



Government of Ethiopia's public works and complementary programmes: A mixed-methods study on pathways to reduce intimate partner violence

Meghna Ranganathan^{a,*}, Marjorie Pichon^a, Melissa Hidrobo^b, Heleene Tabet^b, Wastina Sintayehu^c, Seifu Tadesse^c, Ana Maria Buller^a

^a Department of Global Health and Development, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine, Tavistock Place, WC1H 9SH, London, UK

^b Poverty Health and Nutrition Division, International Food Policy Research Institute, 1201 I St NW, Washington DC, 20005, USA

^c Independent Consultant, JaRco Consulting, P.O. Box 43107, Addis Ababa, Ethiopia

ARTICLE INFO

Keywords:

Public works
Complementary programmes
Social protection
Women's empowerment
Intimate partner violence
Mixed-methods
Ethiopia

ABSTRACT

There is evidence that cash transfers reduce intimate partner violence (IPV), but less is known about the impacts of public works and complementary programmes on IPV. Using mixed-methods we examined whether and how the Ethiopian government's public works programme (that includes food or cash transfers for seasonal labour) alongside complementary activities that engage women and men affected IPV. We analysed midline data collected in July–October 2019 from a randomised controlled trial (RCT) designed to measure the added impacts of the complementary programming in the Amhara and Oromia regions. Eligible households for this analysis had at least one child aged 0–35 months and a primary female caregiver who was married, and under 50 years-old ($n = 2604$). A nested qualitative study was conducted with a sub-sample of RCT participants from February–March 2020; data included seven focus group discussions and 58 in-depth interviews. Male partners of women who reported experiencing IPV were purposively sampled. Ordinary Least Squares regression analyses were used to estimate the average treatment effect of the complementary programming, and sub-analyses were conducted on the poorest ten households from each village who received additional livelihood transfers. Qualitative data were analysed using thematic content analysis. We found no impacts of the complementary programming on IPV in the full sample, but some impacts among the poorest sample. Evidence on pathways found that both the public works and complementary programming decreased poverty-related stress and arguments within relationships and increased emotional wellbeing. There were some impacts on women's empowerment from the complementary programming. However, men's reactions to women's empowerment were mixed. There was strong evidence that engaging men in nutrition behaviour change communication contributed to improving gender relations. Our findings indicate that social protection and complementary programmes have the potential to be gender transformative and prevent the drivers of IPV.

1. Introduction

1.1. Cash transfers and Intimate Partner Violence

Global estimates indicate that 30% of women experience physical and/or sexual violence by an intimate partner in their lifetime (World Health Organisation, 2021), with similar estimates in rural Ethiopia (Yitbarek et al., 2019). Intimate partner violence (IPV) is associated with adverse physical and mental health outcomes, such as injuries, sexually transmitted infections, depression and suicide, among others (Bacchus

et al., 2018; Devries et al., 2013). In addition there are harmful social and economic impacts, such as lost income to women and families, and decreased productivity of survivors, their families and communities (Rogathi et al., 2017; Graves et al., 1995). Significant resources have been invested to understand what works to prevent IPV, with a particular focus on cost-effective and scalable interventions.

Cash transfers and other social safety net programmes have reached approximately 2.5 billion people in low- and middle-income countries, helping women and the most vulnerable members of society (The World Bank, 2018). These social protection programmes have been designed

* Corresponding author.

E-mail address: Meghna.Ranganathan@lshtm.ac.uk (M. Ranganathan).

<https://doi.org/10.1016/j.socscimed.2022.114708>

Received 19 August 2021; Received in revised form 5 January 2022; Accepted 6 January 2022

Available online 10 January 2022

0277-9536/© 2022 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

primarily to reduce poverty and have shown promising impacts on reducing food insecurity (Tiwari et al., 2016) and improving the uptake of health services (Ranganathan and Lagarde, 2012). These programmes have not been designed explicitly to reduce IPV. By examining impacts on IPV, however, there is potential to uncover additional benefits that could be leveraged to achieve multi-sectoral objectives. A growing evidence base demonstrates that cash transfers have the potential to reduce IPV. A review by Buller et al. (2018) found that across 22 quantitative and qualitative studies, the majority (73%) showed that cash decreased IPV; the remaining showed mixed and heterogeneous impacts (Buller et al., 2018). A more recent meta-analysis of 14 experimental and quasi-experimental cash transfer studies found average decreases in physical/sexual IPV (4 percentage points (pp)), emotional abuse (2 pp) and controlling behaviours (4 pp) (Baranov et al., 2021).

The papers reviewed in Buller et al. (2018) provided preliminary evidence of three pathways through which cash can impact IPV, however, the included studies were not designed to rigorously test them (Buller et al., 2018). The pathways were: 1. *Economic security and emotional wellbeing*: Operating through a pure 'income effect' of cash into the household, whereby cash increases financial standing and reduces poverty-related stress, leading to improved emotional wellbeing; 2. *Intra-household conflict*: Capturing the effect of cash in reducing conflict in the couple caused by arguments over tight budgets and daily spending. Alternatively, if money is used for expenditures such as alcohol or tobacco, there is potential for new sources of conflict (although there was less evidence of this occurring); 3. *Women's empowerment*: Increasing a woman's bargaining power, strengthening her self-worth, and potentially increasing her perceived value to the household through cash and complementary programming (particularly those targeting women)—where effects on IPV depend on men's reaction to her new role and power.

Despite the evidence to date, there are still gaps in our understanding of the linkages between cash transfers and IPV. For example, the mechanisms of how cash-or food-for-work versus cash only programmes can affect IPV are not clearly understood, as men and women working outside the home brings an additional dimension to the potential pathways, and women working may challenge traditional gender norms (Perova et al., 2021). In addition, there are gaps in understanding how complementary programming (cash plus) can be used to leverage impacts of cash on IPV and ensure reductions in IPV from cash-or-food-for-work programmes. Qualitative studies embedded in impact evaluations can aid in unpacking and refining hypothesised mechanisms, increase our understanding of the role of design components and/or complementary activities, while obtaining an in-depth understanding of lived experiences (Barrington et al., 2021).

The context for this study is the Government of Ethiopia's national social safety net programme called *The Productive Safety Net Programme (PSNP)* that provides poor, rural households food or cash payments in exchange for seasonal labour in public works, and unconditional cash transfers to households whose main income earners are elderly or disabled. To strengthen the programme and expand its impacts, complementary livelihood, nutrition, gender and natural resource management activities are implemented through an integrated programme called *Strengthen PSNP4 Institutions and Resilience (SPIR) Development Food Security Activity (DFSFA)*. A randomised controlled trial (RCT) was conducted to measure the causal impact of key activities of the SPIR DFSFA programme on livelihood, food security, nutrition, and women's wellbeing, including IPV. As a complement to the main impact evaluation, a qualitative study was embedded to unpack the impacts on IPV.

Specifically, motivated by gaps in the literature and guided by the Buller et al. (2018) pathways this mixed-methods study explored the following research questions: 1) how does the public works programme (PSNP) and the inclusion of complementary activities (SPIR) affect IPV? 2) how do men respond to women's empowerment? and 3) how does engaging men and women together in complementary activities affect gender roles and gender equitable attitudes. While the RCT was

designed to evaluate the added impacts of complementary activities and *not* the impacts of public works only, the qualitative study delves more deeply into how public works may affect IPV. Further, by triangulating qualitative and quantitative data, we contribute to the evidence by expanding the Buller et al. (2018) conceptual framework and hypothesise how public works and complementary programmes affect IPV.

1.2. Programme background

PSNP in Ethiopia is one of the largest social protection programmes in Sub-Saharan Africa. Public works beneficiaries are entitled to five days of work per month over six months per registered individual, which can be divided across able bodied adult household members (for example, a household with three registered individuals are eligible for 15 days of payment). The daily wage rate in 2019/2020 was 41 Birr (exchange rate March 2020: \$1.26) in Oromia and 42 Birr (\$1.29) in Amhara, or 15 kgs of cereal/month (Ministry of Agriculture, 2012). Public works payments typically account for 80–85% of all PSNP payments (Hirvonen and Hoddinott, 2020).

