Social Science & Medicine 133 (2015) 177–188

Contents lists available at ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

Women's entrepreneurship and intimate partner violence: A cluster randomized trial of microenterprise assistance and partner participation in post-conflict Uganda (SSM-D-14-01580R1)☆

Eric P. Green [a, *], Christopher Blattman [b], Julian Jamison [c], Jeannie Annan [d]

[a] Duke Global Health Institute, Box 90519, Durham, NC 27708, USA
[b] Columbia University SIPA, 420 W 118th St, New York, NY 10027, USA
[c] Consumer Financial Protection Bureau, 1700 G St NW, Washington, DC 20552, USA
[d] International Rescue Committee, 122 East 42nd Street, New York, NY 10168, USA

ARTICLE INFO

Article history:
Available online 28 March 2015

Keywords:
Uganda
Poverty
Gender
Cash transfers
Microenterprise
Empowerment
Intimate partner violence
Post-conflict

ABSTRACT

Intimate partner violence is widespread and represents an obstacle to human freedom and a significant public health concern. Poverty alleviation programs and efforts to economically "empower" women have become popular policy options, but theory and empirical evidence are mixed on the relationship between women's empowerment and the experience of violence. We study the effects of a successful poverty alleviation program on women's empowerment and intimate partner relations and violence from 2009 to 2011. In the first experiment, a cluster-randomized superiority trial, 15 marginalized people (86% women) were identified in each of 120 villages ($n = 1800$) in Gulu and Kitgum districts in Uganda. Half of villages were randomly assigned via public lottery to immediate treatment: five days of business training, $150, and supervision and advising. We examine intent-to-treat estimates of program impact and heterogeneity in treatment effects by initial quality of partner relations. 16 months after the initial grants, the program doubled business ownership and incomes ($p < 0.01$); we show that the effect on monthly income, however, is moderated by initial quality of intimate partner relations. We also find small increases in marital control ($p < 0.05$), self-reported autonomy ($p < 0.10$), and quality of partner relations ($p < 0.01$), but essentially no change in intimate partner violence. In a second experiment, we study the impact of a low-cost attempt to include household partners (often husbands) in the process. Participants from the 60 waitlist villages ($n = 904$) were randomly assigned to participate in the program as individuals or with a household partner. We observe small, non-significant decreases in abuse and marital control and large increases in the quality of relationships ($p < 0.05$), but no effects on women's attitudes toward gender norms and a non-significant reduction in autonomy. Involving men and changing framing to promote more inclusive programming can improve relationships, but may not change gender attitudes or increase business success. Increasing women's earnings has no effect on intimate partner violence.

1. Introduction

Intimate partner violence (IPV)—abusive or controlling behaviors toward intimate partners (Dixon and Graham-Kevan, 2011)—is the most common type of violence against women (Garcia-Moreno and Watts, 2011). A 10-country study showed 15–71 percent of women experience IPV over their lifetimes (Garcia-Moreno et al., 2006). In conflict settings, reports of IPV exceed those of rape and sexual violence from men outside the home (Stark and Ager, 2011). Some estimates of the economic cost of IPV suggest it is greater than that of civil war or homicides globally (Fearon and Hoeffler,

☆ A Vanguard Charitable Trust and the LOGiCA Trust Fund at the World Bank funded data collection and analysis. This article is the result of independent research and does not necessarily represent the views of the Consumer Financial Protection Bureau or the United States. For research assistance, we thank Filder Aryemo, Natalie Carlson, Lindsay Dolan, Mathilde Emeriau, Christian Lehmann, Sara Lowes, Lucy Martin, Godfrey Okot, Richard Peck, Alexander Segura, Xing Xia, and Adam Xu through Innovations for Poverty Action (IPA).

* Corresponding author.
E-mail addresses: eric.green@duke.edu (E.P. Green), chrisblattman@columbia.edu (C. Blattman), julison@gmail.com (J. Jamison), jeannie.annan@rescue.org (J. Annan).

http://dx.doi.org/10.1016/j.socscimed.2015.03.042
0277-9536/

2014).

This paper investigates how a widely used economic intervention might also prevent IPV. Reducing IPV is an end it itself, since women's agency and empowerment, including freedom from coercion, are central to the pursuit of development as human freedom (Sen, 1999). IPV is also a public health concern because of its association with poor physical and mental health, including depressive symptoms and suicide (Devries et al., 2011; Beydoun et al., 2012) and HIV infection (Jewkes et al., 2010).

One common approach is to address IPV directly through education or discussion with men (Jewkes et al., 2014). Men's attitudes justifying wife beating are a strong correlate of use of violence against women (Hindin et al., 2008) which is seen as an expression of gender inequality and sustained by the normative use of violence Jewkes (2002), Jewkes et al. (2014). Many interventions target groups of men and use training and discussion to change gender-inequitable attitudes and norms (Barker et al., 2010; Ellsberg et al., 2014).

IPV is also addressed indirectly through poverty alleviation. Governments and development agencies commonly target poor women in low-income countries with cash transfers, livestock, and microfinance. These programs are predicated on the idea that women's earnings and enterprise will reduce poverty while advancing "empowerment", commonly defined as improving the ability of women to access health, education, earning opportunities, rights, and political participation (Duflo, 2011). Economic studies suggest that women exercise more bargaining power in the household when their share of income rises (World Bank, 2011). As discussed below, there are theoretical reasons to believe IPV could increase or decrease as a result.

This paper investigates both approaches to reducing violence—poverty alleviation and engagement with partners—in two experiments. First, we conduct a randomized evaluation of a skills and cash-transfer program among extremely poor and marginalized young adults (mostly women), in post-conflict northern Uganda. In a second experiment, among the beneficiaries randomized to delayed treatment, we study the impact of modifying the program to involve male household members, typically partners.

1.1. Economic empowerment, poverty and IPV

The theoretical literature has ambiguous predictions about the effects of increasing women's income and work outside the home on IPV (for reviews see Aizer, 2010; Hidrobo and Fernald, 2013). Some predict that increasing women's income shares decreases violence. For instance, some sociologists and feminists see financial inequality between the sexes and women's economic dependency as root causes of IPV. Similarly, economic models of household bargaining commonly suggest that as a woman's options outside of the marriage improve, her tolerance for violence decreases, and the husband will strategically use less of it, lest he lose his wife and her income.

Others predict an increase in violence. Some sociologists argue that increases in women's incomes increase tensions between partners, provoke emotional backlashes, or lead men to use violence to reinstate authority. Some economists have also argued that, when a woman values a marriage intrinsically or where divorce is not a credible threat, men may use violence to capture the woman's resources. Thus violence can increase with income or transfers to women.

Research on violence against women shows multiple risk factors across the social ecology and suggests that interventions must address multiple risk factors at individual, family, and systemic levels over a significant period of time in order to sustain change (Ellsberg et al., 2014; Jewkes et al., 2014). The empirical evidence about how best to increase women's empowerment is still thin and mixed (Vyas and Watts, 2009; Ellsberg et al., 2014), however, including whether economic interventions improve empowerment on their own or whether supplemental interventions to address inequalities are needed.

The first experimental evidence regarding economic empowerment and IPV comes from a cluster-randomized trial of a group-based microfinance and gender and HIV training program for poor, rural women in South Africa (Pronyk et al., 2006; Kim et al., 2009). A per protocol analysis suggests that the combined program reduced IPV by more than half and improved partner relations; a secondary analysis shows that microfinance alone has little effect on norms or IPV (Kim et al., 2009). More recent studies of cash transfer programs in Mexico and Peru offer mixed results (Angelucci, 2008; Bobonis et al., 2013; Hidrobo and Fernald, 2013). Unconditional cash transfers in Kenya and Ecuador show significant reductions in IPV (Haushofer and Shapiro, 2013).

