeducation about PTSD, learned helplessness and stress management, and exposure homework (looking at photographs of and visualizing an abusive partner and watching films about domestic violence). These were delivered alongside two to four sessions of cognitive therapy for trauma-related guilt (CT-TRG); later modules focused on self-advocacy and empowerment. Women receiving CTT-BW were compared with a waiting list control of women, who received CTT-BW after a 6-week delay. Participants were no longer experiencing IPV and met diagnostic criteria for abuse-related PTSD and criteria for abuse-related guilt measured using the "Global Guilt Scale" of the authors' Trauma-Related Guilt

Inventory (TRGI). Women who had experienced IPV within the past 30 days were excluded. In a total sample of 32, CTT-BW was associated with significant improvements in PTSD and depressive symptoms, which were maintained at 3-month follow-up (Kubany et al. 2003). In a second study, with a total sample of 125, CTT-BW was again associated with significant improvements in PTSD and depressive symptoms, which were maintained at 6-month follow-up (Kubany et al. 2004).

The CPT intervention applied CBT techniques across six sessions, each lasting 2 h, over 6 weeks, to help women to identify and confront cognitive distortions relating to their worst-experienced traumatic events, including psychoeducation about PTSD. Three papers reported results for participants who had experienced interpersonal (Resick et al. 2008) or intimate partner violence, only (Iverson et al. 2011a, b). Women with PTSD secondary to sexual abuse were recruited through community advertising and referrals from support services and therapists. Women experiencing violence from a current partner in the past 6 months were excluded. The full protocol involved written accounts (WA), in which the participant constructed a script over 45-60 min in which they described a particular "index trauma," after which they rated their "Subjective Units of Distress Scale" (SUDS) and "strong emotions," before reading the account aloud to the therapist. The RCT compared three conditions: the full CPT package (comprising structured, cognitive therapy (CPT-C), and WA), and one or the other constituent parts, individually. In a total sample of 150, all conditions (CPT, CPT-C, and WA) were associated with significant improvements in PTSD, depression, and anxiety, (maintained at 6 months' follow-up), with CPT-C the most effective (Resick et al. 2008). These improvements were associated with reduced likelihood of IPV victimization at 6-month follow-up, after controlling for violence in the previous year (Iverson et al. 2011a). Reductions in PTSD and depressive symptoms were associated with frequency of IPV exposure, with larger reductions in women who experienced more frequent abuse. However, differences equalized at 6-month follow-up (Iverson et al. 2011b).

The *PATH* intervention (Ferrari et al. 2018) comprised a CBT-informed psychological intervention delivered over eight 1-h sessions, either weekly or fortnightly, followed by two "booster" sessions, 1 and 3 months later. PATH was delivered by specialist psychological advocates (SPAs) who had received a 25-day manualized training program developed by a clinical psychologist. The intervention addressed the psychological impacts of IPV; topics included: PTSD, depression, anxiety, low self-esteem, anger, and loss. Study participants were women seeking help for IPV from one of two UK community agencies, aged 17 years or over. Women diagnosed with psychotic disorders, severe drug or alcohol problems, who were unable to read English, or already receiving psychological support were excluded from participation. The RCT compared PATH plus standard agency advocacy services, with standard agency advocacy services alone, which encompassed safety planning, health and safety, housing, welfare benefits, and legal assistance. In a sample of 263 women, the intervention group had significantly greater reductions in PTSD, depressive symptoms, and psychological distress than the control group at

12 months' follow-up. There were no significant differences between groups in anxiety or physical health symptoms or experiences of IPV at follow-up. A nested qualitative study also established that women in the control arm reported an unmet need for psychological support, while those in the intervention arm particularly valued the person-centered and nonhierarchical nature of the PATH intervention. One RCT evaluated a group intervention (Crespo and Arinero 2010), delivered to groups of three to five women across eight sessions lasting 90 min each. The intervention provided initial information about IPV before focusing on a CBT model. This included increasing pleasant activities, problem-solving, cognitive restructuring, and building self-esteem. Each session ended with 5 min of diaphragmatic breathing. A planned waiting list control was deemed unethical, and instead versions of the intervention using exposure techniques versus communication skills were compared. Participants with PTSD symptoms, but who did not meet criteria for diagnosis, were recruited from organizations supporting women experiencing IPV. In a sample of 53 women, having received either intervention was associated with significant reductions in depressive, PTSD and anxiety symptoms, with little difference between exposure and communication skills conditions. Improvements in symptoms were maintained at 1-month follow-up.