SPIR is a five-year project (2016–2021) supporting the implementation of PSNP4 (the fourth iteration of the programme), and complementary activities. Through funding from the United States Agency for International Development's (USAID) Bureau for Humanitarian Assistance, and in collaboration with the Government of Ethiopia, World Vision leads the implementation of SPIR. The main objectives are to enhance resilience to shocks and improve food security and nutrition for vulnerable, rural households. SPIR targets over 500,000 PSNP4 beneficiaries in 15 of the most vulnerable districts in Amhara and Oromia. Based on the Ethiopian demographic and health survey (DHS) data, Oromia has a higher prevalence of physical, sexual and emotional violence against women at 28.9%, 13.2% and 23% respectively, compared to Amhara at 19%, 8% and 23%, respectively (Yitbarek et al., 2019). Gender norms in the regions are patriarchal and traditional, with men considered heads of the family with control over land and economic resources, and women expected to be dependent on and subordinate to men (Alemu, 2007; Semahegn et al., 2013).

The impact evaluation focuses on the livelihood (L) and nutrition (N) activities of the SPIR programming, in addition to enhanced versions on these activities (L* and N*) (see Fig. 1 and supplementary file (S) 1 for more information).

1.3. Hypothesised pathways of change

Public works programmes have the potential to affect IPV through the three pathways hypothesised in Buller et al. (2018). The link of payments to public works, however, adds another dimension to all three pathways: having work may improve beneficiaries' emotional wellbeing, thereby reducing IPV (pathway 1); work also means beneficiaries are away from the home, thereby reducing the potential time for arguments and conflict (pathway 2); providing women with work may also increase her financial autonomy and self-efficacy. Whether this increased economic empowerment reduces IPV depends on her partner's reaction to her status and position (pathway 3). Women working outside the home, however, may directly challenge traditional gender roles and this may lead to more violence if men feel women are taking their positions as breadwinners, or if women spend less time on household tasks. Women's empowerment is defined broadly here as improving the ability of women to access health, education, earning opportunities, rights, and political participation and this may vary by context (Hidrobo and Fernald, 2013).

The SPIR activities also have the potential to affect IPV through the same pathways hypothesised in Buller et al. (2018) and through additional pathways directly related to engaging men and women in gender transformative complementary activities. The main SPIR livelihood activities (L) are organised around Village Economic and Social Associations (VESA) groups that serve as a platform for trainings and activities

Intervention	Components
L	<ul style="list-style-type: none"> • Village Economic and Social Associations (VESAs) • Financial literacy • Agriculture and livestock value chain development • Home gardening and forage production
L*	<ul style="list-style-type: none"> • L activities, plus • Social Analysis and Action (SAA) to improve women's access to markets • Aspirations promotion activities, and • Poultry or cash livelihood transfers targeted to the poor
N	<ul style="list-style-type: none"> • Nutrition behavior change communication (BCC) • Water & Sanitation & Hygiene (WASH) activities • Cascade training of health extension worker supervisors
N*	<ul style="list-style-type: none"> • N activities, plus • Timed and Targeted Counseling (TTC) and Community-based Participatory Nutrition Promotion (CPNP) • Male engagement in BCC • Interpersonal Therapy in Groups (IPT-G) for depression (after mid-line)

Fig. 1. SPIR livelihood (L) and nutrition (N) interventions.

around financial literacy, promotion of savings and credit use, and agriculture and livestock value chain development. The transfer of information and links to social networks could potentially improve households economic security and emotional wellbeing (pathway 1), while bringing women and men together to discuss financial issues could reduce conflict in the household (pathway 2) and empower women (pathway 3) (Gram et al., 2020). The enhanced L* activities strengthen these relationships. In particular, the livelihood transfers (one-time poultry or cash transfers valued at \$200) may not only improve a household's wellbeing, but by targeting women may also empower them. Lastly, the aspirations activities involve a one-time screening of short documentary films designed to motivate individuals to undertake actions to improve their future wellbeing.

The SPIR nutrition package (N) includes social behaviour change communication (BCC) on optimal child feeding practices and nutrition, as well as water, sanitation and health activities. The transfer of information from the BCC and WASH activities could improve the family's health thereby improving the household's emotional wellbeing (pathway 1) and increase women's knowledge and agency as women feel better informed in making decisions (pathway 3). The group-based structure may also lead to increased social interactions which may also improve her emotional wellbeing, increase her agency, and provide outlets for escaping IPV (Gram et al., 2020; Roy et al., 2019). N* also includes Interpersonal Therapy in Groups to address depression, which may also improve a household's emotional wellbeing.

The SPIR activities also include components that are gender transformative that lead to a fourth hypothesised pathway. In particular, the Social Analysis and Action (SAA) activities address restrictive social norms, beliefs, and practices around gender that may empower women and improve how men react to women's increased power. (Dunkle et al., 2020). By involving men in BCC and Timed and Targeted Counselling (TTC) activities, the N* activities are also gender transformative. For example, both the TTC and BCC activities which includes household nutrition and feeding counselling, encourages men to support their wives in childcare that may improve gender roles in the household.

2. Methods

2.1. Study design

We used a mixed-methods design (Flick, 2018) composed of midline data from a quantitative impact evaluation and a nested qualitative

study. The integration of the quantitative and qualitative data began by recruiting the sub-sample of men and women for the nested qualitative study from the population of participants who completed the quantitative survey. We then integrated the two data methods by triangulating the qualitative and quantitative findings, and interpreting and discussing them together (Fetters et al., 2013). As the primary focus of the paper was to understand the pathways through which public works and the complementary activities affect IPV, the quantitative outcomes chosen for analysis were not pre-determined and were based on qualitative evidence of pathways of impact and for which we had quantitative data to triangulate the finding. We include an outcomes table that maps the quantitative outcomes to the relevant pathways and provides detail on how each outcome within the pathways is defined (please see S2).

The impact evaluation was an RCT that compared combinations of complementary activities by randomly assigning 196 *kebeles* (villages) across 13 *woredas* (districts) in Amhara and Oromia to one of four treatment arms: T1 (L* + N*); T2 (L* + N); T3 (L + N*); T4 Control (PSNP only). Within L*, *kebeles* were randomised to receive either cash or poultry grants with and without the aspirations intervention (see S 3). The impact evaluation was registered at American Economic Association (AEA) registry (AEARCTR-0008281) and details of the randomisation can be found in the baseline report (Alderman et al., 2019). This mixed-methods study was conceived after the main impact evaluation was designed and was not part of the pre-analysis plan of the main impact evaluation.

2.2. Data collection and sample

2.2.1. Quantitative sampling and data collection

The main impact evaluation included three rounds of data collection: a baseline survey before SPIR activities were rolled out (February–April 2018), a midline survey (July–October 2019) and an endline survey (February–March 2021). For recruitment, 18 households were randomly sampled at baseline in each *kebele*. The inclusion criteria were that households had to: 1) be a PSNP client household, 2) have at least one child aged 0–35 months, and 3) have the mother or primary female caregiver of the child be a member of the household. All survey rounds included a household, female, and male survey, the latter two were administered to the primary female caregiver (“primary female”) and her spouse (“primary male”) separately.

Of the 196 initial *kebeles*, four were subsequently dropped due to not having PSNP beneficiaries or having security issues. Baseline data was

successfully collected on 3314 households across 192 kebeles, of which 3220 households were subsequently re-interviewed at midline (see Fig. 2). The sample used in this analysis are 2604 households at midline with a primary female that is married and less than 50 years old. This is the relevant sample for studying IPV and for which qualitative data was collected. Of the 2604 households with data on the primary female, 2348 households also administered the primary male survey and 1610 households had data on IPV. Attrition is not correlated with treatment for any of the three samples used in the analysis (S4 Table A1).

2.2.2. Qualitative sampling and data collection

The nested qualitative IPV study occurred seven months after the midline survey (February–March 2020) in the same study regions as the impact evaluation. A sub-sample of men and women were recruited for the qualitative study from the participants who completed the quantitative midline survey. We conducted seven focus groups discussions (FGDs) and 58 in-depth interviews (IDIs), with men and women in Amhara, and men only in Oromia (Table 1). We oversampled men to help answer research questions 2 and 3, exploring how men respond to women’s empowerment, and if and how engaging men and women together in complementary activities affect household dynamics. Data collection was conducted by a local research partner. Study participants were sampled across three kebeles in treatment arms 2 and 3 each, and two kebeles in the control arm. This enabled a comparison between the subset of complementary activities and PSNP only.

