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The Effect of Female Economic Empowerment Interventions on the Risk of Intimate Partner Violence: A Systematic Review and Meta-Analysis

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Abstract

Women's economic empowerment is an essential component of the United Nations Sustainable Development Goals. Not only is it an end in itself but it has further been promoted for its potential to create positive externalities, including the reduction of intimate partner violence (IPV). However, the link between economic empowerment and the risk of IPV remains theoretically ambiguous. *Marital dependency theory* predicts that women with more financial resources hold higher bargaining power and are in a better position to leave potentially abusive relationships. Conversely, *Resource theory* posits that an increase in women's financial resources may clash with traditional gender roles, which may prompt their partner to reassert their status through violent means. In light of this debate, we conducted a meta-analysis of 19 randomized controlled trials assessing the impact of economic empowerment interventions on IPV. Based on a total sample size of 44,772 participants and robust variance estimation, our meta-analysis shows that women's economic empowerment was associated with a significant reduction in the pooled measure of emotional, sexual, and physical IPV. We further documented tentative evidence suggesting that these effects may be amplified when additional gender sensitization training is included in such programs. Despite the overall positive effects, some included studies reported increases in IPV, primarily in the form of partners exerting controlling behavior and dominance over financial resources. Our results therefore emphasize a need to prioritize women's safety in the process of designing economic empowerment programs and to closely monitor the potential risk of conflict and violence within beneficiaries' households.

Keywords

intimate partner violence, domestic violence, economic empowerment, sustainable development goals, randomized controlled trials

Violence against women is globally pervasive. The World Health Organization (WHO) estimates that nearly one third of ever-partnered women worldwide have experienced at least one act of physical and/or sexual violence by an intimate partner violence (IPV) at some point in their lives. Violence against women is not only an obstacle to equality, development, and peace but also entails serious health and economic consequences for women. It is linked to a wide range of negative physical and mental health outcomes, including chronic pain, cardiac symptoms, alcohol abuse, depression, suicidal thoughts, and suicide attempts (Campbell, 2002; Ellsberg et al., 2015; García-Moreno et al., 2013). In economic terms, Fearon and Hoeffler (2014) estimated that the global cost of IPV amounts to US$4.4 trillion or 5.2% of global gross domestic product (GDP).

The United Nations has deemed women's economic empowerment "a cornerstone of the Sustainable Development Goals" (UN Secretary-General, 2016), and economic empowerment interventions have gained popularity among the international donor community. Female economic empowerment is defined as "a process whereby women's and girls' lives are transformed from a situation where they have limited power and access to economic assets to a situation where they experience economic advancement" (Taylor & Pereznieto, 2014, p. 1). Economic empowerment thereby consists of four different elements. First, it comprises the knowledge, individual capabilities, and self-esteem necessary to enable participation in economic life ("power within"); second, it involves the ability

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for women to assert economic decision-making power within their household and community ("power to"); third, economic empowerment is linked to women's access to and control over financial and other resources ("power over"); and finally, it is expressed in women's ability to organize collectively and actively promote their economic rights ("power with"). A large body of literature points to a range of positive effects of female economic empowerment, including improvements in children's education and nutrition (Doss, 2006; Menon et al., 2017; Quisumbing & Maluccio, 2003) and in women's health-seeking behavior (Kadir et al., 2003; Schultz, 1990). Female economic empowerment has also been advocated as an effective policy tool to combat violence against women. To this date, however, this assumption remains theoretically and empirically ambiguous.

This study presents a systematic review and meta-analysis to synthesize existing evidence from randomized controlled trials (RCTs) on whether female economic empowerment has the potential to reduce the risk of IPV in low- and middle-income countries. To the best of our knowledge, the only previous systematic review that explores the link between women's economic empowerment interventions and IPV in low- and middle-income countries dates from 2009 (Vyas & Watts, 2009). A substantial number of additional RCTs have been carried out since publication of this review, rendering its findings outdated. A number of more recent reviews exist that examine the evidence of different types of interventions on violence against women. However, these do not exclusively focus on female economic empowerment interventions, examine wider forms of gender-based violence, are limited in geographic scope, and some of them include nonrandomized study designs (Bourey et al., 2015; Buller et al., 2018; Cork et al., 2018; Ellsberg et al., 2015; Gibbs et al., 2017; Heise, 2011). Most importantly, none of the above studies included a quantitative synthesis of the evidence. A focused and up-to-date understanding of the relationship between female economic empowerment and IPV is crucial for policy making and achieving the Sustainable Development Goal 5 to "eliminate all forms of violence against all women and girls."

Links Between Female Economic Empowerment and IPV

Economic and sociological theories currently disagree on how the distribution of household financial resources may affect women's risk of becoming exposed to IPV. *Marital dependency theory*, on the one hand, postulates that women who are financially dependent on their partner or spouse are more vulnerable to violence (Cools & Kotsadam, 2017). *Resource theory*, on the other hand, portrays male violence against an intimate partner as an instrument to regain power and control if economic resources are imbalanced in favor of the female partner (Anderson, 1997; Atkinson et al., 2005; Basile et al., 2013).

Marital dependency theory argues that it is more difficult for a woman to leave an abusive relationship if she lacks financial resources of her own and consequently has a lower ability to negotiate change (Gelles, 1976; Kalmuss & Straus, 1982). Different household models argue that increases in a woman's opportunities outside her relationship will raise her bargaining power and thereby reduce the threat of violence that she is exposed to (Bhattacharyya et al., 2011; Farmer & Tiefenthaler, 1997; Tauchen et al., 1991). These theoretical predictions are corroborated by recent empirical evidence. For example, Perova (2010) analyzed data from a cash transfer program in Peru, revealing that the decrease in IPV was higher among women whose utility outside of their relationship was affected more strongly by the increase in resources than their utility within the relationship. Likewise, Aizer (2010) studied the impact of the gender wage gap on IPV in the United States, finding that levels of violence decreased with a narrowing of the gender wage gap. Relatedly, other empirical work suggests that an overall improvement in households' financial well-being is likely to reduce poverty-related stress, which in turn leads to a decrease of IPV (Fox et al., 2002).