1.2. Engaging men

The rationale for addressing IPV through men's discussion groups is based on the belief that socially constructed gender norms about inequality are a root cause of violence (Barker et al., 2010). Girls and boys learn gender roles and normative behavior, such as gender-based violence, by watching others and observing rewards and punishments; this is the basis of social learning theory (Bandura, 1973), one of several theoretical etiologies of IPV (for a review see Dixon and Graham-Kevan, 2011). Understanding and addressing the connection between violence and masculinity is also critical, gender theorists argue (Jewkes et al., 2014). 'Gender-transformative' programs are therefore designed to change gender norms and to promote gender equality among men and boys, most often by raising awareness and targeting attitudes throughout the social ecology.

Few interventions engaging men directly to reduce violence have been rigorously assessed (Ellsberg et al., 2014; Jewkes et al., 2014), especially outside of high-income countries. One of the first studies of the men's discussion group approach was a cluster-randomized trial in South Africa of *Stepping Stones*, an eight-week participatory learning program on sexual health for both genders. Men reported reductions in physical and sexual violence perpetration 24 months afterward, but women did not report less victimization Jewkes et al. (2008). More recently in post-conflict Cote D'Ivoire, a randomized evaluation of an IPV prevention program consisting of men's discussion groups showed small but non-significant reductions in women's reports of physical and/or sexual IPV (Hossain et al., 2014).

The economic program we evaluate, however, targets women, not men. As we will describe, our program experience and previous qualitative work suggest that it is important to engage men in the process, but there was not much evidence at the time to inform the program design. Interventions that have worked with men and women partners simultaneously have largely been the domain of psychotherapy. In high-income countries, couples therapy is a well-established strategy for improving relationship quality and reducing conflict (i.e. disputes) between partners (Snyder and Halford, 2012), the latter being a strong correlate of physical violence against women (Jewkes, 2002). This is not the case in most low-income countries where psychotherapy is unavailable to the poor. Since our study commenced, a randomized trial of a group savings program in Cote D'Ivoire that added a couples discussions group (*EA$E*) addressing household economic issues while implicitly touching gender norms found a significant reduction of physical violence in the per protocol analysis for women who attended more

than 75 percent of sessions (Gupta et al., 2013).

1.3. Current study

In 2009, an Italian non-governmental agency, the Association of Volunteers in International Service (AVSI), designed a cash transfer program called *Women's INcome Generating Support* (WINGS) to help ultrapoor women with little formal education to develop small businesses. AVSI aimed to increase women's incomes and autonomy. Asset transfer programs are one of the most commonplace aid programs for the extreme poor. In addition to providing cash, livestock, or some other capital, such programs typically offer a bundle of services, including training, formation of self-help groups, and supervision. AVSI's program is unusual in that it offered cash instead of livestock and encouraged ultrapoor women to start nonfarm businesses like petty trading. This is an important model to explore, if only because cash is much cheaper to deliver than livestock.

As reported in Blattman et al. (2014), this microenterprise program led to large, experimentally identified increases in employment and earnings—impacts that were at least as cost-effective as livestock-based programs. We hypothesized, however, that these average impacts concealed substantial variation. In particular, our qualitative work led us to hypothesize that poor intimate partner relationships are an obstacle to developing successful small-scale businesses. And according to Saile et al. (2013), dysfunctional intimate partner relationships are common in this setting. In a study of nine conflict-affected communities in 2010, more than 70 percent of women reported experiencing at least one type of verbal, psychological, or physical abuse in the past year. These observations motivated a follow-up experiment that is the focus of the current paper.

In a second phase of implementation, clients either received the standard program of business skills training and support described above or a variant called *Women Plus* (W+). In the standard program, now called *Tii ki komi* in Luo or "Work by/for yourself improvement", clients participated as individuals. In the W+ variant, program clients were encouraged to participate in the training and follow-up visits with someone from their household who helps to make financial decisions. For most women, this meant participating with an intimate male partner/spouse or another important male figure, such as a father or brother. In both variants, the money went to the women. For W+ participants, however, the framing of the support shifted from a grant wholly controlled by the woman to a grant encouraging household input into decision-making. The new framing is captured in the W+ program name presented to clients: *Tic kacel ryemo can* or "Let's work together to reduce poverty".

Thus in addition to testing the effects of the standard program on women's autonomy and IPV, this study tests whether a low-cost variation—a slight reframing, basic training in couples' communication and problem solving, and joint participation in the program—augments economic success while achieving the empowerment outcomes that were elusive in the first implementation.

Based on our review of the literature and the results of our initial study, we theorized that this more inclusive approach would lead to a measurable impact in the partner's direct and indirect support for the business—from relaxing constraints placed on the woman, to providing emotional support that helps the woman to juggle all of her responsibilities, to actively participating in business operations. We further hypothesized that partner relations would be improved through reductions in tensions and IPV, resulting from the household's increased economic security and the couple's ability to communicate and work together. We also hypothesized that experimentation with new gendered behavior patterns combined with business success and improvements in relationship quality would begin to change men's and women's attitudes about gender roles.

2. Methods

2.1. Setting and context

This study was conducted in northern Uganda between 2009 and 2011, following two decades of civil war between the Government of Uganda and the Lord's Resistance Army. Security improved in 2005 as the rebel group fled the country. When the study began in 2009, most of the 2 million people displaced because of the war had returned home from nearby displacement camps. Although people exhibited psychological resilience, war and displacement left most impoverished and without the human and financial capital to pursue non-agricultural income-generating activities (Annan et al., 2006).

2.2. Intervention

The WINGS program included four days of business skills training, a start-up grant of approximately $150 USD, and follow-up support by trained field staff. The training taught participants—"clients"—how to create a business plan, budget, market goods and services, and keep basic financial records. At the end of the training, clients prepared written business plans (with help from AVSI staff if illiterate). AVSI staff disbursed cash in two installments and visited the clients approximately every six weeks for six months to monitor spending and provide advice.

In rural Uganda, like much of sub-Saharan Africa, men and women engage in a mix of crop sales, animal raising, casual labor, and small non-farm self-employment, such as petty trading. Women commonly engage in all these activities. But animal-raising and non-farm businesses usually require some starting capital, and the women in our sample were generally too poor to start them and had no source of credit. AVSI's program was designed to overcome these constraints.

In a variant of the program called *Women Plus* (W+), clients were invited to participate with household partners, thus changing the framing. The W+ program also added one day to the training to cover additional material on (i) cultural, gender, and financial barriers to female entrepreneurship), (ii) communication (a common component of couples therapy), and (iii) joint-problem solving (see Online Appendix A).

2.3. Research design

To estimate the impact on economic and social outcomes, we partnered with AVSI to conduct two cluster-randomized pragmatic superiority trials. AVSI purposively selected 120 villages across six subcounties in Gulu and Kitgum districts—the districts most affected by war and displacement. In the first study (Phase 1), we randomized half of the 120 villages to receive the program immediately or after a delay of approximately 20 months (1:1 allocation; see Figure B.1 in the Online Appendix. Villages were excluded from randomization if they had less than 80 households. There were 1800 participants across the two phases ($n = 896$ in villages randomized to Phase 1 and $n = 904$ in villages randomized to delayed treatment). Fig. 1 displays a CONSORT-style participant flow diagram.