We conducted five FGDs in Amhara and two in Oromia, each containing six to ten participants. For the female FGDs in Amhara we sampled a subset of married women under 50 years, two included women who had attended SPIR L* or N* complementary programmes, and the third with those in the control arm. For the male FGDs in Amhara and Oromia, we sampled men under 70 years who were partners of women who reported experiencing IPV.

For the female IDIs we sampled married women under 50 years who had reported experiencing lifetime IPV, had attended L* or N* activities, and had a partner under 70 years. Sampled men for the IDIs were partners of women under 50 years who reported experiencing IPV. For both FGDs and IDIs, men sampled were not partners of women sampled to maintain safety and confidentiality.

FGDs were used to collect normative views, while IDIs were used to obtain personal views and experiences. Given the sensitive nature of the topic, IDIs provided a private space for discussions on personal

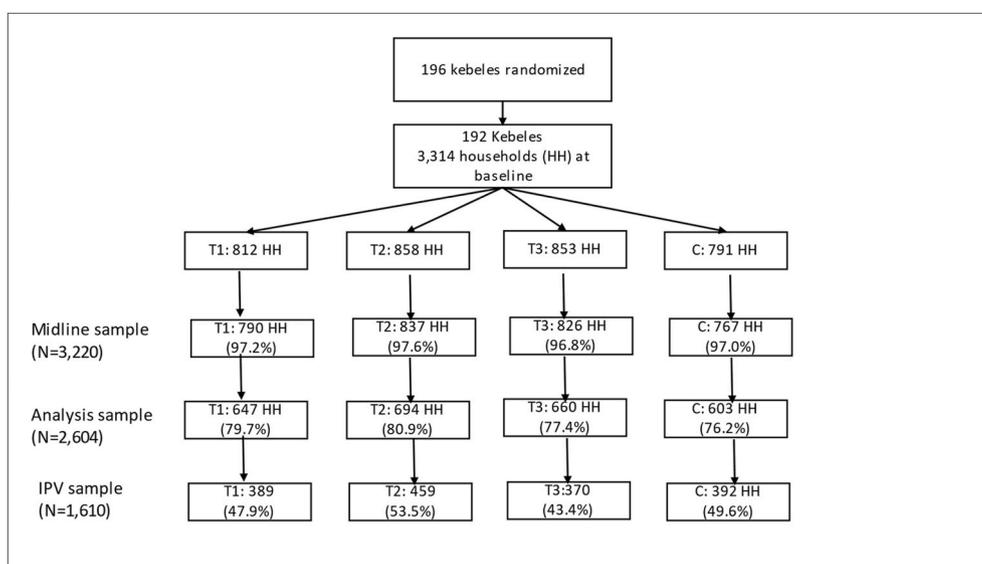
experiences of IPV (questions on personal experiences of IPV were not discussed in the FGDs). The FGDs and IDIs were semi-structured and topic guides explored gender norms, experiences and perceptions of PSNP and complementary activities and how they affected household dynamics and IPV, including men’s responses to women’s empowerment and women’s perspectives on their partner’s engagement in complementary activities.

Prior to data collection interviewers underwent ten days of training on the ethics of collection violence data based on World Health Organisation’s (WHO) ethical guidelines. Topics covered ethical considerations across all stages in the research cycle: informed consent, intensive training on asking IPV-related questions, the safety of respondents and data collection team, confidentiality of data, access to support services through appropriate referral pathways, interviewer self-care, and the referral protocol. Interviewers were experienced social scientists with undergraduate or graduate degrees. We conducted the FGDs in central community locations that were convenient for participants, and IDIs in private locations that ensured confidentiality and comfort. FGDs were conducted by a moderator and an observer who took notes and lasted approximately 1.5-3 hours. IDIs were conducted by sex matched interviewees and lasted approximately 90 minutes. Prior to the start of the FGDs and IDIs informed consent was taken. Participants were offered food and refreshments and reimbursed for transport costs, but we did not offer monetary incentives to participate in the study. The FGDs and IDIs were conducted in either Amharaic or Oromifa, digitally recorded, and then translated and transcribed verbatim into English.

2.3. Data analysis

2.3.1. Qualitative analysis

We conducted a thematic content analysis consisting of four steps: 1) Reading for content: we familiarised ourselves with the content and emergent themes were noted (Braun and Clarke, 2006); 2) Coding: we created codes based on identified themes and assigned them to specific sections of text (Saldana, 2009). To ensure inter-coder reliability, a sample of 15 data-rich transcripts were double-coded; 3) Displaying: We then worked within each code to identify principle sub-themes that reflected finer distinctions in the data. (Saldana, 2009); 4) Interpretation: Emergent findings were refined in collaboration with the local researchers who collected the data and referred to the original language for clarification, if needed.



*Note: percentages are with respect to baseline sample.

Fig. 2. Flow chart of survey participants.

Table 1

Focus group discussions (FGDs) and in-depth interviews (IDIs) by treatment arm.

Treatment arm	Focus group discussions			Total	In-depth interviews			Total
	Women (Amhara)	Men (Amhara)	Men (Oromia)		Women (Amhara)	Men (Amhara)	Men (Oromia)	
1 (L* + N*)	0	0	0	0	0	0	0	0
2 (L + N*)	1	1	1	3	4	4	10	18
3 (L* + N)	1	1	1	3	11	11	10	32
4 Control (PSNP only)	1	0	0	1	4	4	0	8
TOTAL	3	2	2	7	19	19	20	58

2.3.2. Quantitative analysis

For this analysis, we estimated the average treatment effect of each arm (T1, T2 and T3) over all cross-randomised sub-treatments using Ordinary Least Squares. For a few outcomes, we also estimated the impact of SPIR on the sample that was eligible to receive the livelihood transfers; the poorest ten out of 18 households in each *kebele* were identified as eligible for cash or poultry transfers. Although only households in T1 and T2 received the livelihood transfer, the identification of the poorest ten households was conducted across all four treatment arms. For this sample, we estimated the average treatment effect of each treatment crossed with the poultry or cash (T1*cash, T1*poultry, T2*cash, T2*poultry, T3) against the control. We then estimated the average effect of T1 and T2 as the linear combination (mean) of the coefficients on the cash and poultry interventions, and similarly we estimated the average effect of poultry and cash (these effects average the impact of the aspirations sub-treatment).

2.3.3. Ethics

The impact evaluation was approved by the Institutional Review Board at the International Food Policy Research Institute and Hawassa University, Ethiopia. We received ethics approval for the qualitative study from the Ethics Committee in Ethiopia and the London School of Hygiene and Tropical Medicine (ref: 17956).

3. Results

To contextualise the study, we first describe sample characteristics, gender roles and perceptions of IPV. We then structure our results around the research questions we sought to answer: 1) pathways between the PSNP and SPIR activities and IPV, including men's reactions to women's empowerment; and 2) the impact of male engagement in gender transformative complementary activities. Given that the quantitative evaluation was *only designed to assess the added impacts of SPIR* and not the impacts of PSNP, we provide quantitative evidence only for the pathways between the SPIR programme and IPV. We also use the quantitative results on pathways to triangulate the qualitative findings. We highlight perceived unintended consequences of the programme when describing each pathway in the few instances they arise.

3.1. Context

3.1.1. Quantitative sample characteristics

In comparison to Amhara, fewer households in Oromia were headed by women (4.7% versus 11.0%), the average household size was larger (6.7 versus 5.4 members), fewer women had access to education (18.6% versus 23.1%) and more women experienced physical IPV in the last 13 months (10.3% versus 4.0%) (S4, Table A2). Baseline characteristics were well balanced across the four treatment arms (S4, Table A3).