In contrast, proponents of relative resource theory argue that status inconsistency or status incompatibility between husband and wife can in fact result in a higher likelihood of abuse (Hornung et al., 1981). This may specifically be the case when women with unemployed partners take up a job (Macmillan & Gartner, 1999) or if there is an income disparity between the partners in favor of the woman (McCloskey, 1996). Kaukinen (2004) analyzes national data from the United States, revealing that status incompatibility which favored women led to an increase in emotional abuse (but not in physical violence). Atkinson et al. (2005) added more nuance to these results, reporting that the effect of relative resources is directly linked to a husband's gender ideology, such that IPV only increases in response to a growing income share for women in cases where the husband is known to hold traditional gender views. In a similar vein, a cross-national study that pooled data across 44 countries and represented over 400,000 women found that IPV was generally less prevalent in countries with a high proportion of women in the formal work force. However, in countries with a low level of female employment, women faced a higher risk of violence if they were employed in the informal sector (Heise & Kotsadam, 2015). Cools and Kotsadam (2017) proposed a "contextual acceptance employment hypothesis," according to which women are at a higher risk of suffering violence if they hold a job in settings in which IPV is deemed acceptable. Related to this finding, Guarnieri and Rainer (2018) found a higher risk of IPV among Cameroonian women in former British territories relative to former French areas, which was almost entirely explained by partners who objected that they held paid jobs.

Other variants of this theoretical literature argue that IPV is used as a tool to control how others behave or how resources are allocated (Anderberg & Rainer, 2011). Several empirical studies support this claim. For example, Bloch and Rao (2002) presented data from rural India and found that men use violence against their wives to extract resources from their wives' families in the form of dowry. In line with this reasoning, their findings suggest that the likelihood of abuse increases for wives

whose families are wealthier. Eswaran and Malhotra (2011) also used data from India and revealed that women who have better outside options are at greater risk of violence, as their husbands may resort to using violence in order to make sure that the way in which household resources are allocated becomes more closely aligned with their own preferences. This dynamic is often referred to as the "male backlash" theory, according to which men who have lost economic dominance over their wives may use violence as a means to reassert authority and power in the relationship (Hautzinger, 2003). Similarly, Jewkes (2002) posits that "violence is frequently used to resolve a crisis of male identity, at times caused by poverty or an inability to control women" (p. 1).

Method

Criteria for Considering Studies for This Review

Studies were considered eligible for this systematic review if they presented quantitative data; were based on an RCT design; were implemented in a low- or middle-income country; targeted women (either exclusively women or women and men), irrespective of their age, education, occupational, or marital status; and reported on a type of female economic empowerment intervention. Eligible economic empowerment interventions were (i) the promotion of female labor force participation, for example, through vocational training, job information, internships and apprenticeships, childcare and elderly care services, and CV writing workshops; (ii) agricultural interventions, including supply of improved seeds, fertilizer, irrigation systems, and support through self-help groups and farmer associations; (iii) entrepreneurship programs, including microcredit schemes, women's business networks, and investment subsidies; and (iv) financial inclusion interventions, including the provision of formal bank accounts, micro-insurance and micro-saving schemes, and mobile banking. Studies were also required to have included a report on an outcome related to emotional, physical, or sexual forms of IPV, including partners' controlling behaviors. No restrictions were applied to the follow-up timeline and duration of the intervention in question. Finally, given the topicality of the research question and a previous review published in 2009, we only included studies published from 1990 onward.

Search Strategy

We searched Web of Science, EconLit, PsycINFO, and seven registries and databases specialized in RCTs, impact evaluation, and systematic reviews, including 3ie Database for Systematic Reviews, the 3ie Impact Evaluation Repository, the Abdul Latif Jameel Poverty Action Lab, American Economic Association (AEA) Social Sciences Registry, Campbell Collaboration Library, and Evidence for Policy and Practice Information (EPPI)-Centre Library. The applied search string is provided in Supplement 1. Moreover, we hand-searched reference lists of included studies for further relevant studies. Finally, we identified protocols of ongoing trials and checked for their completion prior to publication of this systematic review.

Search Results

A total of 9,062 records were identified after de-duplication. Based on titles and abstract screening, the vast majority of papers (9,004) were discarded because they did not meet the inclusion criteria. Fifty-nine full texts were assessed. Of these, 19 were not based on an RCT design, six tested a noneligible outcome, five featured a noneligible intervention, three were protocols and did not report any results, in four studies, results had been previously published in another included paper, and one study was a quarterly report for which we included the corresponding final report. Based on this procedure, we ended up with a final list of 20 included studies (see Figure 1).

Data Extraction and Risk of Bias Appraisal

I.E.C. extracted data from the relevant studies into a prepiloted form, including information on (i) study participants (e.g., gender, age, socioeconomic status), (ii) content and duration of the economic empowerment intervention, (iii) violence outcomes assessed, and (iv) research design (including trial setup, sample size, and study duration). In addition, I.E.C. and J.I.S. assessed the risk of bias using a revised version of the Cochrane risk of bias tool for randomized trials (Higgins et al., 2011; Sterne et al., 2019). The tool provides a framework to judge whether there are issues across five domains that could introduce bias to the results, including integrity threats with regard to randomization procedures and blinding of participants and assessors, and a potential imbalance between study arms at baseline or at end line due to attrition. We additionally extended the tool to assess the risk of bias in the measurement of IPV, given that face-to-face interviews may bear a higher risk of social desirability bias relative to audio computer–assisted self-interviewing (ACASI) and list experiments. We also assessed whether the intervention was likely to spill over to participants in the control group and whether comparisons were isolated from other interventions. In order to reach a judgment, we looked at information provided in the journal article and in the trial registry records, statistical analysis plan, and the trial protocol where available. All risk of bias assessments were based on double ratings.

Meta-Analysis

In order to aggregate findings across studies, we calculated standardized effect sizes for all outcomes of interest. Specifically, we calculated Hedges' g effect sizes, defined as the standardized mean difference in the outcome of interest between treatment and control group, divided by the pooled standard deviation. We chose Hedges' g over Cohen's d to adjust for potential bias due to small sample size or unequal size of treatment arms in the primary included study.