When it was time for the 60 delayed treatment villages to participate in the program (Phase 2), they were randomized to receive the standard program (no group dynamics; $n = 439$) or the

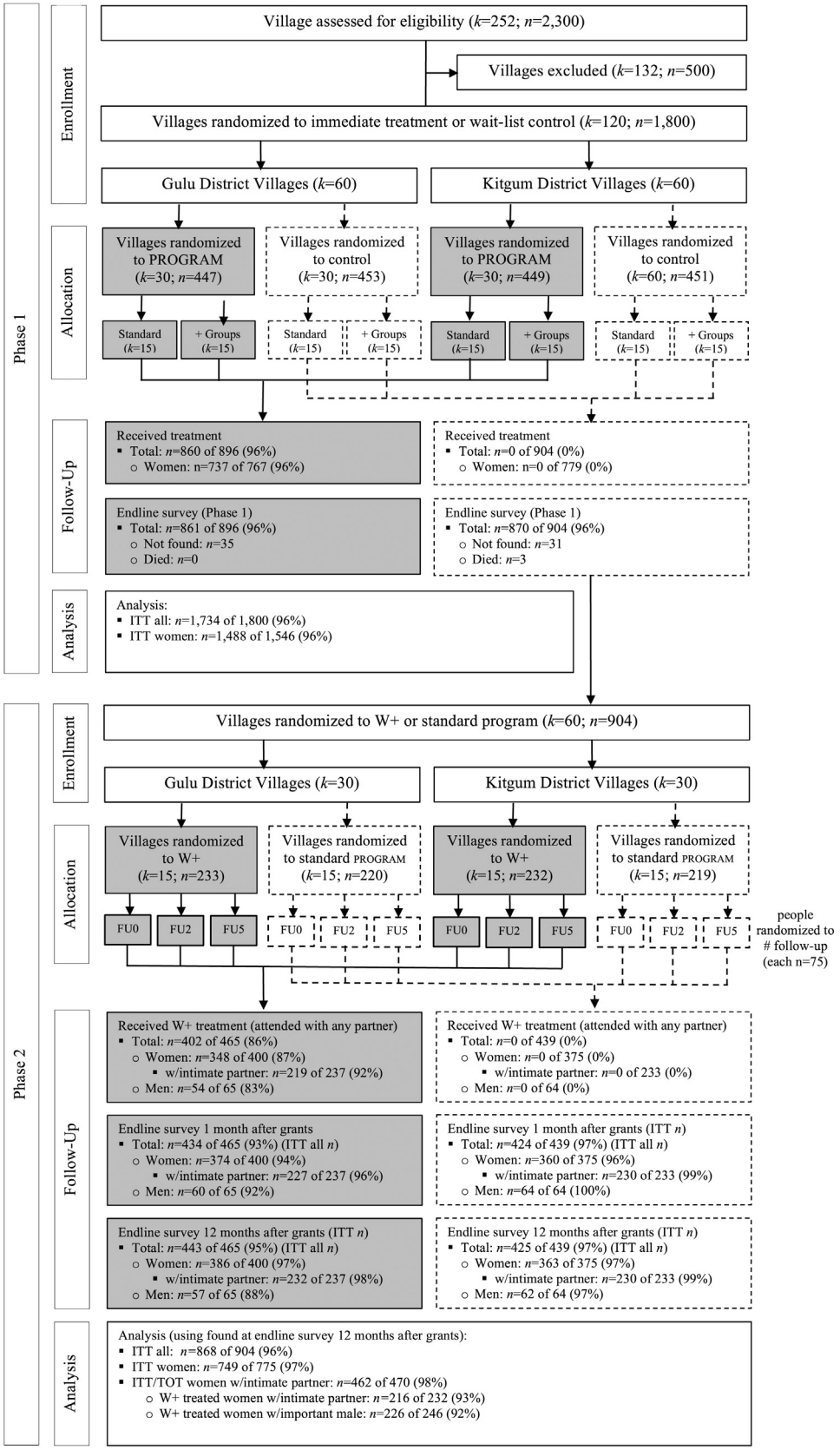

Fig. 1. Participant flow diagram.

W+ variant described above ($n = 465$). In each delayed treatment village, individual clients were also randomized to receive 0, 2, or 5 follow-up visits from AVSI staff (see Blattman et al. (2014) for a discussion of the cross-cutting designs and results). The Uganda National Council for Science and Technology and Institutional Review Boards at Yale University and Columbia University approved the research protocol.

2.4. Procedures

In early 2009, AVSI held public meetings to introduce the program and asked each community to nominate 20 of the most vulnerable people to take part. AVSI stipulated that three-fourths should be women aged 14 to 30. AVSI screened 2300 nominees and selected 1800 (10–17 per village) to participate, screening out the least poor based on the results of interviews and home visits. Thus there was no self-selection into the study.

The author-led research team conducted baseline surveys with all enrolled participants between April and June 2009. Because illiteracy rates are high, Ugandan enumerators (who were not involved in program delivery) administered surveys verbally and captured responses using handheld computers. They conducted surveys in private settings and obtained informed consent. The author team trained enumerators on how to administer sensitive questions about IPV and other private issues.

Villages were randomly assigned to immediate treatment or delayed treatment via a public lottery held in each district. Roughly 20 months later—16 months after clients in the immediate treatment group received their cash grants—all participants were surveyed again. Survey enumerators were not blinded to treatment assignment due to the nature of some survey questions.

Following this survey, the 60 villages in the delayed treatment group were randomly assigned via computer algorithm to participate in the standard version of WINGS or the W+ variant (1:1 allocation). Individual clients within each village (904 total) were also randomly assigned to follow-up. This cohort of clients was surveyed a final time between June and August 2012, approximately one year after receiving cash grants.

2.5. Primary outcome measures

Our primary individual-level outcomes included IPV, attitudes toward gender norms, quality of relationship with partner, support from partner, and autonomy and influence in household purchases (see Table 1). Measures were created by the research team or adapted from a subset of the 2006 Uganda DHS (Uganda Bureau of Statistics (UBOS) and Macro International Inc, 2007). To measure attitudes toward gender norms, we asked clients to rate their agreement with several statements about women's rights and justifications for wife beating. We created a composite partner relationship score by standardizing clients' responses to seven questions about relationship quality, communication patterns, listening skills, and dispute frequency. We constructed two composite scores for partner support of household (e.g., help with chores) and business activities, and we combined these scores into an overall partner support composite. Lastly, we constructed a composite autonomy/influence score from three questions representing a client's autonomy and influence in purchases (can decide how to spend money, can use earnings to buy clothes without permission, has a say in purchase of large household assets). Additional details about the measurement of each outcome are provided in the Online Appendix C. Items in tables and figures marked with the † symbol refer to "partner who helps [client] make domestic and financial decisions" and may not refer specifically to the client's intimate partner.

We also measured the economic impact of the program by asking clients about three alternative measures of income (cash earnings, non-durable consumption, and durable assets), their employment hours by activity, and their financial assets and access (savings, loans, and access to further credit). We tracked use of the cash grant by looking at the overall pattern of all expenditures, as well as a self-reported measure of the proportion of the grant spent across 12 different expense categories.

2.6. Empirical strategy

We estimate intent-to-treat (ITT) effects via the ordinary least squares (OLS) regression:

$$Y_{ij} = \theta T_j + X_{ij}\beta + \varepsilon_{ij}$$

where Y is an outcome for client i in village j, T is an indicator for random assignment to treatment (e.g. assignment to immediate or delayed treatment, assignment to the standard WINGS program or the W+ variant), X is a vector of controls including a district fixed effect, road distances between villages, and 90 baseline (i.e., before Phase 1) and midline (i.e., after Phase 1 but before Phase 2) covariates (see Table B.1 in the Online Appendix). We include distance measures to account for and estimate potential spillovers from clients in treatment villages to those in wait-list villages (see Blattman et al. (2014) for more details about spillover effects in Phase 1). Robust standard errors are clustered by village.