3.1.2. Gender roles and perceptions of IPV

Almost universally men were reported to be responsible for providing for their families and subsisted on farming or livestock rearing. Women were primarily responsible for household tasks and childcare, and they reported their own responsibilities exceeded those of men:

Everything a woman does has no end and is hard work ... He can have fun in his leisure time. But women have no rest and on top of that she has to manage the children. – Woman, ~40 years-old, Amhara, IDI 24, PSNP only

There were some variations in participants' perceptions of IPV. For instance, most participants agreed that physical violence was unacceptable, however, some stated that it was acceptable as a form of disciplinary action when women did not complete their household responsibilities or obey their husband. This belief was held equally by men and women:

*If he told her not to go somewhere and if she did ... then it is not violence ... It teaches her to obey him ... she is not fond of being beaten but she learns something. – Woman, 25 years-old, Amhara, IDI 22, L + N**

Most participants also reported that a man forcing his wife to have sex constituted a form of violence, however, some participants disagreed with this, stating that sex is a marital right and as long as there is no physical harm, non-consensual sex is acceptable. Emotional abuse, on the other hand, was unanimously reported to be the most socially unacceptable form of IPV:

*No matter how ... beautiful or ugly; and good or bad ... a woman deserves respect from her husband. Once man and woman are engaged in a marital life, they are tied to each other by blood and have to care for one another's dignity. – Man, 50 years-old, Oromia, IDI 40, L + N**

Like physical IPV, however, emotional abuse was sometimes condoned if it was in retaliation to the woman not conforming to gendered expectations or male authority.

3.2. Public works (PSNP) and pathways to IPV

We found some qualitative evidence of PSNP reducing marital conflicts through pathways 1 and 2 put forth by Buller et al. (2018), but no evidence of an impact of PSNP on women's empowerment (pathway 3).

3.2.1. Pathway 1: Economic security and emotional wellbeing

PSNP contributed to a partial alleviation of household economic stress and improved wellbeing. Prior to joining PSNP, many male participants reported difficulty finding local work and travelled long distances to provide for their families. This struggle to provide increased stress and led to food insecurity within the household. For example, when discussing his situation before PSNP a man said:

*It was stressful ... We had neither enough farmland nor support from PSNP and it was difficult to feed our children – Man, 46 years-old, Amhara, IDI 15, L + N**

In a couple of extreme cases men reported that this led to feelings of hopelessness and suicidal ideation:

*Before that [PSNP], we were in trouble ... I had nothing ... which makes my life meaningless, and I used to think that I do not deserve [to continue] living – Man, 40 years-old, Oromia, IDI 45, L + N**

Participants expressed gratitude to the government for the work and

money brought by PSNP and reported that in addition to providing financial benefits it gave them a sense of purpose.

Some participants, however, reported frustration over the inability to improve their economic situation solely through PSNP, thereby attenuating potential impacts on IPV. Participants reported that the time they spent working for the programme detracted from working on their own farms, or at more lucrative work that although erratic, may have yielded more economic benefits:

When we work as day labourers [...] we earn 70–100 birr (US \$1.5–2.2) per day but we get 42 birr (\$0.92) per day when we work for the Safety Net Project [PSNP]. As one gutcheye [3–5kg tin cup] of cereal is sold with around 24 birr (\$0.53), we are almost working for free and that is the weakness [of PSNP]. – Woman, 33 years-old, Amhara, FGD 3, PSNP only

3.2.2. Pathway 2: intra-household conflict

We found that participation in PSNP resulted in some reductions in intra-household conflict and improvements in relationship quality. Many participants reported that PSNP helped reduce stress about meeting basic needs, and this led to decreases in couples' arguments:

When there is no money in your household ... this results in disagreements and quarrels in the families. When this shortage of money is solved with the transfer [PSNP], the existing problems and quarrels decrease because the issue is solved. – Man, 30 years-old, Oromia, FGD 7, L+N*

A couple of participants reported arguments over the use of the cash, but these were minor:

*Yes, there were arguments, but it was only to ensure the best use of the money. However, the arguments always finish with agreement. – Man, 46 years-old, Amhara, IDI 15, L + N**

One female participant, however, reported that women's participation in PSNP increased tensions as it decreased their time to complete household tasks:

*Because we stay out with the men all day [working for PSNP], the housework won't be finished and the husbands are not happy about that. – Woman, 30 years-old, Amhara, FGD 5, L + N**

This quote highlights that unlike unconditional cash transfer programmes, cash and/or food-for-work programmes may bring additional tensions to the couple, especially in societies with patriarchal gender roles.

Only one participant spoke of how PSNP impacted IPV, stating a decrease in his perpetration but not an end to it:

[Before we participated in PSNP] we had some disagreements which, as usual, were happening when the living situation got worse ... we had nothing to eat; the disagreements turned to violence ... I beat her ... [after participating in the program] it [violence] happens but has reduced [...] it is not as it was previously. – Man, 23 years-old, Amhara, IDI 7, L+N*

3.3. SPIR (nutrition* and livelihoods*) and pathways to IPV

3.3.1. Impacts of SPIR on IPV

Quantitatively, we find no impacts on past year experience of IPV across any treatment arm for the full sample (Table 2). In the sample of households who were eligible for the livelihood grants, however, we found some evidence of decreases in reports of physical and sexual violence from the T2 cash and poultry interventions when compared to the control arm (Table 3). Looking at the average effect of T1 or T2 across cash and poultry, or the average effect of cash and poultry across T1 and T2, we found decreases in sexual violence in the past year of T2 (L*+ N) and the poultry package (second panel of Table 3). These results are robust to multiple hypothesis testing (S4 Table A6).

Table 2
Experience of past year IPV, full sample.

	(1)	(2)	(3)
	Emotional violence	Physical violence	Sexual violence
T1 (L*+N*)	-0.005 (0.024)	-0.001 (0.019)	-0.016 (0.014)
T2 (L*+N)	-0.006 (0.024)	-0.017 (0.019)	-0.018 (0.014)
T3 (L + N*)	-0.009 (0.025)	-0.017 (0.018)	-0.005 (0.014)
Test: T1 = T2	0.971	0.404	0.847
Test: T2 = T3	0.914	0.978	0.266
Test: T1 = T3	0.891	0.394	0.382
Mean of control (T4)	0.122	0.092	0.054
N	1610	1610	1610

Notes: Estimates from the SPIR midline survey sample. Standard errors (in parentheses) are clustered at the kebele level. All models control for woreda level fixed effects. *p < 0.1, **p < 0.05, ***p < 0.01.

Although evidence of decreases in IPV were limited, we found quantitative and qualitative evidence in support of all three pathways hypothesised in Buller et al. (2018). In pathway 1, the VESA savings group and livelihood transfers appeared to be particularly effective at reducing economic stress, whilst in pathway 2 financial arguments were reduced by women gaining economic independence through VESA, livelihoods and gardening. In pathway 3, in addition to activities that increased women's economic independence, the nutrition education programmes were found to increase women's empowerment, however, qualitative evidence was limited to Amhara. Evidence also suggests that not all men accepted female empowerment, and in some instances, men appeared to still want to retain control of household decisions. Finally, we found evidence of a fourth pathway specific to the SPIR activities. In particular, we found that engaging men and women in VESA, SAA and nutrition BCC activities led to more equitable sharing of household tasks and mutual respect.

Table 3
Experience of past year IPV: sub-sample eligible for livelihood grant.

	(1)	(2)	(3)
	Emotional violence	Physical violence	Sexual violence
T1 x Poultry	-0.016 (0.045)	-0.053* (0.031)	-0.027 (0.023)
T1 x Cash	0.030 (0.043)	0.031 (0.036)	-0.015 (0.024)
T2 x Poultry	0.009 (0.053)	-0.016 (0.042)	-0.057*** (0.021)
T2 x Cash	-0.047 (0.039)	-0.059** (0.027)	-0.034 (0.021)
T3	-0.016 (0.034)	-0.027 (0.027)	-0.013 (0.022)
Linear combination: effect of T1	0.005 (0.034)	-0.013 (0.026)	-0.020 (0.019)
Linear combination: effect of T2	-0.022 (0.038)	-0.041 (0.030)	-0.047** (0.020)
Linear combination: effect of poultry	-0.004 (0.039)	-0.035 (0.030)	-0.042** (0.019)
Linear combination: effect of cash	-0.013 (0.033)	-0.019 (0.026)	-0.026 (0.019)
Test: T1 = T2	0.481	0.318	0.084*
Test: T2 = T3	0.868	0.618	0.061*
Test: T1 = T3	0.544	0.570	0.720
Mean of control (T4)	0.125	0.106	0.072
N	841	841	841

Notes: Estimates from the SPIR midline survey sample. Standard errors (in parentheses) are clustered at the kebele level. All models control for woreda level fixed effects. *p < 0.1, **p < 0.05, ***p < 0.01.

