

**REVISÃO** REVIEW

# Women economic empowerment via cash transfer and microcredit programs is enough to decrease intimate partner violence? Evidence from a systematic review

O empoderamento econômico das mulheres através de programas de transferência de renda e de microcrédito é suficiente para diminuir a violência entre parceiros íntimos? Evidências de uma revisão sistemática

¿El empoderamiento económico de las mujeres a través de programas de transferencia de renta y de microcréditos basta para disminuir la violencia doméstica? Evidencias de una revisión sistemática Tatiana Henriques Leite <sup>1</sup>
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#### **Abstract**

Intimate partner violence (IPV) is a worldwide public health problem. Many proposals aiming to eliminate its occurrence include the empowerment of women through their socio-economic development. In this context, some studies suggested that microcredit programs (MP) and cash transfer programs (CTP) are initiatives that can also reduce the risk of IPV. Others pointed to an opposite effect. The objective of this study was to investigate the influence of women's economic empowerment in MP and CTP on the risk of physical, psychological and sexual violence through a systematic review. Papers/documents selection was conducted by two researchers according to the following criteria: published in English, Portuguese or Spanish; primary data; assessing the effect of MP or CTP on IPV; in heterosexual couples; on women beneficiaries of the intervention; using a comparator group eligible for an MP or CTP; and focusing on risk IPV as the outcomes. Our results showed that the impact of MP are mixed when it comes to physical and physical/sexual violence. Even so, the review suggests that the effect of MP on sexual violence is trivial or nonexistent. Regarding the impact of CTPs, the present study showed that the effects on physical, physical/sexual, psychological, and sexual violence were also heterogeneous. Women more empowered and with some autonomy could be at risk. Despite that, participation in the empowerment program should be encouraged for poor women and families. However, parallel interventions to lead with IPV should be addressed to the main actions to reduce the risk of increasing IPV prevalence in certain scenarios.

Intimate Partner Violence; Government Programs; Empowerment; Women

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# Introduction

Intimate partner violence (IPV) is an important public health problem worldwide due to its high prevalence and severe consequences not only for the individuals and families involved but also to society at large 1. The estimated prevalence of IPV varies between 16.3% and 65.6%, with the highest values found in South Asia (41.7%), the Andean region of Latin America (40.6%) and central Sub-Saharan Africa (65.6%) 1. The consequences of IPV are massive, involving mental, physical and sexual problems, low professional productivity, and offer several barriers for victims to engage in normal, flourishing social activities 2.

Women's economic empowerment, defined here as the ability to generate independent income 3, is considered a key factor in the prevention of IPV 4,5,6. Programs based on microcredit or cash transfer aimed at eradicating poverty have thus been regarded as potential tools for reducing IPV. The main purpose of both types of program is to break the cycle of poverty by bringing women into the labor market - microcredit programs (MP) 7 - or by monthly transfers of fixed benefits to families in extremely vulnerable situations, also known as cash transfer programs (CTP) 8. CTP may be nonconditional when there are no restrictions to a payee's permanence in the program, or conditional, when child health and educational actions are required from the beneficiary for the inclusion and continuity in receiving benefits 8.

Different theoretical frameworks have been used for trying to predict the consequences of women's economic empowerment on IPV. Tauchen et al. 9, for instance, indicate that, depending on the context, IPV could either increase or decrease following an improvement in women's economic status. This model asserts that the increase of women's income raises their bargaining power within the marriage. In certain conservative gender-related contexts, this increases women's participation in the decision-making process within the domestic sphere, making marriage power relations more equitable, thus leading to a reduction in IPV. In other contexts, these increases in women's income could shift power relations towards the women, increasing IPV when men perceive that their authority within the family is fading following their relatively diminished participation as the main bread-winner 9.

According to Farmer & Tiefenthaler 10, raising women's income should necessarily lead to less IPV due to the decrease in their economic dependence on the partner. Reducing the financial gap lowers the tendency to tolerate frustrations and dissatisfaction in marriage, including IPV. In the opposite direction, Block & Rao 11 proposed that increasing women's income will further encourage a violent partner using violence as a strategy to extract financial resources from the victim.

Although these models help in building a rationale for the relationship between women's economic empowerment and IPV, there is no established consensus. Empirical evidence goes in the same direction. While some studies have shown MP protecting women against IPV 12,13,14, others do not detect this effect. There is also research showingthat women participating in an MP are more prone to be involved in IPV 15,16. The same controversy is detected in the literature assessing the effect of CTP 17,18.

This lack of consensus has sparked a number of systematic reviews 19,20,21. The first was published in 2009 and aimed to identify whether women's economic and social empowerment was associated with a lower risk of violence against women. Vyas & Watts 19 concluded that economic autonomy has a protective effect in almost all situations. However, they also noted that in specific contexts such as extreme poverty and low education, a woman's financial independence may in fact increase the risk of victimization. Although commendable for providing a first overview on the subject, this study involved only journals indexed in a single database (MEDLINE) and restricted to papers published in English. The second review was published in 2015 20 to assess the effect of economic and/or social interventions on IPV. Based on a qualitative summary of the literature, the authors found that overall, interventions lead to less IPV and controlling behaviors of partners. Although this review improved on the former, its scope remained narrow to the extent that it was still confined to two databases (MEDLINE and Web of Science) and English-only papers. Moreover, only one of the 16 identified studies examined the effects of CTP.

The most recent review <sup>22</sup>, published in 2017, aimed to undertake a comprehensive review of published papers on the impact of economic interventions sought to prevent IPV and HIV risk behaviors. The review was once again restricted to articles written in English between January 2000 and January 2015 in three databases (MEDLINE, Web of Science and EbscoHost). Google Scholar was used to identify the related gray literature. In some studies, CTP failed to show any effect on IPV. In others, the initiative decreased violence. Microcredit interventions also entailed mixed outcomes, with some studies showing increase, decrease and no effect at all on IPV. Interventions combining microcredit and gender transformative interventions tended to have more positive outcomes, reducing IPV. However, the results presented were grouped only by the type of intervention, which precluded identifying the programs' impacts according to different types of violence 22. The literature selection strategies were also a limitation, as they were not able to identify important papers uncovered in previous reviews.

Given these shortcomings, further studies involving more comprehensive summaries are required. To this end, this paper provides a new systematic review, offering a broader perspective, both in covering a broader range of databases, languages, and economic empowerment programs, and in distinguishing between occurrence setting and types of IPV. Specifically, we investigate the effects of CTP and MP on the occurrence of physical, psychological and sexual IPV against women.

#### Methods

# Protocol and search strategy

The study protocol was registered in the PROSPERO (2016: CRD42016035980). Nine databases were accessed, namely, MEDLINE, LILACS, Cochrane, Embase, Science Direct, PsycINFO, Scopus, WHOLIS, and Open Gray. The last two relate specifically to the related "gray literature". The search was conducted on MEDLINE without language restriction and adapted for the other databases, according to the following strategy: ((("Domestic Violence" [Mesh] OR "Battered Women" [Mesh] OR "Spouse Abuse" [Mesh] OR "intimate partner violence" OR "domestic violence" OR "spouse abuse" OR "battered woman" OR "wife abuse" OR "family violence" OR "partner violence"))) AND ((("Income" [Mesh] OR "small business" [Mesh] OR "cash transfer" OR "public transfer" OR "micro-credit" OR "micro credit" OR "microcredit" OR "income generation" OR "income generating" OR "economic empowerment" OR "cooperatives" OR "micro-finance" OR "micro finance" OR "micro-enterprise" OR "micro enterprise" OR "microenterprise" OR "small business" OR "business, small" OR "small loans" OR "micro loans" OR "microloans" OR "micro-loans" OR "incomes" OR "income generation programs" OR "income generation program" OR "program, income generation" OR "programs, income generation" OR "savings" OR "income distribution" OR "distribution, income" OR "distributions, income" OR "income distributions" OR "family income"))). The search strategies used in the different databases may be provided by authors upon request. Manual searches were also conducted in the reference sections of all selected studies. Database search took place in January 2018.

# **Selection process**

The selection process was independent (T.H.L. and E.S.M.). Papers/documents were first selected on titles and abstracts, according to the following inclusion criteria: publications in English, Portuguese or Spanish; papers/documents related to MP or CTP and IPV; and studies on heterosexual couples. The next step involved reading the text in full, and applying the following eligibility criteria: papers/ documents with primary data; women as the beneficiary of the intervention; presence of a comparator group eligible for an MP or CTP; and estimates of prevalence, incidence and relative risk/odds ratio related to physical, psychological or sexual IPV. All inconsistencies regarding the inclusion of papers/documents were discussed by the two researchers until a consensus was reached.