AVSI and the authors designed the W+ intervention principally for women with partners. As a consequence, for Phase 2 analyses, we focus on ITT results among two subsets of our sample: 1) all women and 2) women who reported having intimate male partners during the survey that took place immediately *before* the Phase 2 program was implemented. The study was powered (80%) to detect a 0.27 standard deviation (or larger) increase in quality of partner relations given 60 clusters of 15 participants each with a k of 0.03.

Finally, we expect the effect of treatment to be driven mainly by "compliers"—those who brought partners when assigned to W+. Assignment to W+ is unlikely to affect outcomes through other channels. If so, we can also calculate a treatment-on-the-treated (TOT) estimate of the average treatment effect, which uses random assignment to treatment as an instrument for the effect of actually bringing someone else (not necessarily an intimate male partner) to the training on outcomes (Angrist and Pischke, 2008). This treatment effect can be interpreted as the impact of the program on compliers. To facilitate comparison to previous empirical work on IPV and economic assistance programs (Pronyk et al., 2006; Gupta et al., 2013), we also report the results of a per protocol (PP) analysis conducted among the subsample of women with intimate male partners. Women assigned to W+ were included in the analysis if they attended at least two days of training with an intimate male partner specifically.

3. Results

3.1. Study sites and participants

Table 2 reports baseline characteristics of study sites and participants. The average village population is 699, and most range from 350 to 1000 people. The average village is 45 km from the district capital.

The average client in the sample was 27.3 years old and completed 2.8 years of education. 85.9 percent of the sample was female, and 47.9 percent were married and living with a partner. On average, clients reported working 15.4 h week in the past month, principally farming. On average, reported cash earnings in the

Table 1
Construction of gender, partner relations, and IPV outcomes.

Outcome/Variable	Scale (>) (1)	2006 Uganda DHS (2)
Hours awake spent with partner in a typical day	Hours (+)	
Partner relationship index	z (+)	
Relationship with partner	1–10 (+)	
Freq of communication with partner about family	0–3 (+)	
Degree of communication with partner	1–10 (+)	
Partner's listening skills	1–10 (+)	
Frequency of major disputes with partner	0–3 (+)	
Partner treats well	0–3 (+)	
Can express opinion when disagrees with partner	0–3 (+)	
Partner support index, overall	z (+)	
Partner support index, family	z (+)	
Partner's contribution to traditionally-female chores	0–7 (+)	
Partner support index, business	z (+)	
Perceptions of women's autonomy/rights	z (+)	
A wife can express opinions when disagrees with partner	0–3 (+)	
A wife can transact in market without permission	0–3 (+)	
A wife may buy clothing with own money without permission	0–3 (+)	
A wife may insist on condom use if partner has disease	0–3 (+)	951
A wife may refuse sex partner has sex with other women	0–3 (+)	954
A husband may not beat wife for refusing him sex	0–3 (+)	828(d)
A husband may not beat wife for burning meal	0–3 (+)	828(e)
A husband may not beat wife for leaving without permission	0–3 (+)	828(a)
Self-reported autonomy/influence in purchases	z (+)	
Can decide how to spend small amounts of money	0–3 (+)	825
Can spend earned money without permission	0–3 (+)	820
Can have input on spending decisions on expensive goods	0–3 (+)	824
Physical/emotional abuse in past 8 months	z (−)	
Partner has recently threatened harm	0–3 (−)	1104(b)
Partner has recently humiliated in front of others	0–3 (−)	1104(a)
Partner has recently beaten	0–3 (−)	1105(g)
Partner has recently kicked or hit	0–3 (−)	1105(d)
Does not refuse if partner wants to have sex	0–3 (−)	956
Marital control in past 8 months	z (−)	
Partner has recently accused of being unfaithful	0–3 (−)	1103(b)
Partner has recently tried to limit contact	0–3 (−)	1103(d)
Partner has recently taken money against will	0–3 (−)	
Cannot transact in market without partner's permission	0–1 (−)	
Partner has recently refused money for household needs	0–3 (−)	
Has recently had to give money to partner	0–3 (−)	
Physical abuse in past 8 months	0–1 (−)	
Emotional abuse in past 8 months	0–1 (−)	
Physical or emotional abuse in past 8 months	0–1 (−)	

Note. This table details variable construction for gender, partner relations, and IPV outcomes. Column 1 lists the scale of each outcome. The character in parentheses indicates the valence of higher values: good (+) or bad (−). Column 2 indicates whether the item was adapted from the 2006 Uganda Demographic and Health Survey. Numbers represent question numbers from the official DHS questionnaire.

previous month were 8938 UGX, roughly $4.47 USD. Table B.2 in the Online Appendix compares clients assigned to delayed treatment (thus the sample for the randomization to W+ in Phase 2) to villagers not enrolled in the program. All villagers were poor, but clients reported slightly less education, employment and income.

3.2. Randomization balance

There was moderate imbalance in Phase 1 baseline covariates between individuals assigned to immediate treatment (Phase 1) or delayed treatment (Phase 2), but little imbalance in the Phase 2 assignment to the standard program or W+. See Table 2 for the results of an OLS regression of baseline covariates on indicators of assignment to treatment (Phase 1 versus Phase 2; standard program versus W+ in Phase 2). The results suggest that the immediate treatment group was slightly worse off economically, which if true would lead to an underestimation of the treatment effects. In this paper, however, we focus mainly on the results of the second randomization to the standard program or W+. We control for covariates in our estimates of all treatment effects to account for any potential bias and to increase precision.

3.3. Treatment compliance

All 120 villages randomized to immediate or delayed treatment participated in the program in the allocated order, and no clusters were lost. At the individual level, there were no crossovers from wait-list control to immediate treatment in Phase 1 or from the standard program (control) to W+ (treatment) in Phase 2. Of the original 896 clients randomized to immediate treatment, 860 participated in the program in Phase 1 (96.0%). Reasons for non-participation included movement out of the subcounty, health issues, and other personal concerns.

As shown in Fig. 1, 904 clients in the wait-list control group were randomized to the standard WINGS program ($n = 439$) or W+ ($n = 465$) prior to the start of Phase 2. Clients assigned to W+ were encouraged to participate in the program with someone in the household who helped to make important decisions, and 87.0% of women complied. Compliance for W+ is defined as receiving the grant, attending the training sessions, and having a partner (not necessarily an intimate partner) who attended at least 2 days of the training. The program had 100 percent attendance among the grant recipients, so noncompliance in W+ is related to partners'

Table 2
Baseline descriptive statistics and tests of balance.