3.3.2. Pathway 1: Economic security and emotional wellbeing

Participants reported many benefits from SPIR including learning about financial savings, crop production and nutrition. This reportedly reduced food insecurity and associated stress, and increased family savings. The VESA savings groups were especially popular with participants because they provided them with financial security:

*Before SPIR, we had no savings. If we faced any urgent problems, it was hard to get someone to lend us money. Even if someone was there, he asks for interest, which is against our Muslim religion; therefore, I used to feel insecure and worry. Now we have a savings group ... and we can use the money for emergencies and even to start a small business. – Man, 45 years-old Amhara, IDI 8, L + N**

Another man further explained how PSNP and VESA activities helped him provide for his family:

*Sometimes, even the daily labour work might not be available, and it bothered me ... if my children got sick what would I do? How could I buy their educational materials? Now, since I am included in the safety net [PSNP] ... and the SPIR, particularly VESA, [the programmes] have been relieving my burdens. – Man, 44 years-old, Amhara, IDI 13, L + N**

Some participants also reported that their families' participation in the poultry and cash grant and VESA savings programme increased their status in the community as they were no longer perceived as poor:

I: Has training and poultry business changed your status in the eyes of the community?

P: Yes, [status in the community has changed] a lot. If I could not sell the eggs from chickens, I would not [have] been able to buy crop and seed. But now I am happy because I buy seed and fertiliser and am able to produce [crops]. Woman, 22 years-old, Amhara, IDI 38, L+N, recipient of poultry*

Previously, when I approached people they usually felt that 'he is going to beg something' ... But after we started participating in this programme [VESA], we get good respect ... – Man, 35 years-old, Oromia, IDI 46, L+N, recipient of cash*

This participant also described how SPIR increased emotional wellbeing for him and his family:

I was thinking of assassinating myself ... Because she did not stop asking for resources to fulfil the needs of the family ... She requested me to give her something, but I can't ... But, after we started in the programme we are living happily without any problem. – Man, 35 years-old, Oromia, IDI 46, L+N, recipient of cash*

Consistent with the qualitative findings, quantitative results showed that all three treatment arms led to increases in savings and accessing resources from VESA (Table 4). However, while T2 (L*+N) and T3 (L + N*) led to decreases in men's financial worry, there was no decrease in depressive symptoms (S4, Table A4).

Despite promising results, participants highlighted that IPV cannot be resolved by tackling income shortage alone. For example, when asked whether the livelihoods component reduced tensions and violence in the household, a participant said:

There are some men who have [an] argumentative personality and do not care for their household. If the problem was due to income shortage the situation can be changed, if it is natural behaviour it is hard to change. – Man, 45 years-old, Amhara, FGD 1, L+N*

3.3.3. Pathway 2: intra-household conflict

Across three FGDs and three IDIs participants reported that SPIR improved their relationship quality by decreasing arguments about money. The vegetable garden was highlighted as an effective

Table 4
Savings and financial worries.

	(1)	(2)	(3)
	Primary female has savings	Household has accessed resources from VESA	Primary male is worried about unexpected expenses
T1 (L*+N*)	0.492*** (0.039)	0.193*** (0.030)	-0.017 (0.024)
T2 (L*+N)	0.456*** (0.041)	0.224*** (0.033)	-0.063** (0.026)
T3 (L + N*)	0.364*** (0.039)	0.225*** (0.034)	-0.066** (0.027)
Test: T1 = T2	0.337	0.317	0.088*
Test: T2 = T3	0.013**	0.964	0.903
Test: T1 = T3	0.000***	0.316	0.081*
Mean of control (T4)	0.234	0.044	0.771
N	2604	2332	2343

Notes: Estimates from SPIR midline survey. Standard errors (in parentheses) are clustered at the kebele level. All models control for woreda level fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

intervention that enabled women to become more financially independent:

*Because we are not buying food from the market, we do not quarrel with the husbands about money ... I do not ask my husband for money as much as I used to, and because I won't be disappointed if he tells me he does not have any, I think our relationship is better. Also because I do not ask him for money, he comes home with good vibes. – Woman, 28 years-old, Amhara, FGD 5, Participant 4, L + N**

There was also evidence from a focus group that recipients of the poultry livelihood intervention experienced improved relationships:

It [SPIR] decreases such problems, because women are starting to earn her own earnings from the chickens she is rearing, and able to cover her own expenses, and she is independent, and [there are] no arguments when she asks for money – Man, 38 years-old, Amhara, FGD 1, L+N, recipient of poultry*

A male participant made an explicit link between reductions in arguments due to VESA and reductions in IPV:

Before she asked me to give her money to purchase basic item[s] for the family. And, I did not have money ... this might result in quarrelling and violence. Now [...]she is involved in groups with neighbourhood women [...] She saves money with [the] group [VESA] ... and uses the money to purchase essential goods. Now, we don't have any quarrels and violence in the household because the problems that cause it [are] solved and she can manage everything. – Man, 22 years-old, Oromia, FGD 7, L+N*

3.3.4. Pathway 3: Women's empowerment - increases in self-confidence, independence and knowledge

Although we did not find evidence in support of pathway 3 in Oromia, in Amhara a few women reported that they felt empowered to contribute financially to the household through participation in VESA groups and vegetable gardens. This financial independence made them more confident, and allowed them to further participate in community activities:

Before [SPIR], when my neighbours would ask me to go to a funeral with them and share some of the cost of the food ... I couldn't afford to contribute the money so I just wouldn't go with them. But now, I can afford to do that. – Woman, 34 years-old, Amhara, IDI 35, L+N*

Participants also reported that women shared the information they received from nutrition trainings with their neighbours, thus becoming role models in the community and improving their status:

*We share the information from the [nutrition] trainings at home, which my wife shares with [the] neighbours, she has been receiving good impression [appreciation] from them. – Man, 44 years-old, Amhara, IDI 13, L + N**

Some women also described how the nutrition trainings increased their husbands respect for them and their financial decision-making power:

*Even though he never accepts what I tell him, when I tell him what food is good for the children ... he has started to realise what I tell him [is true]. When I go to the market he would give me money and would be like, 'if you are using it to cook those foods, I will give you more.' – Woman, 33 years-old, Amhara, IDI 23, L + N**

For one participant, being a member of the VESA group boosted her self-confidence enough to overcome her fear of leaving her abusive husband:

I used to wonder if everyone's life is like that. But after the group meetings I understand that no one should live like me ... I shouldn't be controlled by my husband. I used to be afraid of leaving him, and my future ... but after I received the trainings and talking with the group, I started to believe that I can work and provide for my family by myself. I am not afraid to be alone anymore. – Woman, 30 years-old, Amhara, IDI 32, L+N*

However, leaving her husband did not resolve all issues as he reportedly then tried to gain custody of the children to access the PSNP money.

Consistent with the qualitative results, we found large, significant increases in women's financial decision-making across all three arms but no impacts on self-efficacy (Table 5).

Despite positive changes in women's empowerment, there is recognition that male partner responses complicate this pathway to IPV. Although most men accepted their wives earning money and gaining knowledge, this was not always the case. For example, a woman noted that her husband was unhappy with her sharing knowledge from the nutrition trainings with neighbours:

*He just doesn't see it [sharing the nutrition trainings with other women] as good. I do these things when he is away from home [...] since I believe it's a responsibility and the education is very much helpful [...]. I feel sad just because he is not accepting it. – Woman, 33 years-old, Amhara, IDI 23, L + N**

Table 5
Agency and female's input into decision-making around production.