#### **Data extraction**

Extracted data comprised the paper's identification, demographic characteristics of the study participants and the following methodological features: sample size, intervention strategy, measurement tools used to tap IPV, data collection period, effect measures and analysis strategies employed. The extraction was also carried out independently (T.H.L and E.S.M). Disagreements were solved by referencing back to the original publication and consensus.

### **Data analysis**

The literature synthesis was implemented according to the type of intervention, study design and type of violence. When the subgroups formed by these variables entailed more than five original papers, the stratification also encompassed physical and physical/sexual baseline IPV prevalence; place of living (rural vs. urban); and religion.

Assessment of study quality followed the recommendations found in *The Joanna Briggs Institute Reviewers Manual 2014* (MAStARI Critical Appraisal Checklist), for surveys/case series and experimental studies <sup>23</sup>. The MAStARI is the most adequate tool for observational studies, which comprise the majority reviewed. Checklists for experimental and survey/case studies encompass ten and nine items, respectively (Tables 1 and 2). In observational checklist, since the sixth item is only appropriate for case series and none of the selected studies were of this type, it was excluded from the checklist. In the same questionnaire, item seven was also adapted to seize the response rate of the population eligible to participate in the study. A response rate equal to or above 85% was considered appropriate <sup>24</sup>.

Item Q1 (Truly Randomization) and Q4 (Intention to Treat Analysis) were chosen for the methodologic quality evaluation of experimental studies; and Q1 (Random or Pseudo-Random Sample) and Q9 (Statistical Analysis) when dealing with observational ones. The latter criterion considered the women's age and educational status as the minimum set of confounders for judging the appropriateness of a given analysis.

Initially, data analysis and interpretation considered all selected original papers, but we also performed a subgroup evaluation considering only the investigations without methodological limitations on the criteria mentioned above.

Table 1

Critical appraisal results for randomized controlled trials according to the MAStARI Critical Appraisal Checklist.

Reference	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Microcredit										
Green et al. <sup>28</sup> (2015)	Υ	N	N	Υ	N	N	Y	Υ	N	Υ
Pronyk et al. <sup>25</sup> (2006)	Υ	U	U	N	U	Υ	Υ	Υ	Υ	Υ
Tsai et al. <sup>29</sup> (2016)	U	N	N	Υ	U	N	Y	Υ	Υ	Υ
Cash transfer										
Angelucci <sup>6</sup> (2008)	Υ	U	U	U	U	Υ	Υ	Υ	U	Υ
Hidrobo & Fernald 18 (2013)	Υ	U	U	U	U	Y	Υ	Υ	Υ	Υ
Pettifor et al. 44 (2016)	Υ	N	Υ	Υ	Υ	Υ	Υ	Υ	U	Υ

N: no; U: unclear; Y: yes.

Note: Items: Q1 - Truly Randomization; Q2 - Participants Blinded; Q3 - Allocation Concealment to Groups; Q4 - Intention to Treat Analysis;

Q5 - Outcome Evaluator Blinded to Allocation; Q6 - Control and Treatment are Comparable; Q7 - Groups treated Identically Other than Intervention;

Q8 - Outcomes Measured in the Same Way for All Groups; Q9 - Outcome Measurement; Q10 - Statistical Analysis.

Table 2 Critical appraisal results for included studies using the MAStARI Critical Appraisal Checklist – descriptive/case series studies.

Reference	Q1	Q2	Q3	Q4	Q5	Q7	Q8	Q9
Microcredit								
Ahmed <sup>41</sup> (2005)	N	Υ	Υ	N	N	U	Υ	Υ
Bajracharya & Amin <sup>35</sup> (2013)	Υ	Υ	Υ	Υ	Υ	Υ	U	Υ
Bates et al. <sup>31</sup> (2004)	N	Υ	Υ	Υ	N	Y	U	Υ
Bhuiya et al. <sup>15</sup> (2003)	N	Υ	Υ	U	N	U	Υ	N
Cepeda et al. <sup>40</sup> (2017)	U	Υ	Υ	N	Υ	U	Υ	Υ
Chin <sup>34</sup> (2012)	N	Υ	Υ	N	Υ	N	U	Υ
Dalal et al. 16 (2013)	N	Υ	Υ	Υ	Υ	N	Υ	U
Dutt et al. <sup>14</sup> (2015)	Υ	N	Υ	Υ	Υ	Υ	Υ	N
Hadi <sup>32</sup> (2000)	U	Υ	Υ	N	Y	Υ	Υ	U
Hadi <sup>13</sup> (2005)	U	Υ	Υ	N	Y	Υ	Υ	U
Hasan et al. 42 (2014)	N	Υ	Υ	U	N	U	Υ	Υ
Karim & Law <sup>43</sup> (2016)	Υ	N	Y	Υ	N	N	U	Υ
Kim et al. <sup>37</sup> (2009)	Υ	Υ	Υ	Υ	Y	U	Υ	Υ
Koening et al. <sup>33</sup> (2003)	U	Υ	Υ	N	N	Υ	U	Υ
Murshid et al. <sup>38</sup> (2015)	Υ	Υ	Υ	Υ	N	N	U	Υ
Murshid <sup>36</sup> (2016)	Υ	Υ	Υ	Υ	N	N	U	Υ
Naved & Persson <sup>26</sup> (2005)	Υ	Υ	Υ	Υ	N	U	Υ	Υ
Sarker et al. <sup>30</sup> (2016)	Υ	N	Y	U	Υ	U	U	Υ
Schuler et al. 12 (1996)	N	U	Υ	N	N	Υ	U	Υ
Vyas et al. <sup>39</sup> (2015)	Υ	Υ	Υ	Υ	N	Y	U	N
Cash transfer								
Aísa <sup>49</sup> (2014)	Υ	U	Υ	N	Υ	U	U	N
Bobonis et al. <sup>17</sup> (2013)	Υ	Υ	Υ	U	Υ	N	U	Υ
Bobonis et al. <sup>48</sup> (2015)	Υ	Υ	Υ	U	N	N	U	Υ
Perova <sup>47</sup> (2010)	Υ	Υ	Υ	N	N	N	U	Υ
Rivera et al. <sup>46</sup> (2006)	N	Υ	Υ	N	Υ	Υ	U	Υ
Tolman & Rosen <sup>45</sup> (2001)	Υ	Υ	Υ	Υ	N	Υ	U	N

N: no; U: unclear; Y: yes.

Note: Items: Q1 - Random or Pseudo-Random Sample; Q2 - Criteria for Inclusion Defined; Q3 - Strategies to Deal with Confounding; Q4 – Outcomes Assess; Q5 – Comparisons Between the Groups; Q6 – Not Applicable; Q7 – Response Rate; Q8 - Outcome Measurement; Q9 - Statistical Analysis.

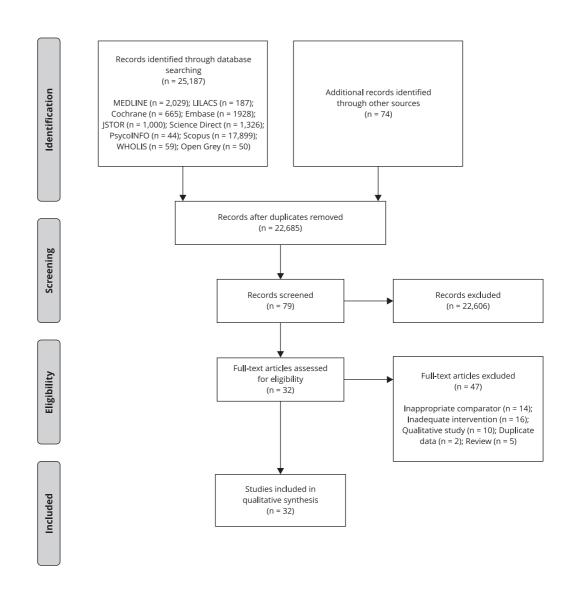
# **Results**

# **Study selection**

As shown in Figure 1, 22,685 non-duplicate references were recovered. Applying the inclusion and the eligibility criteria, 32 studies were selected for the full-text review. While reading the full papers, two were identified as having the same content 5,25, and another two shared the same dataset although involving different confounding variables in the statistical analysis <sup>26,27</sup>. To avoid bias from duplication, only the first publication in both situations was included in the ensuing analyses <sup>25,26</sup>.

Figure 1

Flow chart of search.



Source: Moher et al. 56. For more information, visit http://www.prisma-statement.org.

