

Women's entrepreneurship and intimate partner violence:  
A cluster randomized trial of microenterprise assistance  
and partner participation in post-conflict Uganda  
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**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 ( $n=1,800$ ) 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. Women 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.

*Keywords:* Uganda, poverty, gender, cash transfers, microenterprise, empowerment, intimate partner violence, post-conflict

## Introduction

2 Intimate partner violence (IPV)—abusive or controlling behaviors toward in-  
3 timate partners (Dixon & Graham-Kevan, 2011)—is the most common type of  
4 violence against women (Garcia-Moreno & Watts, 2011). A 10-country study  
5 showed 15 to 71 percent of women experience IPV over their lifetimes (Garcia-  
6 Moreno et al., 2006). In conflict settings, reports of IPV exceed those of rape  
7 and sexual violence from men outside the home (Stark & Ager, 2011). Some  
8 estimates of the economic cost of IPV suggest it is greater than that of civil  
9 war or homicides globally (Fearon & Hoeffler, 2014).

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

17 One common approach is to address IPV directly through education or  
18 discussion with men (Jewkes et al., 2014). Men’s attitudes justifying wife  
19 beating are a strong correlate of use of violence against women (Hindin et al.,  
20 2008) which is seen as an expression of gender inequality and sustained by  
21 the normative use of violence (Jewkes (2002); Jewkes et al. (2014)). Many  
22 interventions target groups of men and use training and discussion to change  
gender-inequitable attitudes and norms (Barker et al., 2010; Ellsberg et al.,

24 2014).

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

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

## 42 **Economic Empowerment, Poverty and IPV**

The theoretical literature has ambiguous predictions about the effects of in-  
44 creasing women’s income and work outside the home on IPV (for reviews see  
Aizer, 2010; Hidrobo & Fernald, 2013). Some predict that increasing women’s

46 income shares decreases violence. For instance, some sociologists and feminists  
see financial inequality between the sexes and women's economic dependency  
48 as root causes of IPV. Similarly, economic models of household bargaining  
commonly suggest that as a woman's options outside of the marriage improve,  
50 her tolerance for violence decreases, and the husband will strategically use less  
of it, lest he lose his wife and her income.

52 Others predict an increase in violence. Some sociologists argue that in-  
creases in women's incomes increase tensions between partners, provoke emo-  
54 tional backlashes, or lead men to use violence to reinstate authority. Some  
economists have also argued that, when a woman values a marriage intrinsi-  
56 cally 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  
58 to women.

Research on violence against women shows multiple risk factors across  
60 the social ecology and suggests that interventions must address multiple risk  
factors at individual, family, and systemic levels over a significant period of  
62 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  
64 still thin and mixed (Vyas & Watts, 2009; Ellsberg et al., 2014), however,  
including whether economic interventions improve empowerment on their own  
66 or whether supplemental interventions to address inequalities are needed.

The first experimental evidence regarding economic empowerment and  
68 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  
70 (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  
72 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 pro-  
74 grams in Mexico and Peru offer mixed results (Angelucci, 2008; Bobonis et al.,  
2013; Hidrobo & Fernald, 2013). Unconditional cash transfers in Kenya and  
76 Ecuador show significant reductions in IPV (Haushofer & Shapiro, 2013).

## **Engaging Men**

78 The rationale for addressing IPV through men's discussion groups is based  
on the belief that socially constructed gender norms about inequality are a  
80 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  
82 and observing rewards and punishments; this is the basis of social learning  
theory (Bandura, 1973), one of several theoretical etiologies of IPV (for a  
84 review see Dixon & Graham-Kevan, 2011). Understanding and addressing the  
connection between violence and masculinity is also critical, gender theorists  
86 argue (Jewkes et al., 2014). 'Gender-transformative' programs are therefore  
designed to change gender norms and to promote gender equality among men  
88 and boys, most often by raising awareness and targeting attitudes throughout  
the social ecology.

90 Few interventions engaging men directly to reduce violence have been rig-

92 ously 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*,  
94 an eight-week participatory learning program on sexual health for both gen-  
ders. Men reported reductions in physical and sexual violence perpetration 24  
96 months afterwards, but women did not report less victimization Jewkes et al.  
(2008). More recently in post-conflict Cote D’Ivoire, a randomized evaluation  
98 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  
100 sexual IPV (Hossain et al., 2014).

The economic program we evaluate, however, targets women, not men.  
102 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  
104 not much evidence at the time to inform the program design. Interventions  
that have worked with men and women partners simultaneously have largely  
106 been the domain of psychotherapy. In high-income countries, couples therapy  
is a well-established strategy for improving relationship quality and reducing  
108 conflict (i.e. disputes) between partners (Snyder & Halford, 2012), the latter  
being a strong correlate of physical violence against women (Jewkes, 2002).  
110 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  
112 a group savings program in Cote D’Ivoire that added a couples discussions  
group (*EA\$E*) addressing household economic issues while implicitly touching  
114 gender norms found a significant reduction of physical violence in the per

protocol analysis for women who attended more than 75 percent of sessions  
116 (Gupta et al., 2013).