	(1)	(2)	(3)	(4)	(5)
	Female self-efficacy	Female had input into most or all inputs' decisions	Female had input into most or all outputs' decisions	Female had input into most or all financial decisions	Controlling behaviours by husband
T1 (L*+N*)	-0.065 (0.159)	0.032 (0.033)	0.010 (0.030)	0.069** (0.030)	0.026 (0.043)
T2 (L*+N)	0.146 (0.172)	0.065* (0.033)	0.070** (0.030)	0.106*** (0.029)	-0.004 (0.035)
T3 (L + N*)	0.263 (0.178)	0.015 (0.035)	0.040 (0.031)	0.068** (0.033)	-0.026 (0.039)
Test: T1 = T2	0.212	0.259	0.043**	0.195	0.467
Test: T2 = T3	0.530	0.093*	0.323	0.216	0.519
Test: T1 = T3	0.060*	0.553	0.315	0.954	0.227
Mean of control (T4)	3.841	0.507	0.467	0.446	0.500
N	2558	2102	2102	2102	1610

Notes: Estimates from the SPIR midline survey. Standard errors (in parentheses) are clustered at the kebele level. All models control for woreda level fixed effects. *p < 0.1, **p < 0.05, ***p < 0.01.

In Oromia, when asked hypothetically about men's reactions to women gaining power and confidence, opinions varied:

*They [men] [would] feel happy because when someone who you know before, becomes above you and gains confidence [it makes you happy]. When she saves money, she is competing with you and it is important that you accept it. – Man, 32 years-old, Oromia, FGD 6, L + N**

While in response another man said:

*Some people do not think like he said [the previous participant]. Before he commands her like a slave. When she learns this education, he thinks that he misses his power. He thinks that he does not have someone [a wife] who supports him. – Man, 30 years-old, Oromia, FGD 6, L + N**

These conflicting opinions both ultimately position women's empowerment in direct competition to men's power. Men have the possibility to deal with this perceived loss of power either by accepting it or trying to reinstate it.

Consistent with qualitative results, the quantitative analysis revealed that although SPIR activities led to increases in women's decision-making, they did not decrease husband's controlling behaviours (Table 5, column 5). In fact, among the livelihood transfer sample, the poultry intervention that led to large increases in women's decision-making, also led to a marginally significant increase in husband's controlling behaviours (S4 Table A5).

3.3.5. Pathway 4: improvements in gender roles and gender equitable attitudes

Some evidence suggests that engaging men and women in VESA, SAA and nutrition BCC activities led to more equitable sharing of household tasks and an increase in mutual respect. For example, when asked about the changes to their relationship after the savings group training a man said:

*Mutual respect and tolerance are all the changes we get from the training ... It totally changed wrong things in my mind to right. It improved our relationships. What I was benefitting from the Safety Net [PSNP] is small when compared to this [SPIR]. – Man, 35 years-old, Oromia, IDI 44, L + N**

A couple of women also reported that participating in the VESA group meetings with their husbands improved the couples' relationship as it increased his respect towards her and started to view her as an equal decision-making partner:

*They [their husbands] are happy now [that] we can discuss financial issues with them and it creates less argument. – Woman, 30 years-old, Amhara, FGD 5, L + N**

Some male nutrition training participants reportedly became more active in the care of their children and women appreciated this contribution:

*He tells me what to feed my children, he says cook this for tonight. He is more involved ... I like it. I really like it. – Woman, 33 years-old, Amhara, IDI 20, L + N**

Additionally, men reported enjoying the trainings, including those that focused on gender equality as it improved their marriage:

*Now I am sharing some of my wife's tasks ... When she bakes injera [Ethiopian bread], I fetch water or collect firewood; so, the training helped me to recognise the need to collaborate with each other for the household. – Man, 23 years-old, Amhara, IDI 7, L + N**

The quantitative results support the qualitative findings; across all three treatment arms we found large increases in men's participation in household chores, in particular collecting firewood and water (Table 6). Impacts were especially large from T3 (L + N*), where engaging men in nutrition BCC significantly increased their involvement in cleaning and meal preparation.

Although women reported they were happy with male engagement in these programmes, they stated more had to be done. Further, there was recognition that when men did engage in household tasks, community responses towards them tended to be negative:

The other men may insult the one who fetches water [...] his friends might say to him 'look, you are doing what women do'. – Woman, 29 years-old, Amhara, FGD 4, L+N*

Quantitatively, we also found evidence that SPIR improved men's gender equitable attitudes, but there were no changes in women's attitudes (Table 7).

4. Discussion

This study examines pathways through which the Government of Ethiopia's public works and complementary programmes impact IPV. Using a mixed-methods approach, this paper elucidates the interplay of pathways hypothesised in Buller et al. (2018) through which these programmes affect IPV. Overall, evidence of impacts of the complementary programmes on IPV were limited, but we found quantitative and qualitative evidence in support of all three pathways in Buller et al. (2018), as well as a fourth pathway specifically related to engaging men in the SPIR complementary programmes.

There was qualitative evidence of public works (PSNP only) partially

alleviating economic stress and improving wellbeing in the family (pathway 1) and decreasing daily quarrels in the household (pathway 2). For the first pathway, almost all participants reported that money from PSNP decreased poverty-related stress and the work provided purpose, though salary and work conditions were not ideal. This aligns with findings that critique public works programmes in Ethiopia and Haiti as programme beneficiaries are generally inadequately compensated for their labour (Carruth and Freeman, 2021). For the second pathway, participants described triggers for arguments decreasing due to the income provided by PSNP. However, there were some indications that public works only could increase family tensions; women reported not having the time to complete household tasks and caring responsibilities when participating in the PSNP only programme, and men did not always respond well to women not meeting this gendered expectation. There was also no evidence of an impact of public works on women's empowerment (pathway 3).

The SPIR skills and training activities provided by the nutrition and livelihood interventions and the cash and poultry transfers had a positive impact on gender relations through all three pathways, and also showed positive impacts on a fourth pathway of improving gender roles and gender equitable attitudes. Participants appreciated the VESA savings groups that allowed them to save and alleviated financial worries (pathway 1). This was corroborated quantitatively, where all three treatment arms led to women reporting savings and households accessing resources from VESA. Men's self-reported financial worry also decreased in T2 (L*+N) and T3 (L + N*), although there was no impact on depressive symptoms. Participants also gave importance to the livelihood and home gardening intervention that decreased daily arguments about money (pathway 2). Women reported becoming financially independent and more self-confident after the SPIR programme (pathway 3). This was triangulated quantitatively by a significant increase in women's financial decision-making power across all three arms. Women also reported gaining respect from their husband and the community through increased nutritional and financial knowledge.

Men, however had conflicting opinions about women's empowerment, and some feared losing their own position of power in the household. This is supported quantitatively; although SPIR activities led to increases in women's decision-making, they did not lead to decreases in husband's controlling behaviours. Gender role strain theory (Pleck et al., 1995) suggests that men who perceive themselves as failing to live up to the provider role may experience negative psychological consequences and exhibit more aggression towards female partners (Moore et al., 2008). This finding aligns with previous research that suggests that although men may be grateful for women's financial contributions to the household, they also perceive it as a threat to their masculinities

Table 6
Primary male's help in the household^a.

	(1)	(2)	(3)	(4)
	Number of childcare activities (out of 10) participated in	Helped with household chores such as cleaning	Helped with cooking or meal preparation	Helped with collecting firewood and water
T1 (L*+N*)	0.115 (0.148)	0.034 (0.031)	0.046 (0.029)	0.076** (0.035)
T2 (L*+N)	0.055 (0.139)	0.044 (0.033)	0.046* (0.027)	0.080** (0.033)
T3 (L + N*)	-0.008 (0.146)	0.088*** (0.032)	0.096*** (0.028)	0.083** (0.037)
Test: T1 = T2	0.695	0.764	0.987	0.927
Test: T2 = T3	0.669	0.202	0.076*	0.939
Test: T1 = T3	0.440	0.096*	0.102	0.873
Mean of control (T4)	3.026	0.338	0.227	0.489
N	1444	2341	2342	2343

Notes: Estimates from the SPIR midline survey. Standard errors (in parentheses) are clustered at the kebele level. All models control for woreda level fixed effects. *p < 0.1, **p < 0.05, ***p < 0.01.

^a Over the last 3 days.

Table 7
Gender equitable attitudes.