# **Study characteristics**

Table 3 shows the general and methodological characteristics of the studies. All were published between 1996 and 2017, particularly after 2010. Research was conducted in Bangladesh (16), Mongolia (1), Tanzania (2), South Africa (3), Uganda (1), United States (1), Guatemala (1), Ecuador (1), Mexico (5) and Peru (1). Twenty-six were surveys and six were randomized controlled trials. Twenty-three studies covered the effects of MP while nine focused on CTP. Most studies concerned married or ever-married women. Only five used specific population: men (2), women with disability (1), school girls (1) and sex workers (1). The comparator groups were composed of women who did not participate in the economic empowerment programs albeit potentially eligible. Physical violence was the most studied type of violence, followed by a combination of physical and sexual violence. The

Table 3  $Identification, participants \ and \ main \ methodological \ characteristics \ of the \ studies \ selected \ for \ the \ systematic \ review.$ 

References	Country (Year)	Study design/ Participants/ Sample size	Baseline prevalence of IPV	Intervention	Control intervention	Type of IPV/ Measurement tool/Recall period	Confounding and effect modification variables
Microcredit							
RCT							
Green et al. <sup>28</sup>	Uganda (2015)	Cluster RCT; rural villages, marriage or single women (14-30 years); Christians: 85%; sample size: 1,546	Not informed	Microcredit + business skills training + follow- up support	Microcredit non-members	Physical, psychological violence and control behavior; 14 isolated questions about IPV; recall period: last 8 months	Employment, started enterprise since baseline, currently doing business, average work hour per week, income, monthly cash earnings, durable assets, non-durable consumption, perceptions of women's autonomy, self-reported autonomy, partner
5	G 4.5.1	al . Dat	51	marge de la		DI	relationship index
Pronyk et al. <sup>25</sup>	South Africa (2006)	Cluster RCT; rural villages, marriage women (> 50%); sample size: 860	Physical or/ and sexual IPV prevalence: 11% (intervention group) and 9% (comparison group) in the last year	IMAGE *: credit + training + lecturer education + ten sessions about gender education	Microcredit non-members	Physical and sexual IPV combined. WHO's questionnaire **; recall period: last 12 months	Women's age, village pair, marital status, lifetime experience of intimate-partner violence by current partner at baseline
Tsai et al. <sup>29</sup>	Mongolia (2016)	Individual RCT; urban villages, women engage in sex work; Buddhists: 53%; sample size: 107	Physical or/ and sexual prevalence: 48% in control group, 40,4% in microcredit group	Credit + 4 sessions intervention about sex protection, safety and sexual risk reduction	Microcredit non-members	Physical, sexual and physical and sexual combined IPV; CTS questionnaire ***; recall period: last 3 and 6 months	No adjustment

Table 3 (continued)

References	Country (Year)	Study design/ Participants/ Sample size	Baseline prevalence of IPV	Intervention	Control intervention	Type of IPV/ Measurement tool/Recall period	Confounding and effect modification variables
<b>Microcredit</b> Surveys							
Ahmed 41	Bangladesh (2005)	Rural village, ever-marriage women (15-49 years); Islamics: 86,6%; sample size: 2,044	Prevalence of physical or psychological IPV: 14,5%	BRAC #: non-formal education, skill development training, and collateral-free loan for income generating activities	Eligible BRAC non-members	Physical and psychological violence; isolated questions about IPV; recall period: last 4 months	Women's age, education, contribution to household income, currently-alive children, age and schooling of household head, poverty status
Bajracharya & Amin <sup>35</sup>	Bangladesh (2013)	Rural and urban villages, ever-marriage women (15-49 years); Muslims: 90%; sample size: 4,195	Prevalence of physical or sexual violence in microcredit group: 28%; microcredit non-members: 21,5%	Grameen Bank #, BRAC #, ASA #, Proshika # and others microcredit programs	Microcredit non-members	Physical and sexual violence; CTS adaptation (8 questions) ***; recall period: last 12 months	Women's age and education, age at first marriage, spouse's education, household size, household sex, socioeconomic status, district, rural/urban
Bates et al. 31	Bangladesh (2004)	Rural villages, marriage women (< 50 years); Muslims: 96%; sample size: 1,211	Prevalence of physical IPV: 35%	Microcredit	Microcredit non-members	Physical IPV; adaptation of the WHO's questionnaire ** (6 questions); recall period: last 12 months	Women's age, education, and contribution to household income, registered marriage, dowry agreement, household socioeconomic status
Bhuiya et al. <sup>15</sup>	Bangladesh (2003)	Rural village, ever-marriage women (17-70 years); Muslims: 91%; sample size: 189	Lifetime prevalence of physical IPV: 55,8%; psychological IPV: 66,8%	Samities # microcredit	Microcredit non-members	Physical and psychological violence; isolated question about IPV; recall period: in life	Husband's age
Cepeda et al. <sup>40</sup>	Guatemala (2017)	Rural village, marriage women (80%); Catholics: 95%; sample size: 883	Prevalence of any type of IPV: 12,7% in microcredit group; 28,5% in non-microcredit group	Microcredit	Microcredit non-members	Control behavior, economic and psychological violence; 7 isolated questions about IPV; recall period not available	Women's age, number of children, education, wage, women main breadwinner

Table 3 (continued)

References	Country (Year)	Study design/ Participants/ Sample size	Baseline prevalence of IPV	Intervention	Control intervention	Type of IPV/ Measurement tool/Recall period	Confounding and effect modification variables
Microcredit							
Surveys							
Chin 34	Bangladesh (2012)	Rural village, ever-marriage women; Muslims: 80%; sample size: 1,843	Prevalence of physical or sexual IPV: 38% in microcredit group, 37% in non-microcredit group	Grameen Bank #, BRAC #, BRDB # and Asha #	Microcredit non-members	Physical and sexual violence; 6 isolated questions about IPV; recall period: last 12 months	Women's and husband's age and education, number of sons at home, number of children, women's number of unions, religion, land size, distance from village to a health center, distance from village to district headquarters, telephone and television service, family planning, shop presence in village, indicator of satellite, health in village
Dalal et al. <sup>16</sup>	Bangladesh (2013)	Urban and rural villages, ever-marriage women (15-49 years); Muslims: 90%; sample size: 4,464	Prevalence of physical or/and sexual IPV: 51% in the past year	Grameen Bank #, BRDB #, BRAC #, Asha #, Proshika # and any microcredit organization	Microcredit non-members	Physical, sexual and physical and/or sexual combined; CTS questionnaire ***; recall period: last 12 months	Age, residence, education, religion, wealth index. Effect modification: spousal equity and women's education
Dutt et al. <sup>14</sup>	Tanzania (2016)	Rural village, marriage women, physical (30-52 years); Christians: 61,4%; sample size: 224	Prevalence of physical IPV: 32% in the past year	MWEDO #: education, health services, enterprise development, and through promotion of human and cultural rights	Microcredit non-members	Physical violence; CTS questionnaire ***; recall period: last 12 months	Financial decision making, partner control, depression, self-esteem
Hadi <sup>32</sup>	Bangladesh (2000)	Rural villages, marriage women (< 50 years); sample size: 500	Prevalence sexual IPV: 26,8% in the past year	Microcredit fewer than 5 years; microcredit 5 years or more; no poor ##	Microcredit non-members	Sexual IPV; deep interview about IPV; recall period: last 12 months	Women's and husband's age and education, occupation of husband, land ownership, women's financial contribution
Hadi <sup>13</sup>	Bangladesh (2005)	Rural villages, marriage women (< 50 years); sample size: 500	Prevalence of physical IPV: 22%; psychological: 28% in the past years	Microcredit fewer than 5 years; microcredit 5	Microcredit non-members	Physical and psychological IPV; deep interview about IPV; recall period: last 12 months	Women's age and position, living standard, age at marriage, education, ownership of family

Table 3 (continued)