## **Nonrandomized Studies**

In addition to the identified RCTs, six non-randomized studies evaluated CBT-informed interventions, including the feasibility study for the HOPE intervention described above (Johnson and Zlotnick 2006). An uncontrolled before-and-after study of 20 women attending CTT for intimate partner violence-related PTSD found that reductions in trauma-related guilt from pre- to mid-treatment assessment predicted PTSD and functioning outcomes following CTT (Allard et al. 2016). One small study (n = 15) explored the feasibility and potential effectiveness of delivering trauma-focused CPT or prolonged exposure therapy via secure, encrypted videoconferencing technology (Hassija and Gray 2011), demonstrating reduced PTSD and depressive symptoms and high satisfaction ratings. Two small studies reported on a combined CBT and motivational interviewing (MI) intervention for survivors of IPV with moderate to severe depressive symptoms (Nicolaidis et al. 2013a, b). (Depressive symptoms were defined as a score of 15 or above on the PHQ-9, which has been found to have a sensitivity of 0.68 and specificity of 0.95 for Major Depressive Disorder (Kroenke et al. 2001).) The "Interconnections Projects" aimed to reduce depression severity and were developed using a community-based participatory approach with African American and Hispanic survivors of IPV. The intervention for Hispanic survivors of IPV (n = 10) involved 12 weekly group sessions, which were led by a trained Hispanic community health worker. The intervention adapted for African American women (n = 60) also provided a race-matched health worker to deliver individual MI sessions and group CBT workshops, but the final 20 participants received CBT-based materials in individual MI sessions, due to low attendance. Both interventions were associated with significant reductions in depression severity. In a total sample of 50 women staying in a refuge, 1 study compared 2 groups volunteering to participate in 12 h of group counseling over 2 weeks, comprising cognitive restructuring, assertiveness and communication skills training, problem-solving, body awareness, and vocational counseling, with a control group (Cox and Stoltenberg 1991). The authors found significant improvements in anxiety and depressive symptoms in those intervention recipients who did not complete and receive interpretation of a personality factors questionnaire in comparison to those who did, which they attributed to group differences.

Finally, a single feasibility study compared a 20-week cognitive therapy intervention ("INSIGHT") in 27 women attending a women and children's service, of whom 67% had a history of IPV (Zust 2000). Depression and anxiety symptoms did not improve significantly in either group post-intervention, and 50% of women affected by violence dropped out.

#### **Mind-Body Interventions**

Mind-body interventions focus on the interconnectedness of mind and body. Included studies evaluated an individually delivered yogic breathing intervention (Franzblau et al. 2008); two variants of group-delivered mindfulness-based stress reduction (Dutton et al. 2013; Kelly and Garland 2016); two stress-management groups, including biofeedback (Michalopoulou et al. 2015; Kokka et al. 2016); and a trauma-sensitive yoga addition to group psychotherapy (Clark et al. 2014).

#### Randomized Controlled Trials

One RCT evaluated an individually delivered yogic breathing intervention (Franzblau et al. 2008), which compared (i) 45 min of yogic breathing training on 2 consecutive days; (ii) 45 min of recorded testimony about IPV, given to a trained, race-matched research assistant on 2 consecutive days; (iii) a combined condition; and (iv) a control group, which did not receive any intervention. Participants were women who had experienced IPV within the past 2 years, recruited through community leaflet and newspaper advertisements. In a total sample of 40 women, testimony, yogic breathing, and a combination of the two were each associated with significant reductions in depressive symptoms, compared to the control group.

Two RCTs reported applications of MBSR (mindfulness-based stress reduction), adapted for women with a history of either IPV (Dutton et al. 2013) or interpersonal violence (including, but not limited to, IPV) (Kelly and Garland 2016). Kelly and Garland delivered trauma-informed MBSR (TI-MBSR) in eight sessions lasting 120–150 min each. Each session comprised guided meditation, gentle movement exercises, lectures, and group discussions, with additional psychoeducation addressing IPV. The intervention group was compared with a waiting list control group, which was later offered the intervention. Participants were self-identified female survivors of IPV, recruited through community advertisements. In a sample of 45 women, TI-MBSR was associated with significant reductions in PTSD and depressive symptoms in comparison to the control group. Participants in Dutton et al.'s study were survivors of IPV; results are as yet unpublished.