	(1) Female: A husband is not justified in beating his wife in any of these situations ^a	(2) Male: A husband is not justified in beating his wife in any of these situations ^a	(3) Female: Acceptable for a woman to travel alone to market, health centre, and to visit friends	(4) Male: Acceptable for a woman to travel alone to market, health centre, and to visit friends	(5) Male: Index of support for equitable gender norms
T1 (L*+N*)	0.013 (0.034)	0.041 (0.038)	0.008 (0.029)	0.025 (0.031)	0.976*** (0.355)
T2 (L*+N)	-0.011 (0.030)	0.079** (0.035)	-0.009 (0.029)	0.049 (0.030)	0.742** (0.368)
T3 (L + N*)	0.035 (0.034)	0.068* (0.036)	0.033 (0.028)	0.024 (0.032)	0.619* (0.370)
Test: T1 = T2	0.460	0.285	0.543	0.441	0.462
Test: T2 = T3	0.133	0.719	0.120	0.407	0.707
Test: T1 = T3	0.521	0.462	0.363	0.969	0.274
Mean of control (T4)	0.428	0.585	0.292	0.348	8.481
N	2579	2340	2598	2344	2346

Notes: Estimates from the SPIR midline survey. Standard errors (in parentheses) are clustered at the kebele level. All models control for woreda level fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

^a Situations asked about: if wife goes out without telling her husband, if wife neglects the children, if wife argues with husband, if wife burns the food, if wife refuses to have sex with husband.

that are built on their ability to provide, resulting in increased male backlash in the form of controlling behaviours (Guarnieri and Rainer, 2018).

Furthermore, SPIR improved gender roles and men's gender equitable attitudes through an additional fourth pathway (pathway 4) that relate to including men and women in gender transformative activities. In our study men reported a willingness to participate in N* trainings, with reports of improvements in household task-sharing and in prioritising nutrition, and this was appreciated by women. This was supported quantitatively across all treatment arms. Impacts were strongest in T3 (L + N*), suggesting that male engagement in the nutrition BCC led to larger participation in household chores and meal preparation resulting in increases in mutual respect. The positive impacts of the nutrition training resonates with findings from a cash and food transfer programme in Ecuador (Buller et al., 2016).

Despite our evidence showing improved men's gender equitable attitudes, qualitative reports indicate that norms at the community level were hard to shift. This aligns with research from other settings such as *Indashyikirwa* in Rwanda (Dunkle et al., 2020) where the training curriculum with couples was effective at reducing IPV but not at addressing community norms (Chatterji et al., 2020). This suggests that social protection programmes with complementary activities have the potential to be gender transformative and reduce IPV at scale, but there needs to be recognition of the time it takes to adapt programmes to ensure cultural and contextual relevance and reliability. Furthermore, programmes that include organised diffusion mechanisms (e.g. 'edutainment') that allow messages delivered in individual groups to be shared with the wider community hold promise as complementary interventions (Francis et al., 2021).

Although we find evidence of improvements along the pathways, we find no evidence that SPIR reduced IPV among the full sample. This is consistent with other studies that show that livelihood interventions may improve emotional and economic wellbeing, but have not been shown to be effective at reducing IPV (Kerr-Wilson et al., 2020). Further, these SPIR complementary programmes were complex and aimed at multiple outcomes without an explicit focus on IPV. Interestingly, for the sub-sample of extremely poor households, the quantitative results showed decreases in reports of sexual IPV from female recipients of T2 (L*+N) and the poultry grant. This is despite evidence that has shown that sexual IPV is usually difficult to change (Gibbs et al., 2020). It is

plausible that the poultry intervention imbedded within other SPIR activities provided women with a source of income (rearing chickens and selling eggs) and nutritious eggs for family consumption, that may have increased her husband's respect. With a decrease in daily arguments there was an improvement in relationship quality. Women may have thus developed a positive view of their sexual relationship and seen it as consensual, rather than as a forced marital obligation which is often the way it is framed in Ethiopia and other patriarchal contexts (Stern and Heise, 2018). This aligns with findings from the Kenya *GiveDirectly* unconditional cash transfer trial, where female directed transfers decreased physical and sexual violence while male directed transfers only decreased physical violence (Haushofer et al., 2019). Future research should compare modalities of women's economic strengthening programmes (e.g., public works or asset transfers) with the inclusion of complementary activities that include gender and power training ('social' empowerment) to test pathways and impacts on relationship quality and IPV.

Finally, drawing on feminist literature on women's empowerment, there needs to be appreciation of this cultural context where traditional gender roles may prevail despite improvements in women's decision-making and empowerment in order not to increase IPV (Catherine and Jenevieve, 2016; Kabeer, 1999). Therefore violence in the household cannot be eliminated by economic strengthening alone, and there is a need for complementary programming, such as engaging men to support women's empowerment and gender equality in gender transformative interventions.

5. Limitations

This study has some limitations. First, PSNP is a seasonal public works programme designed to provide poor, rural households with secure labour. However, with the labour requirement of five days/month over six months, it is not intended as full-time labour, and thus impacts of this public works programme may be attenuated compared to other full-time employment. Second, different components of SPIR intervention were rolled out at different times. Some components had been implemented for a little less than a year before the interviews and may not have benefited from it long enough to result in meaningful reductions in household stress, empowerment, changes in gender norms and violent behaviours. Third, this study was conceived as a

complementary mixed-methods study that was not part of the main impact evaluation. And as such, the main impact evaluation was not designed to explore mechanisms through which public works and complementary programming affect IPV. Thus, our findings must be interpreted accordingly. Given the importance of cash transfers and complementary programmes in IPV prevention, impact evaluations of such programmes should make IPV a primary focus and incorporate a mixed-methods approach from the outset. Social desirability is another possible limitation, particularly from men reporting favourably about programmes so they will continue and under-reporting violence. Finally, given the complex nature of the intervention and the treatment arms, it is difficult to disentangle the impacts of different activities on relationship quality and IPV.

6. Conclusion

This study contributes to the limited literature on the impacts of public works and complementary programmes on IPV. There was limited evidence on the direct impacts of the interventions on IPV for the full sample, but we found quantitative and qualitative evidence to support the pathways that impact on IPV. We found evidence of positive changes due to public works (PSNP) across pathway 1 (emotional wellbeing and economic security) and pathway 2 (intrahousehold conflict), with participants reporting decreases in poverty-related stress and arguments with partners and increases in emotional wellbeing. We found similar impacts from the complementary programmes (SPIR) across pathways 1 and 2, but also in pathway 3 (women's empowerment), although men had conflicting reactions to women's empowerment. We also found impact of SPIR on improving gender roles and men's gender equitable attitudes (pathway 4). The livelihood grant - that served as a source of income for poorer women - holds some promise to empower women, reduce IPV and improve the family's health, especially when embedded with other gender transformative activities such as engaging men in nutrition BCC programmes. We found some limited evidence of unintended consequences of the PSNP programme, and it is important that programme implementers and evaluators monitor these closely with appropriate mitigation measures in place. Given the increased importance of social protection in the COVID-19 response and recovery, as well as the increases in IPV due to the pandemic, this work is likely to become increasingly important.

Funding

The authors are affiliated with the Cash Transfers and Intimate Partner Violence (IPV) collaborative that is supported by funding from an anonymous donor. The impact evaluation of SPIR DFSA was supported by the United States Agency for International Development (USAID) and the qualitative study was supported by an anonymous donor. This work was undertaken as part of the CGIAR Research Program on Policies, Institutions, and Markets (PIM) led by the International Food Policy Research Institute (IFPRI). The funding bodies have had no role in the design of this study, in the analyses and interpretation of data and in the writing this manuscript.

CRediT author statement

Meghna Ranganathan: Conceptualization, Methodology, Formal analysis, Resources, Writing – Original Draft, Writing – Review & Editing, Supervision, Funding acquisition **Marjorie Pichon:** Methodology, Formal analysis, Resources, Writing – Review & Editing **Melissa Hidrobo:** Conceptualization, Methodology, Formal analysis, Resources, Data Curation, Writing – Review & Editing, Visualization, Funding acquisition **Heleene Tambet:** Methodology, Formal analysis, Resources, Data Curation, Writing – Review & Editing, Visualization, **Wastina Sintayehu:** Investigation, Resources, Writing – Review & Editing **Seifu Tadesse:** Investigation, Resources, Writing – Review & Editing, Project

administration **Ana Maria Buller:** Conceptualization, Methodology, Formal analysis, Resources, Writing – Review & Editing, Supervision, Funding acquisition.

Declaration of competing interest

The authors declare no conflict of interest.