In a next step, we applied robust variance estimation (RVE) techniques to quantitatively synthesize effect size estimates across studies. RVE allows to correct standard errors for within-study correlation if there are multiple effect size

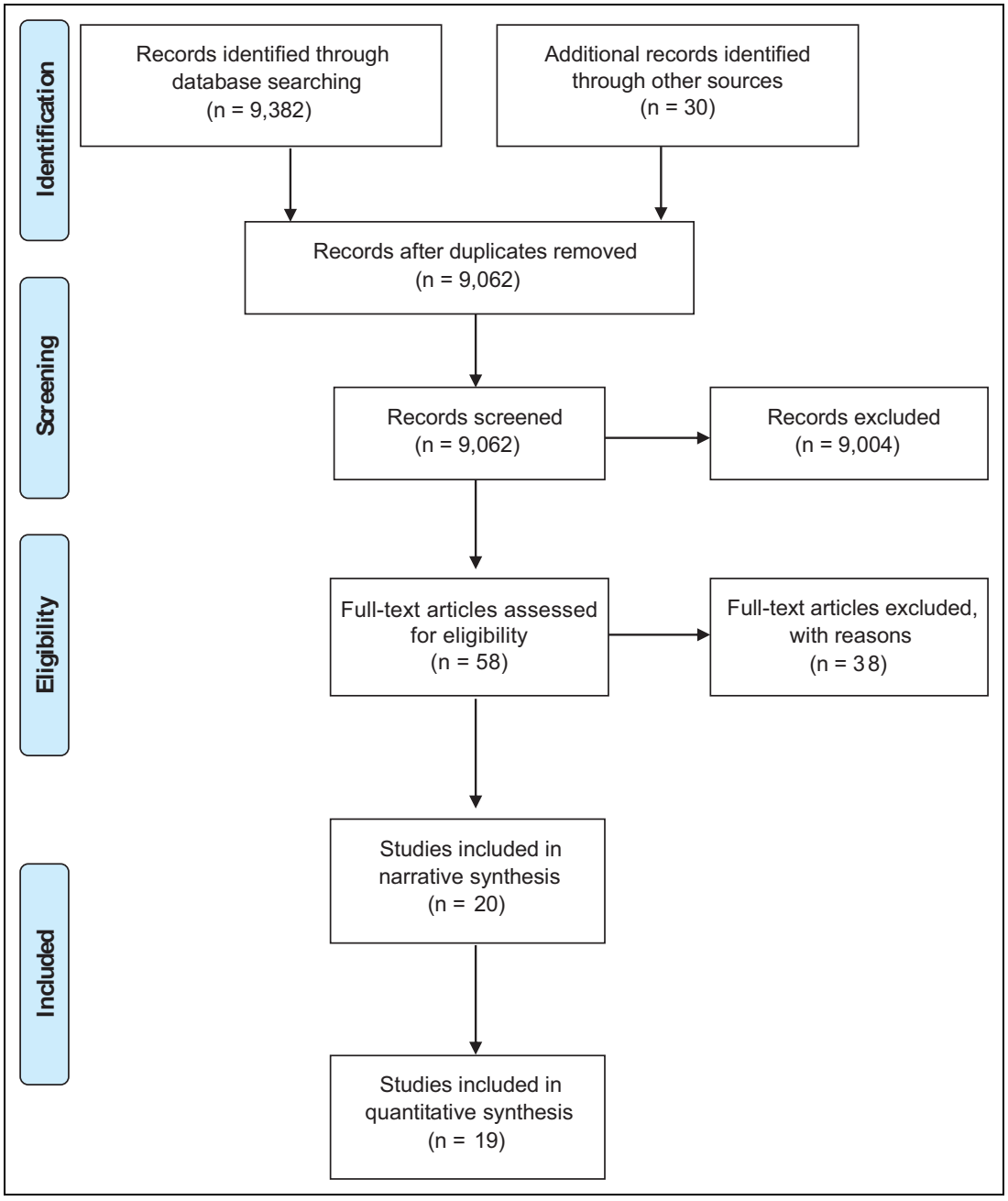

Figure 1. Flow chart.

estimates per outcome, for instance due to different statistical models (Hedges et al., 2010; Tipton, 2013). Following Tanner-Smith et al. (2016), the RVE model for pooling effect sizes was defined as:

$$y_{ij} = \beta_0 + u_j + e_{ij}, \quad (1)$$

where y_{ij} captures the outcome of interest (i.e., emotional, physical, or sexual IPV) and more specifically the estimated effect size $i = 1 \ldots k_j$ in study $j = 1 \ldots m$, and β_0 is the true effect size. Further, u_j is the study-level random effect, $\text{var}(u_j) = \tau^2$ is the between-study variance component, and e_{ij} represents the residual for the ith effect size in the jth study.

We first pooled effect sizes for outcome categories separately, namely physical, sexual, and emotional/psychological violence including controlling behaviors, and then combined all outcomes into one overall IPV measure. For each pooled effect size, we also estimated the degree of heterogeneity that could stem from diversity in study participants, intervention types, study settings, study designs, or definition and measurement of outcomes. For this, we calculated both I^2 and τ^2. I^2 captures the percentage of the variability in Hedges' g

estimates that occurs due to study heterogeneity rather than sampling error, and τ^2 is a point estimate of the between-study variance of "true" effect sizes (Higgins & Green, 2011). Given the relatively small number of included studies, we refrained from conducting additional meta-regressions. These would be based on very small subgroup sizes and thus be statistically underpowered.

Results

Study Characteristics

Characteristics of included studies are summarized in Table 1. Included studies were mainly carried out in Sub-Saharan Africa (Burkina Faso, Burundi, DR Congo, Ethiopia, Ivory Coast, Kenya, Mali, South Africa, and Zambia), some were conducted in Latin America (Ecuador, Colombia, and Mexico), South Asia (Afghanistan, Bangladesh, and India), and South East Asia (Vietnam; see Figure 2). Interventions were mostly implemented in rural areas. The total sample size across all eligible studies was 44,772. Of these, 92% were women and 8% were men. Fourteen studies included women only, and six studies were targeted at both women and men.

Fourteen of the included studies consisted of stand-alone economic empowerment intervention that included a range of intervention types, namely (i) conditional and unconditional cash transfers, (ii) food transfers and food vouchers, (iii) employment programs, (iv) livestock microfinance, (v) microfinance with business training, (vi) provision of community day care for children, and (vii) provision of a savings account. The remaining six studies combined economic empowerment components with specific gender awareness training. Of these, three studies additionally included women's partners and spouses in the training program. Two of these studies were multiarm trials (Green et al., 2015; Ismayilova et al., 2018) testing a pure economic empowerment intervention versus an enriched economic empowerment *plus* gender intervention versus a control group, whereas the remaining studies tested the combined intervention versus a control group. The shortest intervention had a duration of 6 months, and the longest intervention spanned 6 years and 6 months. Finally, the follow-up time varied greatly across studies, ranging between 6 and 60 months (see Table 1).