Stress management and health promotion groups were trialed in two RCTs from the same research group. The first evaluated an 8-week stress management program alone, comprising twice-daily relaxation breathing and progressive muscle relaxation training through an audio CD, supplemented with brief, problem-specific group counseling sessions (Michalopoulou et al. 2015). The intervention group was compared to a control group, which received standard shelter services. In a total sample of 34 women, there was no significant reduction in perceived stress among the intervention group. The authors concluded that it should be considered an adjunctive intervention, as participation was associated with significant reductions in perceived stress. A later version comprised biofeedback-assisted abdominal breathing, using interactive computer-guided practice, progressive muscle relaxation (PMR) following an audio CD, and guided imagery, alongside dietary counseling and pedometer monitoring (Kokka et al. 2016). The group intervention was delivered in eight 60-min sessions to women currently experiencing IPV, recruited through advertising in women's support and pediatric hospital settings. The intervention group was compared to a control group which received the PMR CD only. In a sample of 60 women, the intervention condition showed significantly greater reductions in depressive and anxiety symptoms than the control group.

## Nonrandomized Studies

One feasibility study incorporated 35-min sessions of trauma-sensitive yoga into a 12-week manualized group psychotherapy program focused on IPV, with 17 participants (Clark et al. 2014). Recruitment rates were 85% of eligible women, with 70% retention to follow-up, and no reported harms, supporting feasibility.

#### **Other Group-Administered Interventions**

#### **Randomized Controlled Trials**

*Nia* (Kaslow et al. 2010) is a "culturally informed, empowerment-focused psychoeducational group intervention" for African American women with recent history of IPV and a suicide attempt, evaluated in an RCT. The intervention was delivered to groups of three to five women in ten 90-min sessions which focused on safety planning, psychoeducation about IPV and risk of suicide, relationship difficulties and interpersonal dilemmas, and addressing social support and resource needs. Control women received treatment as usual (TAU): referral for standard hospital-delivered care, including weekly support groups addressing suicidal thoughts and IPV. Participants were African American women recruited from a public hospital. In a sample of 208 women, Nia attendance was associated with significantly reduced depressive symptoms, but not PTSD symptoms or suicidal ideation. Post-intervention, and at 6- and 12-month follow-up, Nia attendance was, however, associated with reduced suicidal ideation in response to IPV incidents, compared to TAU.

#### Nonrandomized Studies

Six nonrandomized group-administered interventions were identified, which addressed mental health problems in the context of traumatic experiences or difficult relationships, using a range of psychotherapeutic, psychoeducational, and skills-focused models.

An uncontrolled, multicenter Scottish study evaluated structured group psychotherapy for survivors of interpersonal trauma, including IPV, based on a Trauma Recovery and Empowerment Model (TREM) (Karatzias et al. 2016). Seventy-one participants attended 9 weekly or biweekly women-only groups, receiving 18 sessions (abbreviated from the full 29 session model), lasting 90 min. Post-traumatic stress, anxiety, and somatization symptoms (but not depressive symptoms) improved significantly following participation, but 41% of participants dropped out. Among those completing therapy, clinically significant improvements were strongest on dissociative symptoms.

One quasi-experimental study reported results from the Boston Consortium of Services for Families in Recovery (BCSFR) trauma-informed model of care; this program targeted interpersonal violence generally, however, rather than IPV specifically (Amaro et al. 2007). The model comprises trauma and mental health assessment, treatment planning and case management, attendance at a trauma recovery and empowerment group (25 sessions; 12 was considered completion, which was achieved by 44%), and attendance at four manualized, trauma-informed skills-building groups, including leadership, economics, family reuniting, and parenting skills. The quasi-experimental study compared outcomes from women attending BCSFR programs to those of women attending programs of similar duration in neighboring metropolitan areas. At 6 and 12-month follow-up, women attending BCSFR (n = 181) had significantly reduced PTSD symptoms in comparison to women attending usual care services (n = 161), but there were no differences in substance misuse rates.

One small before-and-after study reported on a community-based Interpersonal Psychotherapy (IPT) intervention for IPV survivors with moderate to severe symptoms of depression (Cort et al. 2014). The intervention provided eight sessions, which aimed to address current interpersonal disputes with non-abusive family and friends, as well as and chronic, problematic interpersonal patterns (Cort et al. 2014). Women (n = 32) also received a workbook, featuring a relationships and feelings log, exercises, safety plan, and information about IPV. Data from 3-month follow-up suggested significant improvements in symptoms of depression, post-traumatic stress disorder, and interpersonal problems.