References	Country (Year)	Study design/ Participants/ Sample size	Baseline prevalence of IPV	Intervention	Control intervention	Type of IPV/ Measurement tool/Recall period	Confounding and effect modification variables
Microcredit							
Surveys Hasan et al. <sup>42</sup>	Bangladesh (2014)	Rural, urban and slum villages, marriage women with disabilities (> 15 years); sample size: 226	Prevalence of physical IPV: 28,3%; psychological: 41,1%; sexual: 18,2%	Microcredit	Microcredit non-members	Physical, psychological and sexual IPV combined; instrument not mentioned; recall period: last 12 months	Women's age, area of residence, education, marital status, degree of disability
Karim & Law <sup>43</sup>	Bangladesh (2016)	Rural villages, wife-abusive marriage men; sample size: 243	IPV prevalence not informed	Microcredit active participation; nominal participation ###	Microcredit non-members	Physical, psychological and/or sexual IPV combined; WHO's questionnaire ** adaptation; recall period: last 12 months	Women's and husband's education, marital duration, household landholding. Effect modification: spouse's conservative ideology
Kim et al. <sup>37</sup>	South Africa (2009)	Rural villages, marriage women (> 50%) 18 years or more; Protestants: 73,2%; sample size: 860	IPV physical and or sexual violence: 11,4% in the past year	IMAGE *: credit + training + lecture educator + ten session about gender education	Microcredit (only cash)	Physical and sexual IPV combined; WHO's questionnaire **; recall period: last 12 months	Women's age, village pair, marital status, lifetime experience of intimate-partner violence by current partner at baseline
Koenig et al. 33	Bangladesh (2003)	Rural villages, marriage women (20 years or more); sample size: 10,368	Physical IPV prevalence: 42%	Microcredit fewer than 2 years; microcredit 2 or more years	Microcredit non-members	Physical violence; single question about IPV; recall period not informed	Women's age, husband's education, area, number of living sons, religion, landholding, family structure, women's autonomy index. Community-level variable: women's education and credit group membership
Murshid et al. <sup>38</sup>	Bangladesh (2015)	Urban and rural villages; ever- married women (15-49 years); Hindus: 94%; sample size: 4,163	Physical and/ or sexual IPV prevalence: 25%	BRAC #, Grameen Bank #, ASA #, Proshika #	Microcredit non-members	Physical and/ or sexual IPV combined; CTS modified ***; recall period: last 12 months	Women's and husband's age and education, age and education difference, material assets, currently employed, autonomy, decision-making power. Effect modification: urban/rural population

Table 3 (continued)

References	Country (Year)	Study design/ Participants/ Sample size	Baseline prevalence of IPV	Intervention	Control intervention	Type of IPV/ Measurement tool/Recall period	Confounding and effect modification variables
Microcredit							
Surveys Murshid <sup>36</sup>	Bangladesh	Urban and rural	Physical and/	BRAC #,	Microcredit	Physical and/	Women's age and
	(2016)	villages; ever- marriage men (15-54 years); sample size: 3,336	or sexual IPV prevalence: 15%	Grameen Bank #, ASA #, Proshika #	non-members	or sexual IPV combined; CTS modified ***; recall period: last 12 months	education, urban or rural population, intervention media exposure, wealth assets, current employment. Effect modification: material assets
Naved & Persson <sup>26</sup>	Bangladesh (2005)	Urban and rural villages; ever-marriage women (15-49 years); sample size: 2,702	Physical IPV prevalence:19% (urban), 15,8% (rural) in the past year	Microcredit	Microcredit non-members	Physical IPV; CTS questionnaire ***; recall period: last 12 months	Women's age and income, husband's education, dowry, in-lows live in the household, responden relies on natal, family support in crisis, communication between spouses, women's and husband's mother abused by her father, income, muslin, women's attitude toward gender roles, crime in their community
Sarker et al. <sup>30</sup>	Bangladesh (2016)	Rural villages, marriage women (< 49 years); sample size: 180	Physical IPV prevalence: 53,3% in the last 6 months	Microcredit	Microcredit non-members	Physical IPV; instrument not mentioned; recall period: last 6 months	Women's and husband's age and education, family income
Schuler et al. <sup>12</sup>	Bangladesh (1996)	Rural villages, marriage women (< 50 years); sample size: 710	Physical IPV prevalence: 47% in the last year	Grameen Bank #: credit + non-formal literacy training; BRAC #: credit + education and health for children	Microcredit non-members	Physical violence; single question about IPV; recall period: last 12 months	Women's age and education, number of surviving sons and daughters, poverty status, religion, region, contribution to family support
Vyas et al. <sup>39</sup>	Tanzania (2015)	Urban and rural villages, marriage or cohabiting women (90%), mean age of women: 30 years; sample size: 2,084	Physical or/ and sexual IPV prevalence: 40% (urban) and 55,6% (rural)	Microcredit cooperative, microcredit exclusive <sup>§</sup>	Microcredit non-members	Physical and sexual violence; 9 isolated questions about IPV; recall period: last 12 months	Women's age

Table 3 (continued)

References	Country (Year)	Study design/ Participants/ Sample size	Baseline prevalence of IPV	Intervention	Control intervention	Type of IPV/ Measurement tool/Recall period	Confounding and effect modification variables
Cash transfer RCT							
Angelucci <sup>6</sup>	Mexico (2008)	Cluster RCT; rural villages, women with child; sample size: 12,700	IPV prevalence not available	Oportunidades  §§ conditional cash transfer program: cash + health and education for children	Oportunidades non-members	Physical IPV; questionnaire and recall period uninformed	Women's and husband age, women's education, household size, natural disaster, poverty status, alcohol price. Interaction: transfer size and husband with traditional views of gender role
Hidrobo & Fernald <sup>18</sup>	Ecuador (2013)	Cluster RCT; urban and rural villages, marriage women (45%); poor women with a child; Catholics: 74%; sample size: 1,250	Physical IPV prevalence: 30% (control group), 27% (Bono de Desarrollo Humano §§). Psychological IPV prevalence: 56% (control group), 52% (Bono de Desarrollo Humano)	Bono de Desarrollo Humano: non- conditional cash transfer program (only cash)	Bono de Desarrollo Humano non- members	Physical, psychological IPV; WHO's questionnaire **; recall period: unspecific	Age, marital status, race, husband's education, indicator for whether women has had a child die, currently pregnant, asset index, asset index squared, urban/rural, number of children 0-5 years old, whether kitchen is used for sleeping, province indicators. Effect modification: mother education and mother relative education
Pettifor et al. 44	South Africa (2016)	Individual RCT; rural villages, girls aged 13-20 years if they were enrolled in school grades 8-11, not married or pregnant; sample size: 2,448	Physical IPV prevalence: 17% in the last year	Conditional cash transfer program: cash + school attendance (≥ 80% of school days per month)	Non-member microcredit	Physical IPV; questionnaire not mentioned; recall period: last 12 months	Women's age, clustering

Table 3 (continued)

References	Country (Year)	Study design/ Participants/ Sample size	Baseline prevalence of IPV	Intervention	Control intervention	Type of IPV/ Measurement tool/Recall period	Confounding and effect modification variables
Cash transfer							
Surveys Aísa <sup>49</sup>	Mexico (2014)	Urban and rural villages, women with child; Catholics: 83%; sample size: 1,917	Psychological IPV prevalence: 70,5% to Oportunidades §§ member, 68% non-member	Oportunidades conditional cash transfer program: cash + health and education for children	Oportunidades non-members	An item about women's power on contraceptive choices was used as a proxy of psychological abuse; recall period: unspecific	Number of member's family, dependency, education, remittances, property, rooms, telephone, electric, electronic, water, car, fuel. Effect modification: urban/rural population
Bobonis et al. <sup>17</sup>	Mexico (2013)	Rural villages, marriage women (15 years or older), physical and/or sexual; sample size: 2,867	IPV prevalence: 16%; physical: 11%, sexual: 9%, psychological: 11% in the last year	Oportunidades  §§ conditional cash transfer program: cash + health and education for children	Oportunidades non-members	Physical, psychological, sexual violence and threat of physical violence; 15 questions about IPV based on CTS ***; recall period: last 12 months	Women's and husband's age, race and education, household size, marital status, years of marriage, IPV history in women's family. Effect modification: decision- making power, expect gains to marriage, type of marital relationship
Bobonis et al. <sup>48</sup>	Mexico (2015)	Urban and rural setting, marriage women (> 15 years); sample size: Total N = 2,867 (survey 2003), 4,705 (survey 2006), 5,800 (survey 2011)	Physical and/or sexual violence IPV prevalence: 15,9% (2003), 13,7% (2006); 10,2% (2011)	Oportunidades  §§ conditional cash transfer program: cash + health and education for children	Oportunidades non-members	Physical, sexual, and psychological violence; 16 isolated questions about IPV; recall period: last 12 months	Women and partner's age, education and indigenous status, attainment level, household size, cohabiting couple indicator, years in union, histories of spousal abuse in parental household during childhood
Perova 47	Peru (2010)	Urban and rural villages, marriage women (15-49 years); Catholics: 76%; sample size: 3,904	Physical IPV prevalence: 14%, sexual: 4%, psychological: 15% in the last year	Juntos §§: conditional cash transfer program: cash + health and education for children	Juntos non- members	Physical, psychological and sexual violence; 20 isolated questions about IPV; recall period: last 12 months	Women's age and education, health insurance, cohabitation, paid employment, women's family IPV, electricity, hygienic restroom, piped water, family farming, land, household material, urban/rural. Interaction: number of children, women's family IPV as a child, paid job