In terms of outcome measures, four types of IPV were captured, namely physical violence, sexual violence, emotional (psychological) violence, and controlling behaviors. Physical violence was by far the most often studied type of violence, followed by emotional/psychological violence and controlling behaviors, with sexual violence receiving the least attention across all studies. Fourteen of the included studies captured violence experiences based on face-to-face interviews, one study used an ACASI approach (Kilburn et al., 2018), three studies employed list experiments (Bulte & Lensink, 2019; Kotsadam & Villanger, 2020; Peterman et al., 2018), and two studies did not provide detailed information on the interview type. In addition, five studies (Heath et al., 2020; Ismayilova et al., 2018; Kotsadam & Villanger, 2020; Pronyk et al., 2006; Roy et al., 2018) explicitly stated that they had followed the WHO protocol on ethical guidelines for conducting research on women's experience with IPV.

Risk of Bias Appraisal

Most included studies had a moderate risk for bias according to the Cochrane risk of bias tool (see Table 2). As is often the case in psychosocial interventions (Cork et al., 2018), most studies were not able to ensure participant and personnel blinding. In addition, the majority of studies did not disclose whether the allocation sequence was concealed until participants were enrolled and assigned to the intervention or control group. Further, we were only able to retrieve the preanalysis plan for three included studies (Gibbs et al., 2020; Haushofer et al., 2019; Heath et al., 2020), thus hindering our ability to assess the risk of bias concerning the selection of the reported results for the remaining studies. The majority of studies relied on face-to-face interviews, which could have potentially increased social desirability bias, resulting in an underreporting of IPV experiences. Potential bias with regard to missing data was less of a concern. Most studies found no correlation between attrition and different baseline characteristics and no indication of differential attrition rates between treatment and control. Spillover risk and potential contamination through other similar programs were also judged as relatively low in most studies. For none of the studies was the risk of bias deemed to exceed a level so high as to warrant exclusion from the subsequent meta-analysis. However, we could not retrieve sufficient statistical information to calculate standardized effect sizes for the study by Iyengar and Ferrari (2016).

Finally, it is important to note that for interventions combining economic empowerment with gender awareness training in a single treatment arm, we are unable to disentangle whether the observed treatment effects on IPV are due to the empowerment component or due to the gender awareness component (or a combination of both). We therefore separated these studies from the pure economic empowerment interventions in our meta-analysis.

Quantitative Synthesis

We provide separate estimates of pooled RVE effect sizes for pure economic empowerment interventions and for "enriched" empowerment interventions that include additional gender-focused components. Starting with the impact of the former intervention type, we found overall reductions in all forms of violence (see Table 3). Specifically, economic empowerment resulted in a significant decrease in physical violence across all included studies ($g_{pooled} = -.099$, $p < .05$, 95% CI [−.17, −.03]) and a significant decrease in emotional violence ($g_{pooled} = -.085$, $p < .05$, 95% CI [−.17, −.00]). The effect size for sexual violence was also negative and similar in magnitude but remained nonsignificant ($g_{pooled} = -.109$, $p = .28$, 95% CI [−.35, .13]), possibly due to a smaller number of included

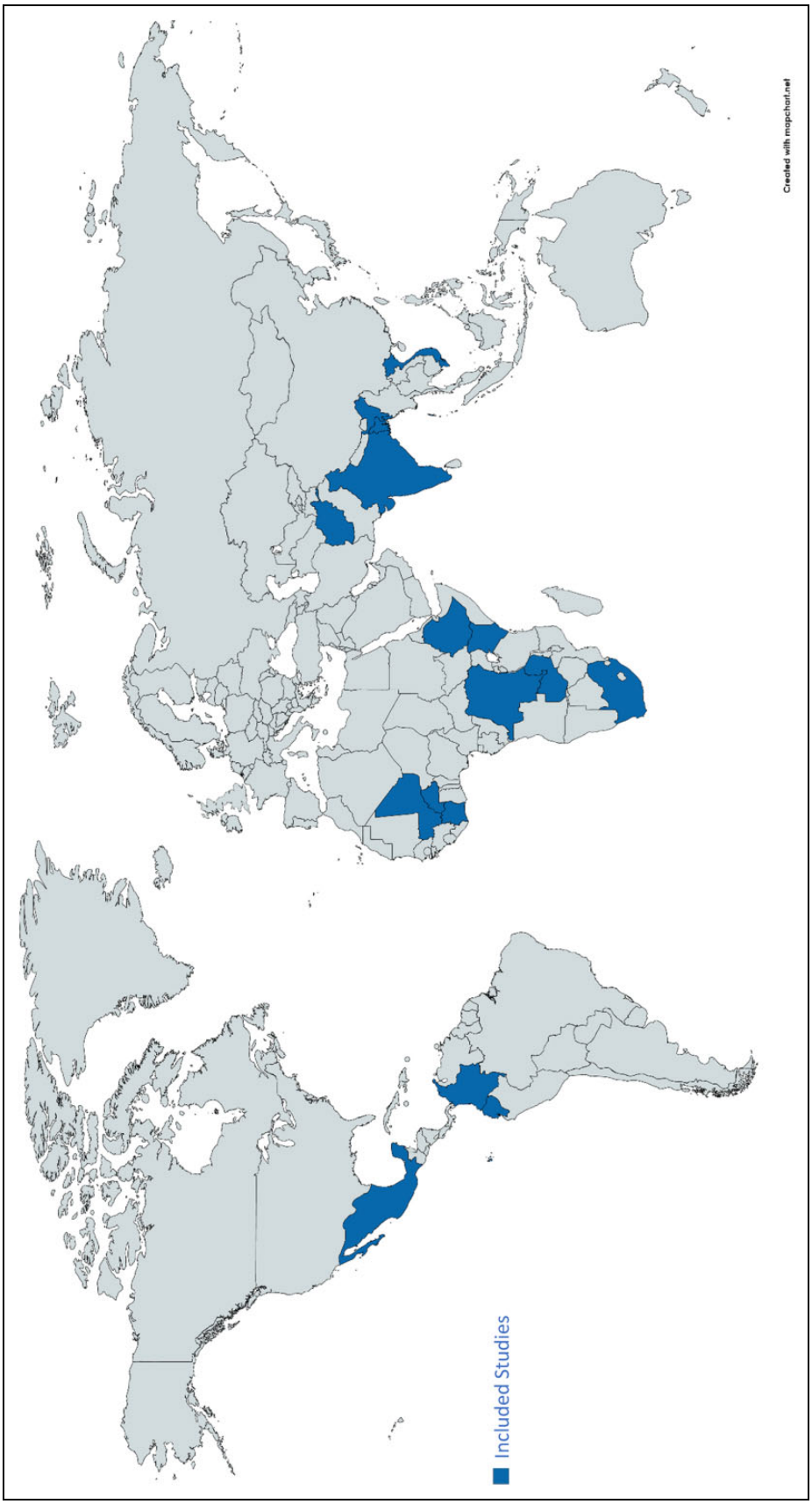

Figure 2. Geographical spread of included studies.