One feasibility study conducted in the USA used community-based participatory research (CBPR) to develop and adapt a group psychotherapy intervention. The intervention comprised six to ten sessions, each of 90 min, and included supportive psychotherapy, psychoeducation, acceptance and commitment therapy, and self-care strategies, focusing on PTSD, family relationships, and well-being. The study included 22 Hispanic women experiencing IPV, who screened positive for PTSD, and found significant PTSD symptom reductions at 6-month follow-up and reduced symptoms of depression at 6- and 12-month follow-up (Kelly and Pich 2014).

Two trauma-informed, gender-responsive, manualized group intervention "curricula" (known together as Women's Integrated Treatment) were evaluated using an uncontrolled design, at a residential center where 55% of women had forensic histories (Covington et al. 2008). The 2 manualized curricula, HWR (Helping Women Recover), a 17-session program for addictions, and BT (Beyond Trauma), an 11-session program linking violence, abuse, and trauma to substance misuse, both use a combination of psychoeducation, cognitive behavioral, expressive arts, and other techniques. Participants were 202 women who completed a 45-day orientation prior to treatment, but attrition and missing data limited analysis to between 40 and 44 clients. Women completing HWR showed significant improvements in PTSD, depressive, and anxiety symptoms, which improved further on completion of BT. Depressive symptoms also reduced during the 45-day stabilization prior to treatment. Women's Integrated Treatment was rated positively by 92% of those completing the final survey.

## **Other Individually Delivered Interventions**

## **Randomized Controlled Trials**

One RCT evaluated the effectiveness of an expressive writing intervention in reducing symptoms of depression and PTSD (Koopman et al. 2005). The intervention consisted of four supervised 20-min sessions in which women used expressive writing to express their most traumatic life experience; the control condition involved writing neutrally about daily routines. The sample comprised women who had experienced, but were not currently experiencing, IPV, recruited through flyers and adverts in newspapers and online communities. In a sample of 47 women, expressive writing was not associated with a significant reduction in symptoms of PTSD. A reduction in depressive symptoms was observed in women screening positive for depression at baseline.

Two brief advocacy interventions (under 12 h) were conducted with Chinese women in Hong Kong (Tiwari et al. 2005, 2010), predominantly by telephone, with 200 and 106 women, respectively (Tiwari et al. 2005, 2010). Both studies evidenced improvements in depressive symptoms post-intervention. One further advocacy intervention (El-Mohandes et al. 2008) targeted depression, smoking cessation, and experience of IPV in African American pregnant women (n = 1070) over a period of 10 weeks (38.6% had experienced IPV). This intervention did not deliver a significant reduction in symptoms of depression.

Two studies (isafe, Koziol-McLain et al. 2018; I-DECIDE, Hegarty et al. 2019) examined the efficacy of an online safety decision aid for improving the mental health of women experiencing IPV over 12 months in Australia (Hegarty et al. 2019) and New Zealand (Koziol-McLain et al. 2018). In both studies, the intervention comprised an online decision aid which assessed women's relationship priorities, plans, and risks, before producing an appropriate action plan. Both studies' control groups received a static website listing resources for IPV and an emergency safety plan. *I-DECIDE* participants reported experiencing IPV or fear of a partner in the last 6 months, were aged 16–50 years, and spoke English (Hegarty et al. 2019). *isafe* participants were English-speaking women aged 17 years or older and currently experiencing IPV (Koziol-McLain et al. 2018). At 12 months' follow-up (I-DECIDE, n = 355; isafe, n = 358), neither

intervention demonstrated greater improvements in depressive symptoms than the control arm.

#### Nonrandomized Studies

Two nonrandomized studies of individually delivered interventions to address the mental health consequences of IPV were identified, one conducted in Denmark, the other in the USA. The Danish study evaluated a trauma recovery group-model intervention (OSV, Out of the Shadows of Violence) for IPV and mental health (Hansen et al. 2014). Out of 212 initial participants, 75 dropped out before starting the program; a further 67 dropped out during the program. The intervention was tailored to individual recipients, but comprised a 1-12 session social workerdelivered stabilization phase; this focused on economic and psychological stability and provided financial, housing, and psychoeducational support. Next, individual (1-12 sessions lasting 60-90 min) or group (14 weekly 3-h sessions) therapy focused on discussing traumatic experiences and emotional responses. Finally, 24 individual or 3 group follow-up sessions supported women to maintain positive changes. Among the 70 women who completed the program, PTSD, depressive, and anxiety symptoms all reduced significantly after the first and second phases; PTSD and depressive symptoms reduced further following the third phase.