Select baseline covariates	Phase 1 ($n = 1800$; $k = 120$)					Phase 2 ($n = 904$; $k = 60$)				
	Control		Treat			Control		Treat		
	M	SD	M	SD	p	M	SD	M	SD	p
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Individual-level covariates										
Age	27.61	7.28	27.04	7.19	0.20	28.30	7.34	28.09	7.65	0.73
Female	0.86	0.35	0.86	0.35	0.72	0.85	0.35	0.86	0.35	0.80
Married or living with partner	0.50	0.50	0.46	0.50	0.28	0.50	0.50	0.47	0.50	0.62
Highest grade reached at school	2.75	2.81	2.82	2.83	0.70	2.96	2.83	2.60	2.78	0.12
Reports having HIV or AIDS	0.06	0.24	0.06	0.23	0.69	0.06	0.24	0.06	0.25	0.80
Reports positive hours in petty business	0.04	0.19	0.03	0.16	0.21	0.05	0.21	0.03	0.16	0.14
Weekly employment, hours	16.16	20.12	14.56	21.04	0.12	16.51	22.48	14.38	17.92	0.09
Weekly employment, hours: Farming for self	9.01	14.58	7.69	15.51	0.08	9.10	15.35	8.13	13.47	0.29
Weekly employment, hours: Farming for wage	4.33	9.99	3.57	7.48	0.08	4.41	11.71	3.99	7.85	0.51
Weekly employment, hours: Leje	1.62	3.66	1.65	4.18	0.91	1.55	3.76	1.43	3.28	0.65
Weekly employment, hours: Brew	0.48	1.62	0.54	1.48	0.45	0.55	1.90	0.38	1.26	0.21
Weekly employment, hours: Buy	0.35	3.17	0.43	4.60	0.67	0.41	3.57	0.27	2.72	0.55
Weekly employment, hours: Other	0.38	2.27	0.68	5.07	0.11	0.46	2.78	0.25	1.46	0.22
Weekly household chores, hours	33.98	21.02	34.93	24.75	0.53	31.86	20.41	31.81	23.63	0.98
No employment hours in past month	0.18	0.38	0.23	0.42	0.07	0.16	0.36	0.18	0.38	0.54
Durable assets (z-score)	−0.61	0.47	−0.67	0.45	0.10	−0.59	0.47	−0.64	0.44	0.38
Monthly cash earnings (000s UGX)	9.33	13.29	8.54	13.07	0.26	10.06	14.81	7.74	11.24	0.02
Member of a savings group	0.11	0.31	0.08	0.27	0.07	0.12	0.33	0.10	0.30	0.43
Savings stock (000s UGX)	5.47	16.08	4.24	14.43	0.20	6.51	17.60	4.03	13.55	0.09
Total outstanding loans (000s UGX)	4.08	12.93	4.21	12.98	0.85	3.81	12.44	3.87	12.87	0.94
Can obtain 15,000 UGX loan	0.24	0.43	0.23	0.42	0.56	0.24	0.43	0.22	0.41	0.43
Can obtain 100,000 UGX ($50) loan	0.04	0.19	0.05	0.21	0.34	0.04	0.19	0.03	0.18	0.88
Community maltreatment in past year	0.16	0.37	0.19	0.39	0.14	0.16	0.37	0.13	0.34	0.35
Related to a traditional chief or LC1	0.30	0.46	0.25	0.43	0.01	0.32	0.47	0.29	0.45	0.29
Total traumatic war events (z-score)	0.03	0.99	−0.04	0.99	0.21	0.05	1.03	0.05	0.94	1.00
Forcibly recruited into rebel group	0.25	0.43	0.20	0.40	0.03	0.25	0.44	0.25	0.43	0.92
Carried gun within rebel group	0.04	0.19	0.03	0.17	0.39	0.03	0.18	0.04	0.19	0.74
Forcibly married within rebel group	0.03	0.17	0.03	0.16	0.63	0.03	0.16	0.03	0.18	0.63
Village-level covariates										
Village population	649.05	471.44	749.62	713.78	0.34	612.02	295.29	684.11	589.63	0.54
Distance to capital (km)	44.72	17.19	46.21	17.54	0.58	44.25	15.79	45.22	18.42	0.81
Accessible by bus	0.91	0.29	0.98	0.13	0.05	0.90	0.29	0.91	0.29	0.94
Village has a market	0.34	0.47	0.18	0.39	0.05	0.34	0.47	0.34	0.47	0.97
Number of shops in village	1.29	4.43	1.65	4.29	0.66	1.17	4.06	1.41	4.76	0.84
Total NGOs in village	7.42	4.26	7.12	3.55	0.68	7.34	3.23	7.50	5.04	0.89

Note. Individual-level covariates come from self-reported surveys. Village-level covariates come from a survey of a community leader or leaders. All Ugandan shilling (UGX)-denominated variables and all hours worked variables were top-censored at the 99th percentile to contain outliers. Missing observations at baseline were imputed at the median. Columns 1-4 and 6-9 report the mean and standard deviation of all respondents prior to Phase 1 and Phase 2, respectively. Columns 5 and 10 report the p-values on balance resulting from OLS regressions of each baseline characteristic on an indicator for treatment assignment plus a strata fixed effect, with heteroskedastic-robust standard errors clustered at the village level.

attendance.

3.4. Survey attrition

Survey attrition (loss-to-follow-up) was minimal in both phases. We completed surveys with all clients at the Phase 1 baseline and found 96 percent of clients—including migrants—for the survey conducted at the end of Phase 1. We also found 96 percent of the Phase 2 sample at the conclusion of Phase 2. Tables B.3 and B.4 in the Online Appendix report complete survey response rates and demonstrate that attrition is not generally significantly correlated with treatment or baseline covariates. Unfound participants were slightly younger and less educated, but more likely to be attending school.

3.5. Phase 1 treatment effects

Selected Phase 1 treatment effects are displayed in Table 3 and Panel A of Fig. 2. The ITT estimates represent the impact of the standard program compared to the delayed treatment group. The point estimates in the plot are standardized and surrounded by 95 percent confidence intervals. Effects in the hypothesized direction are shaded black.

3.5.1. Economic outcomes

As reported in Blattman et al. (2014), the program had large economic impacts. Most of the women invested in petty trading and retailing, adding this to their existing farm activities. About a third of the grant was invested in the first month in the new business, with the rest largely saved in cash or durable assets. As a result of these investments, female clients doubled microenterprise ownership from 40 to 79 percent, increased non-agricultural employment hours by 94 percent (from 5.2 to 10.1) and doubled their monthly earnings (from $7.15 to $15.25 USD). The program had roughly similar effects on the vulnerable men included in the sample.

3.5.2. Treatment heterogeneity in economic outcomes

To the extent that poor intimate relationships constrain business success, we should observe negative average treatment effects (ATEs) on business development and survival among women who initially reported that their partners did not treat them well. Furthermore, if poor relationships limit women's ability to focus on the business, we should observe a positive ATE on hours spent on domestic chores and a negative ATE on monthly earnings.

Table 4 reports estimates of treatment heterogeneity in economic outcomes in the full program according to pre-treatment

Table 3
Impacts of full program (Phase 1): Primary outcomes and selected economic outcomes.

Outcome	Scale (>)	Control		Intent-to-treat estimates					
				All men and women ($N = 1734$)			Women only ($N = 1488$)		
		Mean	SD	β	SE	95%CI	β	SE	95%CI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Employment/occupational index	z (+)	−0.51	0.98	1.04	0.05***	(0.94–1.14)	0.98	0.05***	(0.88–1.09)
Started enterprise since baseline	0–1 (+)	0.50	0.50	0.49	0.02***	(0.44–0.53)	0.47	0.03***	(0.42–0.52)
Currently doing business	0–1 (+)	0.39	0.49	0.40	0.03***	(0.35–0.46)	0.39	0.03***	(0.34–0.45)
Average work hours per week: Non-agricultural	hours (+)	5.34	9.76	5.88	0.67***	(4.55–7.21)	4.92	0.72***	(3.49–6.35)
Index of income measures	z (+)	−0.26	0.87	0.60	0.06***	(0.48–0.71)	0.55	0.06***	(0.43–0.66)
Monthly cash earnings	000s UGX (+)	15.53	36.80	16.92	3.12***	(10.74–23.1)	16.21	3.23***	(9.8–22.61)
Durable assets	z (+)	0.07	0.87	0.41	0.05***	(0.3–0.51)	0.37	0.05***	(0.26–0.48)
Non-durable consumption	z (+)	−0.22	0.88	0.46	0.06***	(0.35–0.58)	0.41	0.06***	(0.29–0.54)
Perceptions of women's autonomy/rights	z (+)	−0.02	1.02	0.07	0.06	(-0.04–0.18)	0.05	0.06	(-0.07–0.17)
Self-reported autonomy/influence in purchases	z (+)	−0.03	1.02	0.09	0.05*	(-0.01–0.18)	0.09	0.05*	(-0.02–0.19)
Partner relationship index	z (+)	−0.04	1.00	0.19	0.06***	(0.07–0.32)	0.18	0.07***	(0.05–0.32)
Physical/emotional abuse in past 8 months	z (−)						0.02	0.06	(-0.1–0.14)
Marital control in past 8 months	z (−)						0.14	0.07**	(0.01–0.27)