Table 1. Characteristics of Included Studies.

Study	Country/Setting	Study Participants	Intervention Type	Intervention Duration	Measured Outcomes	Reference Period IPV	Trial Design	Sample Size	Time to Follow-Up
Economic empowerment intervention versus no economic empowerment intervention									
Angelucci (2008)	Mexico/rural	Women	Conditional cash transfer	Ongoing (under the name of Prospera)	1. Aggressive behavior 2. Alcohol abuse	N/A	cRCT	INT: 6,350 CON: 6,350 [a]	Approximately 6 months after beginning of program
Gibbs et al. (2020)	Afghanistan/urban and peri-urban	1. Vulnerable women (war-/poverty-affected) 2. Aged 18–45	Numeracy and business skills, vocational training, information on saving, and monthly cash stipend	April 2017–April 2018 (12 months)	1. Past year PV 2. Past year severe IPV 3. Past year emotional IPV 4. Past week depressive symptoms 5. Women's gender attitudes 6. Women's involvement in decision making 7. Women's mobility 8. Abuse through siblings/in-laws 9. Food security, income, savings, and shock resilience 10. Life satisfaction	Prior 12 months	RCT	INT: 673 CON: 537	12 (midline) and 22 months
Glass et al. (2017)	DR Congo (eastern)/rural, conflict-affected, extreme low-resource setting	1. Men and women 2. 16 years or older 3. Partnered at baseline and follow-up	Livestock asset transfer	January 2011–September 2016 (6.5 years)	1. Economic stability and livestock/animal assets 2. Traumatic events, subjective health, and mental health 3. IPV (physical/sexual/psychological)	N/A	cRCT	INT: 162 CON: 311	18 months
Haushofer et al. (2019)	Kenya (western)/rural	1. Men and women 2. Eligible if living in a house with a thatched (rather than metal) roof at baseline	Unconditional cash transfer	1. One time 2. 9 months Treatment rollout: June 2011–January 2013	1. Assets, consumption, income, and food security 2. Health 3. Education 4. Psychological well-being 5. Intra-household bargaining 6. IPV (physical/sexual) 7. Economic preferences	Prior 6 months	Two-stage multiarm cRCT	INT: 471 households Spillover: 469 households CON: 432 households	On average 9 months after beginning of transfers
Heath et al. (2020)	Mali (regions of Sikasso, Segou, Mopti, Koulikoro, Kayes, Gao, and District of Bamako)/rural	1. Mothers aged 49 years or younger 2. Married at baseline 3. Poor households with child aged 6–23 months at the time of the baseline survey	Unconditional cash transfer with accompanying measures (centered around health, children's rights, and family economy)	Cash transfer paid every quarter over a 3-year period since 2014	1. IPV (physical/emotional/CB) 2. Household's economic well-being 3. Male spouse's emotional well-being 4. Women's relationship quality 5. Women's empowerment	Prior 12 months	Two-stage cRCT (only first-stage used for IPV)	INT: 998 CON: 263 [b]	23 months

(continued)

Table 1. (continued)

Study	Country/Setting	Study Participants	Intervention Type	Intervention Duration	Measured Outcomes	Reference Period IPV	Trial Design	Sample Size	Time to Follow-Up
Hidrobo and Fernald (2013)	Ecuador (coastal and highland)/rural and urban	1. Women aged 15–69 years with at least one preschool-aged child 2. Living with husband or partner at baseline	Unconditional cash transfer	June 2004 (rural parishes)/ November 2004 (urban parishes)—ongoing (Bono de Desarrollo Humano)	1. PV 2. CB 3. Emotional violence	Questions are not restricted to specific reference period PsV: questions phrased in present tense eliciting current reports of abuse	Two-stage multiarm cRCT	INT: 1,564 CON: 790	23 months
Hidrobo et al. (2016)	Ecuador (northern)/ urban	1. Women aged 15–69 years 2. In a relationship in the last 6 months 3. Be either the household head or the partner of household head	A. Food transfer B. Food voucher C. Conditional cash transfer	April 2011–September 2011 (6 months)	1. CB 2. Emotional violence 3. Moderate PV 4. Severe PV 5. Any physical or sexual violence	1. Prior 6 months 2. Ever	cRCT	INT: 1,014 CON: 411	7 months
Kilburn et al. (2018)	South Africa (Mpumalanga province)/rural but densely populated, high poverty and high HIV prevalence	Unmarried, not pregnant female high school students aged 13–20 years	Conditional cash transfer	2011–2015 (4 years)	1. Sexual violence 2. PV 3. Sexual behavior measures	1. Prior 12 months 2. Ever	RCT	INT: 1,225 CON: 1,223	12, 24, and 36 months
Kotsadam and Villanger (2020)	Ethiopia (Tigray, Amhara, Oromia, SNNP, and Dire Dawa)	Eligible female partnered entry-level applicants	Employment	Ongoing (until 2021)	1. Attitudes and experience with IPV (physical/emotional/ CB) 2. Female empowerment PV	Prior 12 months	RCT	INT: 631 CON: 631 [a]	6 months (also post-intervention)
Peterman et al. (2018)	Zambia/(Kalabo, Shangombo, and Kaputa districts)/ rural, districts with highest rates of adverse children's outcomes	1. Married or cohabiting women aged 15–49 years 2. Primary female adult in households with a child under the age of 5 years	Unconditional cash transfer	Ongoing		Prior 12 months	RCT	INT: 808 CON: 808 [a]	48 months
Pronyk et al. (2006)	South Africa (Limpopo province)	Poorest women in communities	Microfinance with gender and HIV training	June 2001–March 2005 (3.75 years)	1. Household economic well-being 2. Social capital 3. Gender equity 4. Empowerment 5. Vulnerability to violence	Prior 12 months	cRCT	INT: 430 CON: 430	Approximately 24 months post-intervention
Richardson et al. (2018)	India (Rajasthan)/rural	Mother (either biological or guardian) of at least one child between 1 and 6 years	Offer of full-time, community-run, affordable day care	October 2014–September 2017 (approx. 3 years)	1. Mental distress 2. Work demands 3. IPV (physical, psychological, and CB) 4. Women's agency	PV/PsV: prior 12 months CB: ever	cRCT	INT: 1,634 CON: 1,543	17 months (approx. 12 months post-intervention)