# Table 3 (continued)

References	Country (Year)	Study design/ Participants/ Sample size	Baseline prevalence of IPV	Intervention	Control intervention	Type of IPV/ Measurement tool/Recall period	Confounding and effect modification variables
Cash transfer							
Surveys							
Perova 47	Peru (2010)	Urban and rural villages, marriage women (15-49 years); Catholics: 76%; sample size: 3,904	Physical IPV prevalence: 14%, sexual: 4%, psychological: 15% in the last year	Juntos §§; conditional cash transfer program: cash + health and education for children	Juntos non- members	Physical, psychological and sexual violence; 20 isolated questions about IPV; recall period: last 12 months	Women's age and education, health insurance, cohabitation, paid employment, women's family IPV, electricity, hygienic restroom, piped water, family farming, land, household material, urban/rural. Interaction: number of children, women's family IPV as a child, paid job
Rivera et al. <sup>46</sup>	Mexico (2006)	Urban setting, marriage women (> 50%), 18-55 year; sample size: 2,558	Physical IPV prevalence: 18.7% (Oportunidades §§); 15,6% (control internal), 22% (control external)	Oportunidades conditional cash transfer program: cash + health and education for children	External control: community without Oportunidades (292); internal control: eligible in communities that receive Oportunidades but do not receive the cash	psychological, sexual and economic violence; 20	Women's age and education, control group, IPV in childhood, previous marriage, alcohol consumption, freedom of women, decision expenditure, decision about have children
Tolman & Rosen <sup>45</sup>	USA (2001)	Urban setting, single mothers (18-54 years); Chistians: 91,4%; sample size: 753	Physical IPV prevalence: 14,9% in the last year	TANF §§: non- conditional cash transfer program (only cash)	TANF non-me mbers	Physical violence; modified CTS ***; recall period: last 12 months	Uninformed

ASA: Association for Social Advancement; BRAC: Bangladesh Rehabilitation Assistance Committee; BRDB: Bangladesh Rural Development Board; CTS: Conflict Tactics Scale; IPV: intimate partner violence; MWEDO: Massai Woman Development Organization; RCT: randomized clinical trials; TANF: Temporary Assistance for Needy Families; WHO: World Health Organization.

<sup>\*</sup> Name of microcredit intervention;

<sup>\*\*</sup> Questionnaire suggested by the WHO to measure IPV;

<sup>\*\*\*</sup> Created by Murray A. Straus to measure IPV;

<sup>#</sup> Microcredit financial institution;

<sup>##</sup> Time of women's participation in the program; no poor: women not eligible to microcredit program;

<sup>###</sup> Active participation: women who have microcredit and are involved in microcredit activity; nominal participation: women who have microcredit but are not involved in microcredit activity;

<sup>§</sup> Microcredit cooperative: women working together; microcredit alone: woman working alone;

<sup>§§</sup> Cash transfer programs.

questionnaires mostly used to measure IPV were the Conflict Tactics Scales (9 studies) and the World Health Organization (WHO) measurement tool (5 studies). Adjustment for women's age and education were most often employed in the multivariate statistical analyses. Women's decision-making power, education, years of participation in the program, and place of residence (urban vs. rural) were tested as effect modifiers often.

#### Main results

Table 4 presents a qualitative summary of the studies' main results, according to the type of intervention, study designs and violence.

# Microcredit programs

Three randomized clinical trial (RCT) 25,28,29 analyzed the impact of MP on IPV. As presented on Table 4, the studies did not find any effect of MP on physical and sexual abuse, and on physical and psychological abuse combined. Nevertheless, the microcredit (IMAGE) seems to be a protective intervention against physical and sexual IPV when studied in tandem 25.

The results from the nine surveys assessing the association between MP and physical violence were heterogeneous, even after a stratified analysis according to IPV baseline prevalence; religion; or place of living. Among these studies, two indicated that including women in MP increased physical

Table 4 Effect and statistical estimators of the impact of microcredits (MP) and cash transfer programs (CTP) on different types of violence.

Reference	Physical violence	Psychological violence	Sexual violence	Physical and/or sexual violence	Physical and/ or psychological violence
Microcredit					
RCT					
Green et al. <sup>28</sup> (2015)	-	-	-	-	β = 0.02; 95%CI: -0.1; 0.14
Pronyk et al. <sup>25</sup> (2006)	-	-	-	OR = 0.45; 95%CI: 0.23; 0.91	-
Tsai et al. <sup>29</sup> (2016)	$\beta$ = 0.091 (p-value non- significant *)	-	$\beta$ = 0.379 (p- value non-significant)	$\beta$ = 0.118 (p-value non- significant)	-
Surveys					
Ahmed 41 (2005)	-	-	-	-	OR = 1.47; 95%CI: 0.96;
					2.33
					OR = 0.64; 95%CI: 0.25;
					1.66
Bajracharya &	-	-	-	RD = 0.018 (p-value	-
Amin 35 (2013)				non-significant)	
Bates et al. 31 (2004)	OR = 0.75; 95%CI: 0.56;	-	-	-	-
	1.00				
Bhuiya et al. 15 (2003)	OR = 1.88; 95%CI: not	-	-	-	-
	informed				
Cepeda et al. <sup>40</sup> (2017)	-	OR = 0.70; 95%CI: 0.50;	-	-	-
		0.97			
Chin <sup>34</sup> (2012)	-	-	-	$\beta$ = 0.152 (p-value non- significant)	-

# Table 4 (continued)

Reference	Physical violence	Psychological violence	Sexual violence	Physical and/or sexual violence	Physical and/ or psychological violence
<b>Microcredit</b> Surveys					
Dalal et al. <sup>16</sup> (2013)	Women with health	_	Woman with health	Women with decision	_
20.3)	decision power and		decision power and	making power and	
	primary education:		primary education:	primary education:	
	OR = 1.83; 95%CI:1.39;		OR = 0.93; 95%CI:	OR = 1.83; 95%CI:1.40;	
	2.40; secondary		0.58; 1.32; secondary	2.41; secondary	
	education: OR = 2.74;		education: OR = 1.34;	education: OR = 2.67;	
	95%CI: 2.03; 3.69; high		95%CI: 0.83; 2.14;	95%CI: 1.98; 3.61; high	
	education: OR = 3.20;		higher education: OR =	_	
	95%CI: 1.62; 6.34		4.5; 95%CI: 1.85; 11.19	95%CI:1.62; 6.34	
	Women without health			Women without health	-
	decision power and		decision power and	decision power and	
	primary education:		primary education:	primary education:	
	OR = 1.26; 95%CI:		OR = 0.79; 95%CI:	OR = 1.25; 95%CI:	
	0.88; 1.81; secondary		0.45; 1.39; secondary	0.87; 1.79; secondary	
	education: OR = 1.23;		education: OR = 1.30;	education: OR = 1.22;	
	95%CI: 0.81; 1.86;		95%CI: 0.63; 2.70;	95%CI: 0.80; 1.84;	
	higher education: OR =		higher education:	higher education: OR =	
	1.47; 95%CI: 0.34; 6.44		insufficient women	1.47; 95%CI: 0.34; 6.44	
Dutt et al. 14 (2015)	Business cooperative	-	-	-	-
	- several women				
	working together:				
	β = -0.13; 95%CI:				
	-0.30; -0.02				
	Independent owner (-)				
Hadi <sup>32</sup> (2000)	-	-	Microcredit		-
( 111,			participation less		
			than 5 years: OR =		
			0.79 (p-value non-		
			significant)		
			Microcredit		
			participation for 5		
			years or more: OR		
			= 0.65 (p-value non-		
			significant)		
Hadi <sup>13</sup> (2005)	Microcredit	Microcredit			-
	participation less	participation less			
	than 5 years: OR =	than 5 years: OR =			
	0.75 (p-value non-	0.56 (p-value non-			
	significant)	significant)			
	Microcredit	Microcredit			
	participation for 5	participation for 5			
	years or more: OR =	years or more: OR =			
	0.32 (p-value < 0.05)	0.35 (p-value < 0.05)			
Hasan et al. 42 (2014)				ed: OR = 3.46 (p-value < 0.	