*p < 0.1, **p < 0.05, ***p < 0.01.
Note. This table presents selected results from Phase 1. Column 1 lists the scale of each outcome. The character in parentheses indicates the valence of higher values: good (+) or bad (−). Columns 2 and 3 report the means and standard deviations, respectively, for the women assigned to the delayed treatment condition (control). Columns 4–6 report the results of intention-to-treat (ITT) ordinary least squares (OLS) regressions of each outcome on an indicator of assignment to immediate treatment. Columns 4 and 5 report the coefficients and standard errors from an OLS regression of each outcome on an indicator of assignment to immediate treatment, a stratum fixed effect, and baseline covariates. Column 6 reports 95 percent confidence intervals around the estimates in Column 4. Columns 7–9 report the results of ITT OLS regressions of each outcome on an indicator of assignment to immediate treatment among women. These columns follow the structure of Columns 4–6. All standard errors are robust and clustered at the village level.

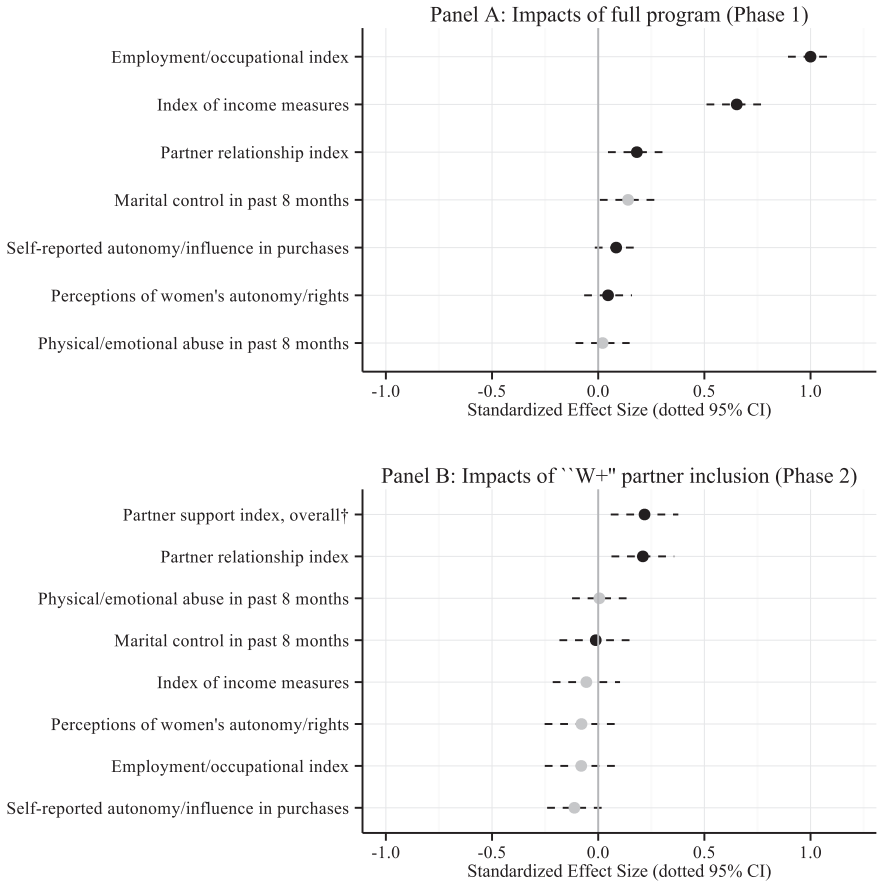

Fig. 2. PANEL A Impacts of full program (Phase 1). Impacts of "W+" partner inclusion (Phase 2). These panels display the standardized results of intention-to-treat (ITT) ordinary least squares (OLS) regressions of each outcome on an indicator of assignment to treatment among women (immediate treatment in Panel A (Phase 1); W+ in panel B (Phase 2), a stratum fixed effect, and baseline covariates. The point estimates were standardized by dividing the coefficient on assignment by the control group standard deviation (Glass's Δ). Black dots represent point estimates in the hypothesized direction (gray if not in the hypothesized direction). Dotted lines represent 95 percent confidence intervals (based on robust standard errors clustered at the village level). † Items refer to "partner who helps [client] make domestic and financial decisions" and may not refer specifically to intimate partner.

reports of poor partner relations and IPV. Results are mixed. There is little evidence of treatment heterogeneity in terms of IPV, but we do see heterogeneity related to partner relations. The most notable finding is that clients who reported that their partners do not treat them well earned $18.12 USD less in the month, essentially wiping out the treatment effect. However, they also reported increases in durable assets and non-durable consumption, indicators of income expected to be lower among clients with worse partner relations. As anticipated, fewer clients with poor partner relations were still operating businesses, though the effect was non-significant. But counter to our expectations, the average client reported 5.8 more hours of chores per week.

3.5.3. Partner relations, IPV and attitudes about gender norms

In addition to the large economic gains overall, the program also led to small increases in the average woman's endorsement of more positive gender norms (non-significant) and in her own experience of autonomy and influence over household purchases ($p < 0.10$). At the same time, however, the program also led to small increases in reports of marital control (0.14 standard deviations, $p < 0.05$). The significant increase in the index of marital control is driven in large part by the finding that women assigned to the treatment reported having to give money to their partner more frequently and that their partners had taken money against their will.

Despite this pattern of partners attempting to capture women's earnings, however, the average woman assigned to the treatment reported a significant increase in the quality of the relationship with her partner of 0.18 standard deviations. The program effect on a self-reported index of physical, emotional, and sexual abuse among women is essentially zero (0.02, non-significant; the prevalence of any abuse within the past 8 months among women assigned to the control group was 19.7 percent).

3.6. Phase 2 (W+) treatment effects

Table 5 and Panel B of Fig. 2 show the impact of the W+ program on our primary outcomes in Phase 2. The comparison group for Phase 2 analyses is the cohort of clients randomly assigned to participate in the standard program alone, so these effects are relative to an active control. We discuss each family of outcomes below. Detailed results are presented in Tables B.5-B.8 the Online Appendix. In these tables, ITT results among women are presented first, followed by ITT results among women who had intimate male partners before Phase 2 started. We focus on these subgroups because they are the most relevant for an examination of the effect of the program on violence against women.

3.6.1. Economic outcomes

There was little impact of W+ on economic outcomes. Involving household partners led to a 9 percentage point (pp) decrease in the proportion of women currently engaged in business and a 6 pp increase in the proportion of women belonging to a savings group. A greater proportion of these women thought they could obtain a relatively large loan and business advice. The ITT effects among women with intimate partners are consistent with the ITT results among all women. Notably, the average woman who participated in W+ with a partner reported a decrease in non-durable consumption of 0.31 standard deviations.

3.6.2. Grant use and expenditures

On average, women assigned to W+ did not spend their grant money differently than women assigned to the standard program (see Table B.6 in the Online Appendix).

3.6.3. Partner relations

We see our largest, most significant results on outcomes describing the relationship between women and their partners. These results are generally robust to different specifications, as shown in Table B.9 in the Online Appendix. On average, women assigned to W+ reported an overall increase in the quality of their relationship with partners of 0.23 standard deviations. This index captures a woman's ratings of relationship, the couple's communication, and the partner's listening skills—all targets of the brief W+ training. Women with intimate partners reported spending

Table 4
Heterogeneity of full program (Phase 1) economic impacts by initial partner relations and IPV.