(continued)

Table 1. (continued)

Study	Country/Setting	Study Participants	Intervention Type	Intervention Duration	Measured Outcomes	Reference Period IPV	Trial Design	Sample Size	Time to Follow-Up
Roy et al. (2018)	Bangladesh (1. northwest/2. coastal southern)/rural	1. Women married at baseline 2. Poor households (consumption below lower poverty line in Bangladesh) with child aged 0–24 months in March 2012 3. Not receiving other benefits	1. Cash transfer 2. Food ration 3. Half cash transfer and half food ration 4. Cash transfer along with nutrition	May 2012–April 2014 (2 years)	1. Woman's economic resources 2. Agency 3. Household resources 4. IPV (physical/emotional)	Prior 6 months	Two cRCTs	INT: 1,115 CON: 1,115 [a]	6–10 months after the program ended
Tankard et al. (2019)	Colombia (southwestern)/urban	1. Women aged 18–55 years with a male partner (not necessarily cohabitating) 2. Had not used a formal or informal savings service or any service of the partnering bank within the past	Free, no fees, personal savings account	June 2013–January 2015 (2.5 years)	1. Formal banking experience 2. Economic status 3. Confidence 4. Attitudes of social empowerment 5. Perceived norms of social empowerment 6. Ending of relationship 7. IPV (financial, emotional, physical, and sexual) 8. Health checkup measures	Prior 6 months	RCT	INT: 1,364 CON: 436	18 months
Female economic empowerment + gender training intervention									
Bulte and Lensink (2019)	Vietnam (northern)/rural	1. Women aged 18 years or older 2. Members of Vietnamese microfinance organization targeting poor, entrepreneurial women	Training covering gender and standard business subjects	February 2012–October 2012 (9 months)	1. PV 2. Bargaining power 3. Profits	Prior 6 months	cRCT	List experiment: INT: 1,685 CON: 1,685 [a] Survey question: INT: 1,662 CON: 1,662 [a]	17 months (6 months after final session)
Green et al. (2015)	Uganda (northern part)/rural, formerly displaced people	1. Most vulnerable people in their communities 2. 3/4 women aged 14–30 years as stipulated by implementing organization	A. Phase 1: Microfinance with business skills training (standard) B. Phase 2: Microfinance with business skills training and added gender training (Women Plus, W+)	2009–2011 (2 years)	1.IPV (physical/sexual/emotional) 2. Attitudes toward gender norms 2. Quality of relationship with partner 4. Support from partner 5. Autonomy and influence in household purchases	Prior 8 months	Two cRCTs	Phase 1: INT: 896 CON: 904 Phase 2: INT: 465 (W+) CON: 439 (standard)	Phase 1: 20 months/16 months post-initial treatment Phase 2: 12 months post-delayed treatment
Gupta et al. (2013)	Côte d'Ivoire (north and northwestern)/rural	Women aged 18 years or older with no prior experience with microcredit program and a male partner	A. VLSA B. VLSA and gender dialogue group with male partner	October 2010–August 2012 (approx. 2 years)	1. Physical and/or sexual IPV 2. PV 3. Sexual IPV 4. Economic abuse 5. Gender norms (attitudes toward wife beating + ability to refuse sex)	Prior 12 months	RCT	INT: 650 CON: 548	21 months (12 months post-intervention)

(continued)

Table 1. (continued)

Study	Country/Setting	Study Participants	Intervention Type	Intervention Duration	Measured Outcomes	Reference Period IPV	Trial Design	Sample Size	Time to Follow-Up
Halim et al. (2019)	Tanzania (northern)/ rural	Women, aged 18 years and older, with a male spouse or partner Male partners of participating women, aged 18 years and older	Women: Saving and lending group and training on business skills, literacy, child nutrition and health, child protection, and IPV and HIV prevention Male partners: Participation in gendertransformative training via male peer groups (Intervention group 1) Participation in peer groups; and community leaders participate in gender dialogues (Intervention group 2)	August 2015–March 2016 (7 months)	1. Men's attitudes toward wife beating 2. Men's perpetration of and women's victimization of physical, sexual, emotional, and economic IPV	Prior 3 months	Multiarm cRCT	INT: 150 women–men dyads Group 1, 150 women–men dyads Group 2 CON: 150 women–men dyads	9 months
Ismayilova et al. (2018)	Burkina Faso (Nord Region)/rural, extreme poverty and food insecurity	Ultra poor households with eligible female caregiver of a 10- to 15-year-old child	A. Savings and loans group, micro-grant, household management, and livelihood development training (Trickle Up) B. Savings and loans group, micro-grant, household management, and livelihood development training and family coaching (Trickle Up Plus)	October 2014–December 2016 (2.25 years)	1. Women's economic empowerment status within the family (financial autonomy, decision making power, and gender norms) 2. IPV (physical/ emotional)	1. Prior 12 months 2. Ever	Two-stage, multiarm cRCT	INT: Trickle Up 120 Trickle Up Plus 120 CON: 120	12 months
Iyengar and Ferrari (2016)	Burundi (Makamba province)/rural, post-conflict setting	Women and men who participate in village savings and loans association (VSLA)	A. VSLA B. VLSA and discussion sessions for women and their spouses sharing progressive attitudes about the role of gender in household decision making regarding finances	N/A	1. Household consumption 2. Decision making and conflict resolution 3. Gender roles 4. Attitudes toward violence 5. Exposure to IPV (hurting, insulting, threatening, and screaming) 6. Women's rights	Prior 2 weeks	RCT	INT: 250 CON: 250 [a]	N/A

Note. IPV = intimate partner violence; cRCT = cluster randomized controlled trial; N/A = not applicable; INT = intervention; CON = control; PsV = psychological violence; CB = controlling behaviour; PV = physical violence; CBT = cognitive behavioural therapy; VSLA = village savings and loan association.