# Table 4 (continued)

Reference	Physical violence	Psychological violence	Sexual violence	Physical and/or sexual violence	Physical and/ or psychological violence		
Microcredit							
Surveys							
Karim & Law <sup>43</sup> (2016)	Physical, sexual and psychological violence combined.						
	Active participation: $\beta = -0.194$ (p-value < 0.05)						
	Physical, sexual and psychological violence combined.						
	Nominal participation: $\beta$ = -0.095 (p-value non-significant)						
Kim et al. <sup>37</sup> (2009)	-	-	-	IMAGE **: OR = 0.51;	-		
				95%CI: 0.28; 0.93			
				Only credit **: OR =			
				0.86; 95%CI: 0.22; 3.36			
Koenig et al. <sup>33</sup> (2003)	Jessore (Bangladesh):	-	-	-	-		
	β = -1.682 (p-value						
	non-significant)						
	Sirajgonj (Bangladesh):						
	β = -0.713 (p-value						
	non-significant)						
Murshid et al. <sup>38</sup> (2015)	<u>-</u>	-	-	Women with relatively better economic status: $\beta = 0.47$			
				(p-value < 0.05)			
				Poorer women: β =			
				-0.04 (p-value non-			
				significant)			
Murshid <sup>36</sup> (2016)	-	-	-	$\beta$ = 0.22 (p-value non- significant)			
Naved & Person 26	Urban: OR = 1.83	-	-	-	-		
(2005)	(p-value < 0.05)						
	Rural: OR = 1.08						
	(p-value non-						
	significant)						
Sarker et al. <sup>30</sup> (2016)	OR = 5.4 (p-value <	-	-	-	-		
	0.05)						
Schuler et al. <sup>12</sup> (1996)	Grameen Bank **:	-	-	-	-		
	OR = 0.30; 95%CI:						
	0.18; 0.51						
	BRAC **: OR = 0.44;						
	95%CI: 0.28; 0.70						

# Table 4 (continued)

Reference	Physical violence	Psychological violence	Sexual violence	Physical and/or sexual violence	Physical and/ or psychological violence
Microcredit					
Surveys					
	BRAC **: OR = 0.44; 95%CI: 0.28; 0.70				
Vyas et al. <sup>39</sup> (2015)	95%Ci. 0.26, 0.70			Dar es Salaam	
				(Tanzania): cooperative	
Cash transfer				significant)  Mbeya (Tanzania): exclusive – women working alone: OR= 0.68 (p-value non- significant)	
RCT					
Angelucci <sup>6</sup> (2008)	Small values of cash transfer: $\beta$ = -0.08 (p-value < 0.05) Higher values of cash transfer and husband with traditional views of gender role: $\beta$ = 0.033 (p-value < 0.05)	-	-	-	-
Hidrobo & Fernald <sup>18</sup> (2013)	Women with more than primary schooling: β = -0.04 (p-value nonsignificant) No effect (effect measure not informed)	Women with more than primary schooling: $\beta$ = -0.21 (p-value < 0.05)  Women had less than primary schooling and had equal to or higher education than their partners: $\beta$ = 0.09 (p-value < 0.05)	-	-	
Pettifor et al. 44 (2016)	OR = 0.66; 95%CI: 0.59; 0.74		-	-	-

Table 4 (continued)

Reference	Physical violence	Psychological violence	Sexual violence	Physical and/or sexual violence	Physical and/ or psychological violence
Cash transfer					
Surveys					
Aísa <sup>49</sup> (2014)	-	Urban: $\beta = 0.150$ (p-value < 0.05)	-	-	-
		Rural: $\beta = 0.116$ (p-value non- significant)			
Bobonis et al. 17	$\beta$ = -0.070 (p-value <	$\beta$ = 0.041 (p-value non-	β = -0.066 (p-value	$\beta$ = -0.096 (p-value <	-
(2013) ***	0.05)	significant)	non-significant)	0.05)	
Bobonis et al. 48	$\beta$ = -0.016 (p-value	β = 0.049 (p-value <	$\beta$ = 0.037 (p-value <	$\beta$ = -0.032 (p-value	-
(2015)	non-significant)	0.05)	0.05)	non-significant)	
Perova <sup>47</sup> (2010)	Number of children:	Number of children: $\beta$	Number of children:	-	-
	$\beta$ = 0.02 (p-value non- significant)	= 0.02 (p-value < 0.05)	$\beta$ = 0.00 (p-value non- significant)		
	Father use to beat	Father use to beat	Father use to beat		
	her mother: β =	her mother: β =	her mother: $\beta = 0.03$		
	0.05 (p-value non- significant)	0.04 (p-value non- significant)	(p-value < 0.05)		
	Women have a	Woman have a cash	Woman have a cash		
	cash paid job: β =	paid job: β = -0.07	paid job: $\beta$ = -0.05		
	-0.02 (p-value non- significant)	(p-value < 0.05)	(p-value < 0.05)		
Rivera et al. <sup>46</sup> (2006)	Internal control: OR =	Internal control: OR =	Internal control: OR =	-	-
	1.31; 95%CI: 0.86; 2.04	0.79; 95%CI: 0.56; 1.09	1.58; 95%CI: 0.90; 2.77		
	External control: OR =	External control: OR =	External control: OR =		
	0.81; 95%CI: 0.62; 1.05	0.75; 95%CI: 0;60; 0.93	0.82; 95%CI: 0.60; 1.12		
Tolman & Rosen 45	No effect (effect	-	-	-	-
(2001)	measure not				
	informed)				

<sup>-:</sup> not measured; 95%CI: 95% confidence interval; BRAC: Bangladesh Rehabilitation Assistance Committee; OR: odds ratio; RCT: randomized clinical trials; RD: risk difference.

IPV 15,30, whereas one indicated decline 12, one suggested no relationship 31, and five showed effect modification by women's education and decision-making power in marriage 16; period of women's participation in the program <sup>13,32</sup>; living in a rural or urban area <sup>26</sup>; the municipality of residence <sup>33</sup>; and type of microcredit organization (cooperative or individual-based credit) 14. The seven survey studies assessing the effects of MP on physical and or sexual violence also failed to show a clear picture, not even when stratifying the studies by the characteristics described before. As shown in Table 4, whereas three studies found no effect of MP on these type of IPV 34,35,36, four suggested that the effect was modified by women's education and decision-making power in marriage 16; type of microcredit (with or without gender transformative intervention) 37; women's economic status 38; and different municipalities and business arrangement (cooperative vs. individual-based credit) could influence the results 39.

Only two surveys assessed the repercussions of MP following psychological violence. One found a protective effect <sup>40</sup>, whereas the other suggested that women attending the program five or more

<sup>\*</sup> p-value non-significant: p-value > 0.05;

<sup>\*\*</sup> Microcredit intervention program;

<sup>\*\*\*</sup> There was no effect modification considering decision-making power, expect gains to marriage and type of marital relationship. Note: light gray (protective factor); gray (no effect); dark gray (risk factor).

years tended to experience less victimization 13. Two studies examined the relationships between MP and sexual violence. Both, failed to show any statistically significant effects of the intervention 16,32. The only survey assessing physical and psychological violence combined as the outcome also did not find any association 41. Two studies used physical, psychological and sexual violence combined as outcome. One showed that MP decrease violence 42. While still finding that active participation in an MP could decrease violence in general, the second study showed that a nominal participation – when formally receiving the money but without the autonomy to use it at their will -increased the risk among women with conservative husbands 43.

#### Cash transfer programs

Three randomized controlled trials evaluated the impact of CTP on different forms of IPV 6,18,44. Angelucci 6 found that receiving a more substantial amount of money increased the risk of physical violence among women with partners holding a more traditional view of gender roles, yet that the intervention was protective when women received smaller amounts, regardless of the partner's cultural background. Pettifor et al. <sup>44</sup> pointed out that being part of the CTP was a protective factor for physical violence among school girls. For Hidrobo & Fernald 18, the intervention had a protective effect for psychological violence on women with intermediate or higher education, while the risk increased among those with a lower educational level if they had more years of schooling than their partners.

Five surveys evaluated the impact of CTP on physical violence. Only one suggested that CTP reduces physical violence 17, while four studies reported no effect at all 45,46,47,48. None of the studies showed an increased risk. The effects of CTP on psychological violence were also covered in five studies. Again, there seems to be no consensus in the literature, even after stratifying the analysis. Two studies showed no impact 17,46; two suggested an effect modification according to place of living (rural vs. urban) 49; number of children, and IPV during childhood and paid job 47; and one showed an increased risk <sup>48</sup>. Four papers studied the effect of CTP on sexual violence <sup>17,46,47,48</sup>. Two found no association <sup>17,46</sup>, one an increased risk <sup>48</sup> and one a modification effect based on number of children, IPV during childhood and paid job 47.

#### Assessment of study quality and sensitive analyses

Table 1 (experimental studies) and Table 2 (surveys) synthesize the assessment of methodological quality. Focusing solely on RCT studies, criteria 1 (Truly Randomization) and 4 (Intention to Treat Analysis) were endorsed in only one MP 28 and CTP 44 study, respectively. The first paper did not find any association between MP and physical and or psychological violence. The second showed that CTP was protective against physical violence among adolescents.