Outcome	Scale (>)	Assigned phase 1		Covariate		Interaction		
		β	SE	β	SE	β	SE	95%CI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Baseline covariate: IPV (n = 715)								
Index of income measures	z (+)	0.48	0.09***	−0.03	0.04	0.01	0.05	(−0.08–0.11)
Monthly cash earnings	000s UGX (+)	14.66	5.00***	−0.61	2.11	0.66	3.11	(−5.5–6.83)
Durable assets	z (+)	0.27	0.09***	−0.06	0.03**	0.04	0.04	(−0.04–0.11)
Non-durable consumption	z (+)	0.43	0.07***	0.02	0.03	−0.02	0.04	(−0.11 to 0.06)
Started enterprise since baseline	0–1 (+)	0.45	0.03***	0.01	0.03	0.00	0.03	(−0.06 to 0.06)
Currently doing business	0–1 (+)	0.37	0.04***	−0.00	0.03	−0.00	0.03	(−0.07 to 0.06)
Average hours of chores per week	hours (−)	0.05	1.63	−0.90	0.69	1.02	1.27	(−1.5–3.53)
Baseline covariate: Partner does not treat well (n = 725)								
Index of income measures	z (+)	0.49	0.10***	−0.17	0.13	0.03	0.19	(−0.34–0.41)
Monthly cash earnings	000s UGX (+)	18.05	5.48***	2.64	7.50	−18.12	9.56*	(−37.06–0.81)
Durable assets	z (+)	0.25	0.10***	−0.35	0.12***	0.17	0.18	(−0.18–0.52)
Non-durable consumption	z (+)	0.41	0.07***	0.01	0.11	0.19	0.17	(−0.15–0.52)
Started enterprise since baseline	0–1 (+)	0.44	0.03***	−0.10	0.07	0.10	0.08	(−0.05–0.25)
Currently doing business	0–1 (+)	0.39	0.04***	0.01	0.09	−0.12	0.11	(−0.34–0.1)
Average hours of chores per week	hours (−)	−0.49	1.81	−5.06	1.94**	5.77	3.09*	(−0.35–11.89)

*p < 0.1, **p < 0.05, ***p < 0.01.

Note. Coefficients and standard errors come from an OLS regression of each dependent variable on an indicator assignment to immediate treatment, a covariate taken from baseline (identified in the panel headings), and an interaction between these two indicators. Baseline covariates and strata fixed effects were included in each regression and are omitted. Column 1 lists the scale of each outcome. The character in parentheses indicates the valence of higher values: good (+) or bad (−). Columns 2–5 report coefficients and standard errors for the assignment and covariate indicators, respectively. Columns 6–7 report the coefficients and standard errors on the interaction. This is the estimate of treatment heterogeneity. Column 8 reports 95 percent confidence intervals around the estimates in Column 6.

Table 5
Impacts of "W+" partner inclusion (Phase 2): Primary outcomes and selected economic outcomes.

Outcome	Scale (>)	Control		Intent-to-treat estimates					
				Women only ($N = 749$)			Women w/partner only ($N = 462$)		
		Mean	SD	β	SE	95%CI	β	SE	95%CI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Employment/occupational index	z (+)	0.10	1.49	−0.12	0.13	(−0.38–0.14)	−0.14	0.20	(−0.53–0.25)
Started enterprise since baseline	0-1 (+)	0.96	0.21	0.02	0.02	(−0.01–0.06)	0.03	0.03	(−0.02–0.08)
Currently doing business	0-1 (+)	0.71	0.45	−0.09	0.05*	(−0.19–0)	−0.11	0.07*	(−0.25–0.02)
Average work hours per week: Non-agricultural	hours (+)	7.28	12.99	−1.01	0.93	(−2.87–0.84)	−1.23	1.36	(−3.95–1.48)
Index of income measures	z (+)	−0.02	1.03	−0.06	0.08	(−0.22–0.11)	−0.19	0.10*	(−0.4–0.02)
Monthly cash earnings	000s UGX (+)	16.89	31.94	−3.43	2.49	(−8.42–1.55)	−3.31	3.09	(−9.49–2.87)
Durable assets	z (+)	0.76	1.05	0.07	0.06	(−0.05–0.19)	0.00	0.09	(−0.17–0.18)
Non-durable consumption	z (+)	0.06	1.03	−0.06	0.10	(−0.26–0.13)	−0.28	0.10***	(−0.48–−0.08)
Perceptions of women's autonomy/rights	z (+)	0.05	0.99	−0.08	0.09	(−0.25–0.09)	−0.01	0.11	(−0.22–0.2)
Self-reported autonomy/influence in purchases	z (+)	0.05	0.98	−0.11	0.06*	(−0.23–0.02)	−0.07	0.11	(−0.29–0.15)
Partner relationship index	z (+)	−0.23	1.09	0.23	0.08***	(0.07–0.39)	0.24	0.11**	(0.02–0.46)
Partner support index, overall[a]	z (+)	−0.17	0.97	0.21	0.08***	(0.06–0.36)	0.44	0.09***	(0.26–0.62)
Partner support index, family[a]	z (+)	−0.18	0.96	0.23	0.07***	(0.08–0.38)	0.45	0.11***	(0.23–0.66)
Partner support index, business[a]	z (+)	−0.10	1.02	0.13	0.09	(−0.06–0.31)	0.28	0.11***	(0.07–0.5)
Physical/emotional abuse in past 8 months	z (−)	0.03	1.17	0.01	0.08	(−0.14–0.16)	−0.08	0.06	(−0.2–0.04)
Marital control in past 8 months	z (−)	−0.01	1.06	−0.01	0.09	(−0.19–0.17)	−0.07	0.10	(−0.26–0.12)

*p < 0.1, **p < 0.05, ***p < 0.01.
Note. This table presents selected results from Phase 2. Column 1 lists the scale of each outcome. The character in parentheses indicates the valence of higher values: good (+) or bad (−). Columns 2 and 3 report the means and standard deviations, respectively, for the women assigned to participate in the program alone (control). Columns 4–6 report the results of intention-to-treat (ITT) ordinary least squares (OLS) regressions of each outcome on an indicator of assignment to immediate treatment. Columns 4 and 5 report the coefficients and standard errors from an OLS regression of each outcome on an indicator of assignment to immediate treatment, a stratum fixed effect, and baseline covariates. Column 6 reports 95 percent confidence intervals around the estimates in Column 4. Columns 7–9 report the results of ITT OLS regressions of each outcome on an indicator of assignment to immediate treatment among women. These columns follow the structure of Columns 4–6. All standard errors are robust and clustered at the village level.
[a] Items refer to "partner who helps [client] make domestic and financial decisions" and may not refer specifically to intimate partner.

hours per day more with their partner.

The average woman assigned to W+ also reported receiving more support from her partner, even for traditionally female chores. This increase in household support extended to partners helping with the business. Effects are larger—sometimes more than twice as large—among the subset of women who reported having an intimate partner prior to the start of Phase 2.

3.6.4. IPV and attitudes about gender norms

In contrast to the results of the full program showing a small *increase* in marital control and essentially no effect on abuse, the W+ results provide weak evidence of a small *decrease* in both outcomes. The ITT results among women with intimate partners show non-significant declines in IPV and marital control of 0.08 and 0.07 standard deviations, respectively. The only statistically significant ITT result is that the average woman with an intimate partner reported a decrease of 0.11 standard deviations in how often her partner tried to limit her contact with family and friends. Comparable effects are found in treatment-on-the-treated analyses of women with intimate partners (displayed in Table B.10 in the Online Appendix). The per protocol analysis also produces similar results, although the decrease in marital control of 0.17 standard deviations is slightly larger and significant ($p < 0.10$).