[a] Only total sample size reported in article, intervention and control group sizes were derived by dividing total size by 2. [b] Only total sample size reported in article, intervention and control group sizes were derived by assigning the proportion of clusters.

Table 2. Risk of Bias Summary.

	Randomization process	Deviations from interventions	Missing outcome data	Measurement of the outcome	Selection of reported result	Measurement of IPV	Spill-over to comparisons	Isolation of comparisons
Gibbs et al. (2020)	+	+	−	+	+	?	?	+
Glass et al. (2017)	?	+	+	+	?	?	−	+
Green et al. (2015)	?	?	+	±−	?	?	?	?
Gupta et al. (2013)	?	?	+	−	?	?	?	+
Halim et al. (2019)	−	+	+	−	?	?	?	?
Haushofer et al. (2019)	?	?	+	+	+	?	+	+
Heath, Hidrobo, and Roy (2018)	?	+	+	+	?	?	+	?
Hidrobo and Fernald (2013)	?	?	+	+	?	?	?	?
Hidrobo, Peterman, and Heise (2016)	?	?	+	+	?	?	?	?
Ismayilova et al. (2018)	?	?	+	±−	?	?	+	?
Kilburn et al. (2018)	?	?	−	+	?	+	?	?
Kotsadam and Villanger (n.d.)	?	?	+	?	+	+	?	?
Richardson et al. (2018)	?	?	+	+	+	?	+	?
Roy et al. (2018)	?	?	+	+	?	?	?	?
Tankard, Paluck, and Prentice (2019)	?	?	−	+	?	?	?	?
Pronyk et al. (2006)	?	?	−	−	?	?	?	+
Angelucci (2008)	?	?	−	+	?	?	?	?
Bulte and Lensink (2019)	?	?	+	+	?	+	?	?
Iyengar and Ferrari (2011)	?	?	−	−	?	?	−	?
Peterman et al. (2018)	?	?	+	+	?	+	?	?

Note. IPV = intimate partner violence. + low risk of bias; ? some concern/insufficient information; − high risk of bias; ±− high risk of bias for one treatment arm, low risk of bias for the other, for RCTs where it is not specified whether the authors followed an intention-to-treat or a per-protocol approach, it is not possible to assess the risk of bias for deviations of intended outcomes.

studies and effect sizes for this outcome category. The corresponding forest plots and grand pooled estimates (denoted by a diamond symbol in each graph) for the respective outcome categories can be found in Supplementary Figures S1–S3. In Column (4), we combined all three outcomes into one overall measure, revealing a significant decrease in IPV across 16 studies ($g_{pooled} = -.089$, $p < .01$, 95% CI [−.15, −.03]). Heterogeneity was high with I^2 statistics ranging from 76% to 91%. This may point to substantial variations in program designs, participant characteristics, follow-up time frames, and survey formats (e.g., face-to-face interviews vs. other forms).

In a subsequent step, meta-analysis was performed for studies testing interventions with an additional gender-sensitization component. As shown in Table 4 and Supplementary Figures S4–S6, the pooled effect sizes again pointed to reductions in all three types of IPV. We report a significant reduction in exposure to sexual violence among treatment group participants in the two respective RCTs ($g_{pooled} = -.114$, $p < .05$, 95% CI [−.17, −.06]). The magnitude of all effect sizes was larger compared to effect sizes for the stand-alone economic empowerment interventions. This may suggest that the additional gender training helped to further protect the women who

Table 3. Pooled Effect Sizes for Pure Economic Empowerment Interventions.

	Physical IPV (1)	Sexual IPV (2)	Emotional IPV (3)	All IPV (4)
Hedges' *g* (*SE*)	−0.099* (0.03)	−0.109 (0.09)	−0.085* (0.04)	−0.090** (0.03)
95% CI	[−0.17, −0.03]	[−0.35, 0.13]	[−0.17, −0.00]	[−0.15, −0.03]
I^2 (%)	85.79	90.72	76.22	86.63
τ^2	0.016	0.027	0.011	0.013
No of studies	14	5	12	16
No of effect sizes	43	6	36	81

Note. IPV = intimate partner violence.
*p < .05. **p < .01. ***p < .001. ****p < .10.

Table 4. Pooled Effect Sizes for Economic Empowerment + Gender Sensitivity Interventions.

	Physical IPV (1)	Sexual IPV (2)	Emotional IPV (3)	All IPV (4)
Hedges' *g* (*SE*)	−0.169 (0.10)	−0.114* (0.00)	−0.297 (0.14)	−0.180 (0.099)
95% CI	[−0.44, 0.10]	[−0.17, −0.06]	[−0.74, 0.15]	[−0.46, 0.10]
I^2 (%)	87.12	56.00	92.85	92.45
τ^2	0.030	0.013	0.102	0.053
No of studies	5	2	4	5
No of effect sizes	17	6	19	35

Note. IPV = intimate partner violence.
*p < .05. **p < .01. ***p < .001.

participated in the program or, in other words, to reinforce the violence-mitigating effect of the economic empowerment component. However, this remains a conjecture since three of four pooled effect sizes in this case were not statistically significant. Similar to the above analysis, heterogeneity was quite substantial with I^2 values ranging from 56% to 93%. This heterogeneity may partly stem from variations in targeting strategies, whereby some interventions were addressed at both women and their partners and some were exclusively aimed at women. While meta-regressions would allow us to assess potential sources of heterogeneity in more detail, we do not have a sufficient number of included studies and thus adequate statistical power to proceed with statistical analyses of this type.

The majority of studies reported positive or null effects on different forms of IPV. However, four studies found evidence suggesting an *increase* in IPV in the intervention group. Green and colleagues (2015) observed a rise in partners' controlling behaviors after women's participation in an entrepreneurship training in Uganda. Likewise, Hidrobo and Fernald (2013) documented an increase in controlling behaviors but only for the subgroup of women who had undergone less than 6 years of schooling and whose partners' educational status was either to or lower than their own. For studies that tested economic empowerment interventions with additional gender-focused curricula, Halim and colleagues (2019) reported an increase in economic violence. The outcome measure consisted of indicators, such as prohibiting the woman from going to work, from managing her own financial resources, and taking away her salary, and can thus be understood as a form of controlling behaviors in the economic realm. Finally, Bulte and Lensink (2019) found evidence of an increase in physical violence following an entrepreneurship and gender training in Vietnam.