Acknowledgements

We wish to thank our study participants for their time and for kindly sharing their stories with us. We also wish to thank our study partners at World Vision, CARE, ORDA, and Laterite. For the qualitative study, we wish to thank our colleagues at JaRco Consulting for their contributions to study tools, data collection and in the interpretation of the data.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.socscimed.2022.114708>.

References

- Alderman, H., Bachewe, F., Gilligan, D.O., Hidrobo, M., 2019. Impact Evaluation of the Strengthen PSNP4 Institutions and Resilience (SPIR) Development Food Security Activity (DFSA): Baseline Report.
- Alemu, A., 2007. Oral narrative as ideological weapon for subordinating women: the case of Jimma Oromo*. *J. African Cult. Stud.* 19 (1), 55–80.
- Bacchus, L.J., Ranganathan, M., Watts, C., Devries, K., 2018. Recent intimate partner violence against women and health: a systematic review and meta-analysis of cohort studies. *BMJ Open* 8 (7), 1–20.
- Baranov, V., Cameron, L., Contreras Suarez, D., Thibout, C., Jan. 2021. Theoretical underpinnings and meta-analysis of the effects of cash transfers on intimate partner violence in low- and middle-income countries. *J. Dev. Stud.* 57 (1), 1–25.
- Barrington, C., Peterman, A., Akaligaung, A.J., Palermo, T., de Milliano, M., Aborigo, R., 2021. 'Poverty can break a home': exploring mechanisms linking cash plus programming and intimate partner violence in Ghana. *Soc. Sci. Med.* (July), 114521.
- Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. *Qual. Res. Psychol.* 3 (2), 77–101.
- Buller, A.M., Hidrobo, M., Peterman, A., Heise, L., 2016. The way to a man's heart is through his stomach?: a mixed methods study on causal mechanisms linking cash plus cash and in-kind food transfers decreased intimate partner violence. *BMC Publ. Health* 16 (1), 488.
- Buller, A.M., Peterman, A., Ranganathan, M., Bleile, A., Hidrobo, M., Heise, L., 2018. A mixed-method review of cash transfers and intimate partner violence in low and middle-income countries. *World Bank Res. Obs.* 33 (2), 218–258.
- Carruth, L., Freeman, S., 2021. Aid or exploitation?: food-for-work, cash-for-work, and the production of 'beneficiary-workers' in Ethiopia and Haiti. *World Dev.* 140, 105283.
- Catherine, Campbell, Jenevieve, Mannell, 2016. Conceptualising the agency of highly marginalised women: intimate partner violence in extreme settings. *Global Publ. Health* 16 (11), 1–2.
- Chatterji, S., Stern, E., Dunkle, K., Heise, L., Jun. 2020. Community activism as a strategy to reduce intimate partner violence (IPV) in rural Rwanda: results of a community randomised trial. *J. Glob. Health* 10 (1), 10406.
- Devries, KM, et al., 2013. The global prevalence of intimate partner violence against women. *Science* 340 (6140), 1527–1528.
- Dunkle, K., Stern, E., Chatterji, S., Heise, L., Dec. 2020. Effective prevention of intimate partner violence through couples training: a randomised controlled trial of Indashyikirwa in Rwanda. *BMJ Glob. Heal.* 5 (12), e002439.
- Fetters, M.D., Curry, L.A., Creswell, J.W., Dec. 2013. Achieving integration in mixed methods designs-principles and practices. *Health Serv. Res.* 48 (6 Pt 2), 2134–2156.
- Flick, U., 2018. *An Introduction to Qualitative Research*, fifth ed. SAGE, London, England.
- Francis, S., et al., Apr. 2021. The influence of organised diffusion on social norms change: addressing intimate partner violence in Nepal. *Global Publ. Health* 16 (4), 610–622.
- Gibbs, A., et al., Mar. 2020. The impacts of combined social and economic empowerment training on intimate partner violence, depression, gender norms and livelihoods among women: an individually randomised controlled trial and qualitative study in Afghanistan. *BMJ Glob. Heal.* 5 (3), e001946.
- Gram, L., Desai, S., Prost, A., Dec. 2020. Classroom, club or collective? Three types of community-based group intervention and why they matter for health. *BMJ Glob. Heal.* 5 (12), e003302.
- Graves, L., Hankivsky, O., Kingston-Riechers, J., 1995. *Selected Estimates of the Costs of Violence against Women*. Centre for Research on Violence Against Women and Children., London, UK.
- Guarnieri, E., Rainer, H., 2018. Female empowerment and male backlash. *Work. Pap.* (April), 1–55.

- Haushofer, J., Ringdal, C., Shapiro, J.P., Wang, X.Y., 2019. Income Changes and Intimate Partner Violence: Evidence from Unconditional Cash Transfers in Kenya, p. 25627.
- Hidrobo, Melissa, Fernald, Lia, 2013. Cash transfers and domestic violence. *J. Health Econ.* 32, 304–319.
- Hirvonen, K., Hoddinott, J., 2020. Beneficiary views on cash and in-kind payments: evidence from Ethiopia's productive safety net programme. *World Bank Econ. Rev.* 1–16.
- Kabeer, N., 1999. Resources, agency, achievements: reflections on the measurement of women's empowerment. *Dev. Change* 30 (3), 435–464.
- Kerr-Wilson, A., Gibbs, A., McAslan Fraser, E., Ramsoomar, L., Parke, A., Khuwaja, HMA., Jewkes, R., 2020. A rigorous global evidence review of interventions to prevent violence against women and girls. What Works to Prevent Violence Against Women and Girls Global Programme, Pretoria, South Africa.
- Ministry of Agriculture, 2012. Ethiopia Rural Productive Safety Net Programs (RPSNP): Annual Work Plan and Budget for EFY (2019/2020).
- Moore, T.M., et al., 2008. Domains of masculine gender role stress and intimate partner violence in a clinical sample of violent men. *Psychol. Men Masc.* 9, 82–89.
- Perova, E., Johnson, E.C., Mannava, A., Reynolds, S.A., Teman, A.H., 2021. Public Work Programs and Gender-Based Violence: Evidence from Lao PDR.
- Pleck, J.H., 1995. The gender role strain paradigm: an update," in *A new psychology of men*. In: Levant, W., Pollack, R.F. (Eds.), New York. Basic Books, NY, USA.
- Ranganathan, M., Lagarde, M., Nov. 2012. Promoting healthy behaviours and improving health outcomes in low and middle income countries: a review of the impact of conditional cash transfer programmes. *Prev. Med. (Baltim)* 55 (Suppl. 1), S95–S105.
- Rogathi, J.J., et al., 2017. Postpartum depression among women who have experienced intimate partner violence: a prospective cohort study at Moshi, Tanzania. *J. Affect. Disord.* 218 (April), 238–245.
- Roy, S., Hidrobo, M., Hoddinott, J., Ahmed, A., Dec. 2019. Transfers, behavior change communication, and intimate partner violence: postprogram evidence from rural Bangladesh. *Rev. Econ. Stat.* 101 (5), 865–877.
- Saldana, Johnny, 2009. *The Coding Manual for Qualitative Researchers*. SAGE, Los Angeles, CA.
- Semahegn, A., Belachew, T., Abdulahi, M., 2013. Domestic violence and its predictors among married women in reproductive age in Fagitalekoma Woreda, Awi zone, Amhara regional state, North Western Ethiopia. *Reprod. Health* 10 (1), 63.
- Stern, E., Heise, L., 2018. Sexual coercion, consent and negotiation : processes of change amongst couples participating in the Indashyikirwa programme in Rwanda Culture, Health & Sexuality Sexual coercion, consent and negotiation : processes of change amongst couples participation. *Cult. Health Sex.* 1–16.
- The World Bank, 2018. *The State of Social Safety Nets*. Washington D.C.
- Tiwari, S., et al., 2016. Impact of cash transfer programs on food security and nutrition in sub-Saharan Africa: a cross-country analysis. *Glob. Food Sec.* 11, 72–83.
- Yitbarek, K., Woldie, M., Abraham, G., 2019. "Time for action: intimate partner violence troubles one third of Ethiopian women. *PLoS One* 14 (5), 1–13.
- "Violence against women prevalence estimates global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women.," *WHO behalf United Nations Inter-Agency Work. Gr. Violence Against Women Estim. Data (UNICEF, UNFPA, UNODC, UNSD, UNWomen)*, 2021.