In the USA, a mixed-methods feasibility study was conducted of the Home Visitation Enhancing Linkages Project (HELP), a screening, motivational interviewing, and case management intervention to address maternal depression, substance use, and IPV. Health visitors screened 116 clients: 22% screened positive for one or more risk domains, but implementation of motivational interviewing and case management was lower than expected (Dauber et al. 2017).

# **Trial Protocols**

The rapid review also identified five study protocols for mental health interventions for women who have experienced IPV. All protocols are for RCTs, of which two will be conducted in HICs: Canada (Ford-Gilboe et al. 2017) and the USA (Glass et al. 2017). The remaining three will be conducted in low- and middle-income countries (LMICs): Kenya (Sijbrandij et al. 2016), Tanzania (Tol et al. 2017), and South Africa (Pallitto et al. 2016). Two protocols describe interventions that make use of an online safety planning aid (Ford-Gilboe et al. 2017; Glass et al. 2017), and three describe psychological interventions. Psychological interventions include a combined CPT and advocacy intervention designed for refugees experiencing psychological distress (Tol et al. 2017), a nurse-led empowerment counseling program for pregnant women (Pallitto et al. 2016), and individual counseling study (Sijbrandij et al. 2016). All interventions will evaluate their effects on symptoms of depression; some also target alcohol use (Glass et al. 2017), anxiety (Tol et al. 2017), and/or PTSD symptoms (Ford-Gilboe et al. 2017; Tol et al. 2017; Sijbrandij et al. 2016).

# **Quality of Evidence**

Although the quality of evidence identified during the rapid review was not formally assessed, a number of strengths, weaknesses, and evidence gaps were apparent. The range of interventions represented in the literature is encouraging, encompassing CBT, advocacy and empowerment approaches, and creative, expressive, and mindbody therapies. The variety of disciplines reporting on included interventions also demonstrates the multidisciplinary research base for mental health interventions for women experiencing IPV, including nursing, social work, psychology, and psychiatry-led interventions.

RCTs were well-represented among the interventions aiming to reduce the mental health consequences of IPV; several feasibility and pilot studies leading to these more rigorous trials were also identified. RCTs were used to evaluate a diverse range of therapies, which were in several cases tailored to cultural and/or clinical contexts. However, only a minority investigated the extent to which improvements were maintained in the medium to long term, and in many the sample size was small. Fifteen of the 39 reviewed studies included fewer than 50 participants; by way of context, approximate rules for the design of *pilots* to inform main trials with 90% power and two-sided 5% significance suggest sample sizes per treatment arm of 25 for small (0.2) standardized effect sizes (Whitehead et al. 2016). Attrition was a problem across many studies; strategies for retention should be carefully considered in future research. These may include the use of community-based participatory research approaches to develop and adapt interventions, described in four nonrandomized studies addressing the mental health consequences of IPV (Nicolaidis et al. 2013a, b; Kelly and Pich 2014; Cort et al. 2014). Other weaknesses include the lack of control groups in nonrandomized studies, which limits the interpretation of their results.

The majority of interventions targeted PTSD and, to a lesser extent, depression; evidence for interventions to address other mental health needs was limited. Interventions to address IPV experienced by women with severe mental illness are particularly lacking: only three studies were identified, none of which were RCTs. More evidence is needed from LMICs; two RCTs from LMIC settings are among the published protocols identified during this review.

# Conclusions

Intimate partner violence is a highly prevalent form of gender-based violence, which is associated with a variety of mental health problems. There is a growing evidence base for interventions to address symptoms of depression and PTSD among women who have experienced IPV; research suggests in particular that CBT-based interventions and cognitive processing may be effective interventions for women who are no longer experiencing abuse. Less evidence is available regarding interventions to reduce psychological symptoms among women who are still enduring abusive relationships, although integrated advocacy and psychological interventions also appear to be promising. Evidence on effective interventions for mental health service users is also lacking. Future research in this area should seek to build on the growing evidence base of non-specific interventions for mental health service users who have experienced trauma.

## **Cross-Reference**

Mental Health Consequences of Sexual Assault

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