Discussion

IPV is a widespread global phenomenon with far reaching consequences. We present the first meta-analysis to date to establish whether economic empowerment interventions targeted at women have the potential to lower their risk of experiencing abuse. Overall, the examined evidence suggests that, in most settings, women's economic empowerment was associated with a decrease in IPV. Effect sizes for different forms of violence ranged from a Hedge's g of −.11 to −.08 for pure economic strengthening programs and from −.30 to −.11 for programs with additional gender sensitization components. Although the documented effect sizes would be classified as small (Cohen, 1988), they match the magnitude of pooled treatment effects reported in other meta-analyses of international development programs (e.g., McEwan, 2015; Saavedra & Garcia, 2012; Steinert et al., 2018). Larger intervention effects were generally observed for more "generous" cash-transfer and microfinance interventions (e.g., Haushofer et al., 2019; Hidrobo et al., 2016; Kilburn et al., 2018; Pronyk et al., 2006), possibly because they have a greater financial impact in comparison to more "subtle" economic interventions such as savings programs, vocational training, or provision of child care. However, since a meta-analysis was not feasible due to limited statistical power, we can only speculate about reasons for heterogeneity in the magnitude of effect sizes.

Despite generally being able to report beneficial effects, there was some evidence suggesting possible harmful effects. These were primarily documented as taking the form of controlling behavior, which we conceptualized as an expression of emotional violence. It is possible that women who are particularly disempowered and vulnerable at baseline are at higher risk of being exposed to highly controlling behaviors in the period following the intervention. This is corroborated by Hidrobo and Fernald (2013), who found that women with poor educational status were more at risk, and may also apply to the study by Green and colleagues (2015), which focused on marginalized, displaced women in post-conflict Uganda. As described in Halim and colleagues (2019), controlling behaviors may manifest in the form of financial control and in appropriating women's financial resources. Hence, it is possible that women's participation in an economic empowerment program and their linked earning potential may motivate male partners to try to extract financial resources for their own benefit. Consequently, this dynamic is likely more pronounced in relationships in which the woman assumes a more subordinate role. Strikingly, this risk also persisted in programs with specific gender sensitization components and active involvement of male partners (Halim et al., 2019). It therefore remains unclear whether women are more adequately protected if an empowerment intervention is exclusively targeted at them or when their partners are also directly involved in the intervention. Future research on this question is urgently needed and should employ multiarm designs to test different targeting strategies against each other. Another possible explanation for the increase in men's controlling behaviors relates to the tendency to substitute one form of violence with another. This has been highlighted in previous studies, suggesting that "[t]here is concern that programs which focus primarily on physical and sexual violence prevention may inadvertently shift men toward emotional abuse" (Abramsky et al., 2014, p. 1). Against this backdrop, these aspects must be carefully considered in future program designs to ensure that well-intentioned interventions do not backfire.

Future studies should also place a stronger emphasis on utilizing indirect measurement approaches such as list experiments and random response techniques to alleviate possible underreporting of violence experiences. The benefits of such approaches are illustrated particularly strikingly in the study by Bulte and Lensink (2019). Here, participants reported a small reduction in IPV based on direct elicitation but then disclosed *higher* post-intervention levels of violence when asked through the list experiment. While underreporting would not invalidate the integrity of an experimental design if it occurred in the treatment and control group equally, it is possible that treatment group participants are "primed" by the intervention and tend to overstate possible benefits due to social desirability bias or a "Hawthorne effect" (Cluver et al., 2018). It is therefore possible that the true treatment effect—or in the worst case, iatrogenic treatment effect—is masked in studies that rely exclusively on direct survey formats.

Some limitations must be noted. A first potential shortcoming is linked to the inclusion criteria related to study design. While RCTs are considered the "gold standard" design of impact evaluations (Webber & Prouse, 2018), one of their weaknesses, as pointed out by Deaton (2010), is that they offer a limited explanation as to which channels the established causal links work through. While other study designs such as qualitative data analyses can help illuminate these mechanisms of change (see Steinert et al., 2018), they were not captured in this review. Our ability to understand which processes led to a reduction in IPV risk and which program components remained ineffective or may even have caused harm is thus limited. Apart from this, and reflecting another inherent challenge of most RCTs, we are unable to examine longer term—or even intergenerational—effects of economic empowerment, given that most included studies did not have follow-up data reaching further than 2 years. Third, the search string was written in English and may have introduced a substantial geographical bias to the identified list of publications. When handsearching the reference list, we also screened and assessed all German- or Spanish-language publications for eligibility, all of which turned out to be noneligible. However, there might have been some valuable studies written in other languages that were not included but would have met the eligibility criteria. Fourth, the geographic scope of this review was limited since eligibility was constrained to studies implemented in low- and middle-income countries. It therefore remains questionable whether the findings of this review—along with their policy implications—should be applied to Western (and high-income) contexts. Relatedly, previous studies have pointed to substantial cross-national and cross-cultural variations in the root causes of IPV, which may stem from heterogeneity in the intensity of patriarchal family structures and from differences in sociocultural norms on female subordination (Arthur & Clark, 2009; Heise et al., 1994; Kacen, 2006; Levinson, 1989; Whaley, 2001). Hence, it is possible that improving women's access to economic resources is associated with a diminished risk of violence in some contexts (as was the case in most studies included in this review) while it increases the risk of violence in other contexts. A final limitation is related to the emphasis on individual-, household-, and community-level interventions. Changes occurring at the national level, such as changes in legislation permitting women to own or inherit property, are not considered in this review—although they, too, may empower women economically and thus carry implications for IPV (Heise, 2011).

Our results indicate that most economic empowerment interventions, on average, led to a decrease in IPV. On the one hand, our findings thus endorse economic strengthening as a viable policy tool for reducing gender-based violence. On the other hand, they highlight the need for future research in order to better understand under which circumstances and for whom economic strengthening may have unintended negative consequences. Moreover, further research should study how economic empowerment interventions can impact IPV in the

long run and whether they may have beneficial intergenerational impacts.

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Supplemental Material

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