Women's gender attitudes were essentially unchanged, except that the average woman reported less endorsement of the idea that a wife can express her opinion when she disagrees with her partner (0.17 points on a scale of 0–3). Women assigned to W+ reported less autonomy and influence over household purchases (decrease of 0.07 standard deviations).

4. Discussion

This study demonstrates that, in the context of an ultrapoor asset transfer program in northern Uganda, the quality of women's relationships with intimate partners is an important determinant of economic success, but that economic success does not affect intimate partner violence. Also, increasing male engagement does not lead to more economic success or less IPV, but can improve the quality of couples' relationships.

First, we show that increasing women's earnings has no effect on intimate partner violence more than a year later. Economic success at microenterprise development may, however, subject them to increased efforts from intimate partners to capture and control earnings. Theoretically, this has three alternative interpretations. The lack of an effect on IPV could be interpreted to mean that theories about male backlash (predicting an increase in violence) and women's bargaining power (predicting a decrease in violence) have only a weak connection to IPV (see Aizer, 2010; Hidrobo and Fernald, 2013). Alternatively, it could be that both theories are valid and both are operating in this context, but the effects cancel one another out. It is also possible that much larger changes in income are required to see a change in IPV in either direction.

Note, however, that the clients doubled their income—an extraordinary achievement for a program with cost-effectiveness at its core—but they are still poor in absolute terms. We cannot rule out the possibility that a larger change in income would also have no effect on IPV, but it is difficult to imagine programs more than doubling income in a cost-effective manner. Whatever explanation dominates, we see no evidence that IPV ought to be a first order objective (or concern) for anti-poverty programs. That said, while economic development on its own may be insufficient, it may be an important entry point and catalyst for broader, combined interventions that use economic gains to stimulate wider social changes.

Second, we show that a woman's relationship with her partner is an important determinant of economic success. Clients who initially report poor relations do worse economically than those with better relationships, and essentially fare no better in terms of monthly earnings than women randomized to a control group

waiting their turn to participate in the program. This suggests that economic assistance programs should support clients who report poor partner relations, possibly through a low-cost modification like W+.

Engaging male partners appears to be a promising approach. We show that a slight, costless reframing of the program to a more inclusive household approach involving partners (typically husbands) and an extra day of training on gender relations, communication, and joint problem-solving leads to large positive effects on women's relationships with their partner. It does not, however, significantly improve economic outcomes or reduce IPV relative to the standard individual-based program. One interpretation is that this effort to engage men and teach relationship skills created a sense of shared goals and enabled couples to reduce frictions and misunderstandings over activities and decisions typically controlled by men in this setting.

In terms of IPV-reduction, our results can be most closely compared to studies from South Africa and Cote D'Ivoire that show positive effects of combining economic assistance programs for women with (i) 'gender' training and female discussion groups in South Africa (Pronyk et al., 2006) and (ii) mixed-gendered discussion groups focused on household economic issues while implicitly addressing gender norms in Cote D'Ivoire (Gupta et al., 2013). Both studies report 55 percent reductions in IPV in per protocol analyses (physical abuse only in Cote D'Ivoire; ITT results are small and non-significant). In the current study, with a potentially more vulnerable conflict-affected population, we only observe a non-significant reduction in IPV (any physical or emotional abuse in past 8 months) of 13 percent in a per protocol analysis.

There are some key differences to consider, however. For instance, the intervention we studied was a small dose by design compared to the others, and IPV reduction was not the primary intervention target. The South Africa and Cote D'Ivoire trials involved regular meetings over roughly 15 months and 5 months, respectively, compared to only one day focused on gender, communication skills, and joint problem solving in the current study. Additionally, it is unclear how much time post-intervention is sufficient to detect impacts. Pronyk et al. (2006) waited 24 months, but Gupta et al. (2013)—like us—measured outcomes at 12 months post-intervention.

Taken together, the South Africa and Cote D'Ivoire studies suggest that pairing economic assistance and efforts to reduce IPV might be effective with a large enough dose; however, given the small number of rigorous evaluations and findings that are not robust to different specifications (i.e., ITT), further intervention studies are needed to draw firmer conclusions. It is critical to continue to examine dosage to find interventions that are cost-effective and have potential for scalability.

In terms of couples' relationships, we show that involving male partners, even with a light touch, can promote positive changes and increase the partner's support, even for traditionally-female chores. The sizes of the relationship effects are impressive given that they are comparable to effect sizes observed in studies of formal couples therapy (Snyder and Halford, 2012), a much more expensive endeavor that has relied on professional therapists. Overall, we find partners are more supportive and less controlling when involved in the process, but women lose a small degree of autonomy and fail to increase their endorsement of views that a wife should have the right to express her opinions, the right to go about daily life without asking for her husband's permission, and the right to freedom from abuse.

By having men participate in the initial training, watch role-plays, and practice communicating with their partners in front of the group, we aimed to stimulate social learning that would lead to behavior change (Bandura, 1973). We found modest evidence that this process began for the W+ couples. Principles of operant conditioning (Skinner, 1953) suggest that, over time, men will be reinforced for supporting their wives as their behaviors are reinforced by the wife and by the observation that their collective effort is benefitting the household. This process is hypothesized to create a situation of cognitive dissonance (Festinger, 1957) in which the male partner holds conflicting beliefs (e.g., women should not be allowed to travel freely outside of the village vs. giving women freedom of movement helps them to be more productive business partners) and then seeks to resolve the dissonance by updating his beliefs.

That said, mutual obligation and a sense of men's co-ownership can play out in complex ways, both decreasing women's autonomy and improving cooperative behavior. An alternative view of the results is that men have learned that a new and different way to influence their female partners is by spending time with them, talking to them, and persuading them to do what they (the men) want. W+ has taught them how to communicate and negotiate, so they step in and are heard more often, and also keep more control over things like business decision-making.

5. Limitations

This study has two main limitations. First, we relied on self-reported IPV data. To the extent that clients were uncomfortable acknowledging abuse to our enumerators, this would lead to an underreporting of IPV. It seems unlikely that any underreporting would be correlated with assignment to treatment in either study, but we cannot rule this out. If women assigned to immediate treatment in Study 1 or W+ in Study 2 were less likely to report actual abuse, it would attenuate average treatment effects. Second, we could not experimentally vary the intervention "dose" given the cluster-randomized design and power limitations. Nevertheless, this study of a slight reframing represents an important first step.

Finally, our results may not generalize to all models of economic assistance (e.g., microfinance), but the intervention studied is similar to programs offered to millions of poor women around the world, thus making this an important contribution. It is possible, however, that the average woman in our sample—the poorest among a population of poor people affected by conflict—would respond differently to the program than the typical woman targeted for economic assistance. Yet these results should still have broad applicability as cash transfers continue to become more common as a humanitarian intervention in post-conflict settings.

6. Conclusions

Conditional cash transfers, unconditional cash transfers, business skills training, and vocational training are increasingly common program and policy options for improving the lives of the ultra poor—particularly poor women who are thought to be more likely than men to invest earnings in family wellbeing. A parallel goal of most economic assistance programs targeting poor women is empowerment, usually measured in terms of autonomy and bargaining power. Almost universally, studies show that these programs are effective at increasing income, consumption, and wealth, but empowerment is more elusive. Our study is no exception.

Some theory and evidence suggests that increasing women's incomes increases their risk for IPV, others suggest this as a path to autonomy and increased bargaining power, while others point to it as inadequate to change violent behavior on its own. We need to better understand the mechanisms of change within households, in particular how economic factors and partner relationships influence each other. How and when to engage men in women's empowerment, particularly in cost-effective and scalable ways, remains understudied.

Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.socscimed.2015.03.042.

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