## Current Study

118 In 2009, an Italian non-governmental agency, the Association of Volunteers in  
International Service (AVSI), designed a cash transfer program called *PRO-*  
120 *GRAM NAME OMITTED* to help ultrapoor women with little formal edu-  
cation to develop small businesses. AVSI aimed to increase women's incomes  
122 and autonomy. Asset transfer programs are one of the most commonplace aid  
programs for the extreme poor. In addition to providing cash, livestock, or  
124 some other capital, such programs typically offer a bundle of services, includ-  
ing training, formation of self-help groups, and supervision. AVSI's program  
126 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  
128 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  
130 to large, experimentally identified increases in employment and earnings—  
impacts that were at least as cost-effective as livestock-based programs. We  
132 hypothesized, however, that these average impacts concealed substantial vari-  
ation. In particular, our qualitative work led us to hypothesize that poor inti-  
134 mate partner relationships are an obstacle to developing successful small-scale  
businesses. And according to Saile et al. (2013), dysfunctional intimate partner  
136 relationships are common in this setting. In a study of nine conflict-affected



communities in 2010, more than 70 percent of women reported experiencing  
138 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  
140 current paper.

In a second phase of implementation, clients either received the standard  
142 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*  
144 in Luo or “Work by/for yourself improvement”, clients participated as indi-  
viduals. In the W+ variant, program clients were encouraged to participate in  
146 the training and follow-up visits with someone from their household who helps  
to make financial decisions. For most women, this meant participating with  
148 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+  
150 participants, however, the framing of the support shifted from a grant wholly  
controlled by the woman to a grant encouraging household input into decision-  
152 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”.

154 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 re-  
156 framing, basic training in couples’ communication and problem solving, and  
joint participation in the program—augments economic success while achiev-  
158 ing the empowerment outcomes that were elusive in the first implementation.

Based on our review of the literature and the results of our initial study,

160 we theorized that this more inclusive approach would lead to a measurable  
162 impact in the partner's direct and indirect support for the business—from re-  
164 laxing constraints placed on the woman, to providing emotional support that  
166 helps the woman to juggle all of her responsibilities, to actively participating in  
168 business operations. We further hypothesized that partner relations would be  
170 improved through reductions in tensions and IPV, resulting from the house-  
hold's increased economic security and the couple's ability to communicate  
and work together. We also hypothesized that experimentation with new gen-  
dered behavior patterns combined with business success and improvements in  
relationship quality would begin to change men's and women's attitudes about  
gender roles.

## Methods

### 172 **Setting and Context**

This study was conducted in northern Uganda between 2009 and 2011, fol-  
174 lowing 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  
176 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  
178 camps. Although people exhibited psychological resilience, war and displace-  
ment left most impoverished and without the human and financial capital to  
180 pursue non-agricultural income-generating activities (Annan et al., 2006).

## Intervention

182 The *PROGRAM NAME OMITTED* (PROGRAM) program included four  
days of business skills training, a start-up grant of approximately \$150 USD,  
184 and follow-up support by trained field staff. The training taught participants—  
“clients”—how to create a business plan, budget, market goods and services,  
186 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  
188 disbursed cash in two installments and visited the clients approximately every  
six weeks for six months to monitor spending and provide advice.

190 In rural Uganda, like much of sub-Saharan Africa, men and women en-  
gage in a mix of crop sales, animal raising, casual labor, and small non-farm  
192 self-employment, such as petty trading. Women commonly engage in all these  
activities. But animal-raising and non-farm businesses usually require some  
194 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  
196 these constraints.

In a variant of the program called *Women Plus* (W+), clients were invited  
198 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)  
200 cultural, gender, and financial barriers to female entrepreneurship), (ii) com-  
munication (a common component of couples therapy), and (iii) joint-problem  
202 solving (see Online Appendix A; [INSERT LINK TO ONLINE FILE]).

## Research Design

204 To estimate the impact on economic and social outcomes, we partnered with  
AVSI to conduct two cluster-randomized pragmatic superiority trials. AVSI  
206 purposively selected 120 villages across six subcounties in Gulu and Kitgum  
districts—the districts most affected by war and displacement. In the first  
208 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  
210 Figure C.1 in the Online Appendix; [INSERT LINK TO ONLINE FILE]). Vil-  
lages were excluded from randomization if they had less than 80 households.  
212 There were 1,800 participants across the two phases ( $n=896$  in villages ran-  
domized to Phase 1 and  $n=904$  in villages randomized to delayed treatment).  
214 Figure 1 displays a CONSORT-style participant flow diagram.