In surveys, criterion 1 (Random or Pseudo-Random Sample) and 9 (Statistical Analysis) were endorsed in seven MP 26,30,35,36,37,38,43 and three CTP 17,47,48 studies, respectively (Table 2). One of two MP surveys evaluating physical violence <sup>26,30</sup> found a risk effect <sup>30</sup> while the other uncovered a modification effect by place of living 26. Four papers evaluated the effect of MP on physical and or sexual violence 35,36,37,38. Among those, two showed no effect 35,36 and two showed a modification effect by type of intervention <sup>37</sup> and socioeconomic position <sup>38</sup>. The only paper assessing the relation between MP and physical, psychological and sexual violence occurring in tandem revealed a modification effect according to whether women were managing their own businesses 43.

The CTPs survey papers that endorsed the two methodological criteria had heterogeneous results, too. Those looking at physical violence as the outcome showed a protective effect of CTP 17, but also no effect <sup>47,48</sup>. Regarding psychological violence, results were rather mixed. The papers either showed no effect <sup>17</sup>, some risk <sup>48</sup> and a modification effect according to the number of children; a previous history of domestic violence in original family; and having or not a paid job 47. The same heterogeneity persists in sexual violence, as the studies showed no effect 17, risk 48 and modification effects 47.

# Discussion

# Studies profile

As shown in the Results section, studies assessing the effect of IPV on women enrolling in economic empowerment programs are restricted to a few countries. Those focusing on MP were restrict to Africa and Southeast Asia, while papers covering CTP were more common in Latin America. The growing interest on the subject is noticeable given more than 50% of the reviewed papers have been published since 2010. Most studies have focused on MP rather than CTP. The scope of the original studies follows the literature's trend regarding violence against women, which mainly focuses on the assessment of the programs' impact on physical violence.

Methodologically, improvement in the quality of violence identification strategies is perceptible over time, with studies gradually incorporating more robust instruments in recent years. The number of randomized controlled trials remains small compared to surveys. Adequate sample size and the proper use of control groups are positive features found in all original surveys/intervention studies. Variables used to control for confounding were those frequently used in IPV studies. The majority cross-sectional studies disregarded the time of women's participation in economic empowerment programs in the analysis. Nevertheless, the few studies exploring this aspect showed that time from the enrollment in the program is an important facet. Hadi et al. 13, for instance, found that participating in MP for five years or more protects against physical and psychological violence while participating for less than five years bears no effect. Conversely, Bobonis et al. 48 showed that women's participation in income transfer programs could reduce violence initially but that this beneficial effect did not hold over time.

#### Main results

The effects of women's enrollment in microcredit and cash transfer programs on physical violence were clearly heterogeneous. Contradictory results came from studies analyzing the impact of MP on physical and or sexual violence as well. The same picture arose when considering the papers focusing on the effect of CTP on psychological and sexual IPV. Conversely, there is some indication that MP is not associated with sexual abuse.

Most studies pointing to an increased risk of physical violence among participants show this association taking place primarily among women with higher education 16, holding more decisionmaking power 16, living in urban villages 26 and those receiving higher sums of cash 6. A similar result was reached when physical violence was studied along with sexual abuse. Women with high decisionmaking power 16 and with more years of schooling 16 have an increased risk to IPV. This pattern is also replicated for psychological violence and CTP. Hidrobo & Fernald 18 showed an increased risk in a small subgroup (women with less than elementary schooling who have more or equal education to their partners). These results suggest that more empowered women are more vulnerable to violence in these specific sets and situations.

Despite some limitations (discussed below), the heterogeneous effects of MP and CTP on IPV uncovered here may be interpreted using the theoretical model proposed by Tauchen et al. 9. Accordingly, IPV may either increase or reduce following enrollments in economic empowerment programs, depending on the sociocultural context of the family. In countries with a more patriarchal and chauvinist culture, increasing a woman's income could be perceived as a threat to men's power leading to more violence as a result. In contrast, in regions with less gender inequality, economic empowerment may be viewed positively by partners with whom women usually share responsibilities for family support 19.

These findings underline the importance of considering some peculiarities in attempting to understand the subject, while also showing that there is no single answer to this review question. Moreover, whether physical violence is studied by itself or in tandem with sexual abuse as outcome, the effect of MP may not be generalized to all contexts since most of those studies came from a single country (Bangladesh).

The literature on the repercussions of MP on levels of psychological violence against women remains scarce, precluding any conclusion. There are only two studies evaluating this relationship 13,40. Compared to research on physical abuse, the small number of studies focusing on psychological violence emphasizes the need to expand the debate.

The few papers studying the association of MP and sexual violence have shown little effect so far 16,32. The difficulty in perceiving a sexual abuse within the marriage may explain this lack of effect, especially in more conservative societies where sexual violence tends to be culturally legitimized. Interventions that explicitly address gender issues and sexuality in marriage would be welcome as strategies aiming to economically empower women and reduce sexual violence.

Besides this general discussion, it is essential to look at the RCT studies in more detail. Focusing on RCTs studying MP, the article published by Pronyk et al. 25, in 2006, is worth mentioning. This is the only study testing a mixed intervention strategy (IMAGE) that coupled MP to professional training, women's follow-up and educational lectures on gender, sexuality, and IPV. As pointed out in the Results section, this initiative proved to be an important protective factor for women regarding partner physical and or sexual violence, either in comparison to women who did not participate in the program or to those receiving only an inductive amount of cash to start a small business 25. In a separate paper, the authors also pointed out that a single cash intervention was not effective in preventing physical and or sexual violence when the targeted women were compared to those without any intervention <sup>37</sup>, thus strongly indicating the importance of combined strategies – cash, training and health information – when aiming at reducing these types of IPV. Despite these promising results, the unique microcredit RCT that endorsed the quality criteria, showed no effect considering physical and psychological violence combined as the outcome <sup>28</sup>.

The RCTs focusing on the impact of CTP on IPV showed a different picture. The effects differed according to the contextual and individual characteristics of women and their partners. Angelucci 6, for instance, identified a protective effect of CTP with respect to physical violence among women who received fewer resources, but pointed out that risk of victimization rose in situations where the amount of cash provided was more substantial. The author showed that this "reverse" pattern occurred, more often, in women with partners holding a more traditional view of gender roles <sup>6</sup>. Pointing out that women benefiting from Oportunidades CTP (Mexico), with low schooling but more education than their partners were at an increased risk of suffering psychological violence as compared to women not included in the program 18. Thus, it shows the importance of considering gender inequalities as a background factor when analyzing the impact of CTP on IPV 18. As also suggested by Tauchen et al. 9, these findings suggest that men could be using violence as a strategy to "recover" their perceived lost power within the domestic sphere. Conducted by Pettifor et al. 44, the only RCT endorsing both quality criteria, showed a protective effect of CTP on physical violence. Despite this auspicious result, it is important to emphasize that this paper considered physical dating violence and did not analyzed effect modification possibilities.

#### Other heterogeneity sources

Even though all programs are based on poverty reduction strategies through money transfer/loan directed to women, the heterogeneity of interventions within and across countries hamper comparisons and thus a comprehensive summarization of the literature. Conditional CTPs, for example, involve actions strengthening women's bonds with society through social support, access to health services and child/adolescent education. The requirement to comply with these demands may lead women to reinforce their social ties and create more favorable conditions for escaping a violent situation or asking for specialized help. This does not occur in non-conditional strategies.

Another source of inconsistency that could not be explored concerns the regional differences in specific objectives, operational strategies and coverage of the CTP programs. For instance, the literature suggests that the programs Oportunidades (conditional CTP/Mexico) and Juntos (unconditional CTP/Ecuador) work very differently 17,18. The contrasting impacts of the initiatives in these countries may be related to their distinct implementation periods, as well as to the different moments the attached conditionalities were monitored 19,20. An impact analysis that does not consider these discrepancies may lead to spurious results.

The same picture shows up when focusing on MP. In some approaches, complementary actions, such as training and monitoring women's initiatives with a view to their financial autonomy, are part of the program while in several others, women merely receive credit.

Classifying programs based on the presence or absence of actions parallel to the financial incentive is a perspective that could put light in some particularity between microcredit and cash transfer programs. MP has women as the target of all its interventions, in the case of CTPs, women are provided with cash but parallel interventions - the so called conditionalities - have the child and adolescent as the target group. This feature precludes an evaluation of both interventions in tandem. Besides, more than half of the microcredit programs failed to describe the initiative in detail. In many cases it was impossible to figure out all the activities associated with the core intervention (receiving the credit), which precluded any related comprehensive classification.

Another aspect that may have contributed to the inconsistency of the results concerns the differences in outcome measurement strategies. While some studies used cross culturally validated instruments, others opted to remove or add questions from validated questionnaires or, worse, used isolated questions extracted from well-established questionnaires on IPV.