[Figure 1 about here.]

216 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  
218 (no group dynamics;  $n=439$ ) or the W+ variant described above ( $n=465$ ).  
In each delayed treatment village, individual clients were also randomized to  
220 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  
222 Council for Science and Technology and Institutional Review Boards at Yale  
University and Columbia University approved the research protocol.

## 224 **Procedures**

In early 2009, AVSI held public meetings to introduce the program and asked  
226 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  
228 screened 2,300 nominees and selected 1,800 (10 to 17 per village) to participate,  
screening out the least poor based on the results of interviews and home visits.  
230 Thus there was no self-selection into the study.

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

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

Following this survey, the 60 villages in the delayed treatment group  
244 were randomly assigned via computer algorithm to participate in the standard  
version of PROGRAM or the W+ variant (1:1 allocation). Individual clients  
246 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,  
248 approximately one year after receiving cash grants.

## Primary Outcome Measures

250 Our primary individual-level outcomes included IPV, attitudes toward gender  
norms, quality of relationship with partner, support from partner, and au-  
252 tonomy and influence in household purchases (see Table 1). Measures were  
created by the research team or adapted from a subset of the 2006 Uganda  
254 DHS (Uganda Bureau of Statistics (UBOS) & Macro International Inc, 2007).  
To measure attitudes toward gender norms, we asked clients to rate their agree-  
256 ment with several statements about women’s rights and justifications for wife  
beating. We created a composite partner relationship score by standardizing  
258 clients’ responses to seven questions about relationship quality, communica-  
tion patterns, listening skills, and dispute frequency. We constructed two  
260 composite scores for partner support of household (e.g., help with chores)  
and business activities, and we combined these scores into an overall partner  
262 support composite. Lastly, we constructed a composite autonomy/influence  
score from three questions representing a client’s autonomy and influence in  
264 purchases (can decide how to spend money, can use earnings to buy clothes  
without permission, has a say in purchase of large household assets). Ad-  
266 ditional details about the measurement of each outcome are provided in the  
Online Appendix B [INSERT LINK TO ONLINE FILE]. Items in tables and  
268 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  
 270 intimate partner.

[Table 1 about here.]

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

## Empirical Strategy

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

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

282 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  
 284 treatment, assignment to the standard PROGRAM or the W+ variant),  $X$   
 is a vector of controls including a district fixed effect, road distances between

286 villages, and 90 baseline (i.e., before Phase 1) and midline (i.e., after Phase 1  
but before Phase 2) covariates (see Table C.1 in the Online Appendix). We  
288 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.  
290 (2014) for more details about spillover effects in Phase 1). Robust standard  
errors are clustered by village.

292 AVSI and the authors designed the W+ intervention principally for  
women with partners. As a consequence, for Phase 2 analyses, we focus on  
294 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  
296 immediately *before* the Phase 2 program was implemented. The study was  
powered (80%) to detect a 0.27 standard deviation (or larger) increase in  
298 quality of partner relations given 60 clusters of 15 participants each with a  $k$   
of 0.03.

300 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 un-  
302 likely to affect outcomes through other channels. If so, we can also calculate  
a treatment-on-the-treated (TOT) estimate of the average treatment effect,  
304 which uses random assignment to treatment as an instrument for the effect  
of actually bringing someone else (not necessarily an intimate male partner)  
306 to the training on outcomes (Angrist & Pischke, 2008). This treatment effect  
can be interpreted as the impact of the program on compliers. To facilitate  
308 comparison to previous empirical work on IPV and economic assistance pro-



grams (Pronyk et al., 2006; Gupta et al., 2013), we also report the results of  
310 a per protocol (PP) analysis conducted among the subsample of women with  
intimate male partners. Women assigned to W+ were included in the analysis  
312 if they attended at least two days of training with an intimate male partner  
specifically.

## 314 **Results**

### **Study Sites and Participants**

316 Table 2 reports baseline characteristics of study sites and participants. The  
average village population is 699, and most range from 350 to 1,000 people.  
318 The average village is 45 kilometers from the district capital.

[Table 2 about here.]

320 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  
322 were married and living with a partner. On average, clients reported working  
15.4 hours week in the past month, principally farming. On average, reported  
324 cash earnings in the previous month were 8,938 UGX, roughly \$4.47 USD. Ta-  
ble C.2 in the Online Appendix [INSERT LINK TO ONLINE FILE] compares  
326 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  
328 poor, but clients reported slightly less education, employment and income.