Lastly, regarding the adjustments used in the analyses, most studies included variables classically associated with IPV such as the woman's age, education level or socioeconomic status. However, some studies also adjusted for specific variables seizing local and culturally contoured characteristics, such as the gender of the first child, religion, presence of a dowry, and number of wives. These methodological differences may also hamper a comprehensive synthesis.

## Comparing results with previous reviews

There is a consensus among the reviews conducted by Vyas & Watts 19, Gibbs et al. 22 and the current study as to the overall impact depending on the specific interventions and individual characteristics, as well as on the social and cultural context wherein the programs are developed. As mentioned before, the effects may diverge according to local, gender norms, women and partner's schooling and other factors. Agreeing with the review advanced by Gibbs et al. 22, the heterogeneity in perspectives, methods and results across studies detected in our study attests to a clear obstacle in implementing a meta-analysis and other strategies aiming at the literature spin-off.

On the other hand, the present study diverges with those from Bourey et al. 20, that indicate that economic interventions are satisfactory approaches to restrain violence against women. This lack of consensus may be caused by the fact that this previous study, as mentioned on the Introduction, had a narrower scope than our review as it was based on only sixteen original researches.

# Limitations and strengths

The results of this review should be interpreted in the light of its limitations and strengths. Restricting the review to papers published in English, Spanish and Portuguese is only a possible limitation. The lack of a formal assessment of publication bias and not carrying the evaluation through to a formal meta-analysis for combining the results were also constraints. Regarding the latter, however, some explanation for not going a step further is due. In fact, we first attempted a quantitative approach, but were impeded not only by the considerable statistical heterogeneity found across studies, but also by the absence of relevant information in the papers for implementing a subgroup analysis. Given most reviewed studies were observational, it was not possible to guarantee the homogeneity of the reference groups regarding possible confounding factors. Regional particularities could not be considered in the analysis as well as other relevant characteristics as accurate description of the intervention, woman and partner's education, number of children per family, amount of microcredit or cash transfer received, intervention period, complementary interventions, family income and religion. Despite these shortcomings, at least three methodological options are a step forward from previous reviews. One concerns the scope of data sources encompassing nine bibliographic databases, as well as the related gray literature. The latter strategy allowed finding 12 papers that were otherwise missed in a previous review with similar scope 20. The three types (and combination) of IPV covered by this review, and the inclusion of both MP and CTP papers are also positive points.

#### Literature methodological shortcomings and suggestions to overcome them

The small number of randomized trials should be mentioned. When dealing with research addressing IPV at core, there is a myth that only observational studies are adequate or a tenable methodological option. However, this is not true 18,25,28. To improve the level of evidence, this type of study design should be encouraged.

The lack of comments on any effect modification in the original papers is another limitation of the literature. As a consequence, we were unable to identify whether this feature was examined yet absent in those studies or if it was assessed at all. Since the literature suggests many variables at the individual and contextual levels modifying the impact of MP/CTP in IPV, reporting these details is welcome to help improving our knowledge about the subject.

The narrow scope of previous literature may also be regarded as a limitation. The role of economic empowerment programs on sexual abuse is one of those issues to be covered. Almost all studies implemented so far have assessed this type of violence along with physical violence precluding more thorough and specific conclusions. Similarly, investing in research to assess effects on psychological violence is required, given former studies are limited to a few countries in Latin America and restricted CTP.

#### **Conclusions**

Microcredit and cash transfer are successful programs for eradicating hunger and poverty on their own right 50,51. However, our results showed that the impact of MP are mixed when it comes to physical and physical/sexual violence, differing markedly according to given scenarios. Even so, the review suggests that the effect of MP on sexual violence is trivial or nonexistent. Regarding the impact of CTPs, the present study showed that the effects on physical, physical/sexual, psychological, and sexual violence were also heterogeneous. Therefore, a single, definitive answer to the main review question-if MP and CTP are associated to IPV prevalence is hence not possible. Although economic empowerment programs for women may increase IPV in some contexts, participation involving not only women but all family members as well should not be discouraged. There is a bulk of evidence that such programs reduce, child mortality, preventable infectious diseases, and other health improvements 52,53,54,55. However, the increase in violence against women should not be ignored. Educational actions encompassing the discussion of gender roles with a focus on eradicating violence against women could be implemented alongside microcredit and income transfer programs in places where there is a high prevalence of IPV.

Beyond the conclusions reached in this article, immanent differences between the types of programs, limitations and heterogeneity of the studies underscore the need of new studies that better account for the cultural contexts and characteristics of the interventions under scrutiny. More specific reviews focusing on the impact of a specific economic empowerment program and a type of IPV should enable a more in-depth account. The increasing interest in the subject in recent years may also help moving forward towards overcoming gaps and limitations faced thus far producing increasingly robust evidence will certainly help better guide the implementation of effective public policies to address this critical global public health problem.

# **Contributors**

T. H. Leite contributed to the conception and design, critical review of the intellectual content, and writing of the article. C. L. Moraes, E. S. Marques, R. Caetano, and J. U. Braga contributed to the conception and design and critical review of the intellectual content. M. E. Reichenheim critically reviewed the intellectual content. All authors approved the final version to be published.

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#### Resumo

A violência entre parceiros íntimos (VPI) é um problema de saúde pública de alcance global. Muitas propostas para eliminar a VPI incluem o empoderamento das mulheres através do desenvolvimento socioeconômico individual. Nesse contexto, alguns estudos sugerem que programas de microcrédito (PMC) e de transferência de renda (PTR) também podem reduzir o risco de VPI, enquanto outros apontam para um efeito oposto. Através de uma revisão sistemática, este estudo teve como objetivo investigar a influência do empoderamento econômico das mulheres através de PMCs e PTRs sobre o risco de violência física, psicológica e sexual. A seleção de artigos e documentos foi realizada por dois pesquisadores, com base nos seguintes critérios: publicação em inglês, português ou espanhol; dados primários; avaliação do efeito de PMC ou PTR sobre VPI; casais heterossexuais; mulheres beneficiárias da intervenção; uso de um grupo de comparação elegível para um PMC ou PTR e foco sobre o risco de VPI como o desfecho. Nossos resultados mostraram que o impacto dos PMCs é misto no que diz respeito à violência física e física/sexual. Contanto, a revisão sugere que o efeito dos PMCs sobre a violência sexual é trivial ou inexistente. Quanto ao impacto dos PTRs, o estudo mostrou que os efeitos sobre a violência física, física/sexual, psicológica e sexual também foram heterogêneos. As mulheres mais empoderadas e com alguma autonomia poderiam estar em risco maior. Entretanto, a participação no programa de empoderamento deve ser incentivada para as mulheres e famílias pobres. Intervenções paralelas para líder com a VPI devem focar nas principais medidas para reduzir o risco de aumento de prevalência de VPI em determinados cenários.

Violência por Parceiro Íntimo; Programas Governamentais; Empoderamento; Mulheres

#### Resumen

La violencia doméstica (VPI por sus siglas en portugués) es un problema de salud pública en todo el mundo. Las propuestas para eliminarla incluyen el empoderamiento de las mujeres a través de su desarrollo socioeconómico. Algunos estudios sugieren que los programas de microcrédito (PMCs) y de transferencia de renta (PTRs) son iniciativas capaces de reducir el riesgo de VPI. Otros estudios indican un efecto contrario. Basándonos en una revisión sistemática, el estudio procuró investigar la influencia del empoderamiento económico de las mujeres, a través de PMCs y PTRs, sobre el riesgo de violencia física, psicológica y sexual. Los artículos y documentos fueron seleccionados por dos investigadores, de acuerdo con los siguientes criterios: estudios publicados en inglés, portugués o español; datos primarios; evaluación del efecto del PMC o PTR sobre la VPI; parejas heterosexuales; mujeres beneficiarias de la intervención; un grupo de comparación elegible para un PMC o PTR y centrados en el riesgo de VPI como desenlace. De acuerdo con nuestros resultados, el impacto de los PMCs es mixto en lo que se refiere a la violencia física y física/sexual. No obstante, la revisión sugiere que el efecto de los PMCs sobre la violencia sexual es trivial o inexistente. En relación con el impacto de los PTRs, el estudio mostró que los efectos sobre la violencia física, física/sexual, psicológica y sexual también son heterogéneos. Las mujeres más empoderadas y con alguna autonomía podrían estar en riesgo. Sin embargo, la participación en el programa de empoderamiento debe incentivarse en el caso de las mujeres y familias pobres. Las intervenciones paralelas para combatir VPI deben dar prioridad a medidas para reducir el riesgo de aumento de la prevalencia de esta violencia en determinados contextos.

Violencia de Pareja; Programas de Gobierno; Empoderamiento; Mujeres