## **Randomization Balance**

330 There was moderate imbalance in Phase 1 baseline covariates between individ-  
uals assigned to immediate treatment (Phase 1) or delayed treatment (Phase  
332 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  
334 on indicators of assignment to treatment (Phase 1 versus Phase 2; standard  
program versus W+ in Phase 2). The results suggest that the immediate treat-  
336 ment group was slightly worse off economically, which if true would lead to  
an underestimation of the treatment effects. In this paper, however, we focus  
338 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  
340 account for any potential bias and to increase precision.

## **Treatment Compliance**

342 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  
344 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  
346 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  
348 included movement out of the subcounty, health issues, and other personal  
concerns.

350 As shown in Figure 1, 904 clients in the wait-list control group were ran-  
domized to the standard PROGRAM ( $n=439$ ) or W+ ( $n=465$ ) prior to the  
352 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  
354 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  
356 necessarily an intimate partner) who attended at least 2 days of the train-  
ing. The program had 100 percent attendance among the grant recipients, so  
358 noncompliance in W+ is related to partners' attendance.

## **Survey Attrition**

360 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—  
362 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.  
364 Tables C.3 and C.4 in the Online Appendix [INSERT LINK TO ONLINE  
FILE] report complete survey response rates and demonstrate that attrition  
366 is not generally significantly correlated with treatment or baseline covariates.  
Unfound participants were slightly younger and less educated, but more likely  
368 to be attending school.

## Phase 1 Treatment Effects

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

[Table 3 about here.]

376 [Figure 2 about here.]

**Economic outcomes** As reported in Blattman et al. (2014), the program  
378 had large economic impacts. Most of the women invested in petty trading  
and retailing, adding this to their existing farm activities. About a third  
380 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,  
382 female clients doubled microenterprise ownership from 40 to 79 percent, in-  
creased non-agricultural employment hours by 94 percent (from 5.2 to 10.1)  
384 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.

386 **Treatment heterogeneity in economic outcomes** To the extent that  
poor intimate relationships constrain business success, we should observe neg-  
388 ative average treatment effects (ATEs) on business development and survival  
among women who initially reported that their partners did not treat them

390 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  
392 and a negative ATE on monthly earnings.

Table 4 reports estimates of treatment heterogeneity in economic out-  
394 comes in the full program according to pre-treatment reports of poor partner  
relations and IPV. Results are mixed. There is little evidence of treatment  
396 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  
398 partners do not treat them well earned \$18.12 USD less in the month, essen-  
tially wiping out the treatment effect. However, they also reported increases  
400 in durable assets and non-durable consumption, indicators of income expected  
to be lower among clients with worse partner relations. As anticipated, fewer  
402 clients with poor partner relations were still operating businesses, though the  
effect was non-significant. But counter to our expectations, the average client  
404 reported 5.8 more hours of chores per week.

[Table 4 about here.]

406 **Partner relations, IPV and attitudes about gender norms** In addi-  
tion to the large economic gains overall, the program also led to small in-  
408 creases in the average woman’s endorsement of more positive gender norms  
(non-significant) and in her own experience of autonomy and influence over  
410 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,  
412  $p < 0.05$ ). The significant increase in the index of marital control is driven

in large part by the finding that women assigned to the treatment reported  
414 having to give money to their partner more frequently and that their partners  
had taken money against their will.

416 Despite this pattern of partners attempting to capture women's earnings,  
however, the average woman assigned to the treatment reported a significant  
418 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,  
420 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  
422 the control group was 19.7 percent).

## **Phase 2 (W+) Treatment Effects**

424 Table 5 and Panel B of Figure 2 show the impact of the W+ program on our  
primary outcomes in Phase 2. The comparison group for Phase 2 analyses  
426 is the cohort of clients randomly assigned to participate in the standard pro-  
gram alone, so these effects are relative to an active control. We discuss each  
428 family of outcomes below. Detailed results are presented in Tables C.5-C.8  
the Online Appendix [INSERT LINK TO ONLINE FILE]. In these tables,  
430 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  
432 these subgroups because they are the most relevant for an examination of the  
effect of the program on violence against women.

434 [Table 5 about here.]

**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.

**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 C.6 in the Online Appendix [INSERT LINK TO ONLINE FILE]).

**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 C.9 in the Online Appendix [INSERT LINK TO ONLINE FILE]. 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 hours per day more with their partner.

The average woman assigned to W+ also reported receiving more support from their 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.

**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 C.10 in the Online Appendix [INSERT LINK TO ONLINE FILE]). 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).



## 480 Discussion

This study demonstrates that, in the context of an ultrapoor asset transfer  
482 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  
484 male engagement does not lead to more economic success or less IPV, but can improve the quality of couples’ relationships.  
486

First, we show that increasing women’s earnings has no effect on intimate  
488 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  
490 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 & Fernald, 2013). Alternatively, it could be that both theories are valid and both are operating in  
492 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  
494 direction.  
496  
498

Note, however, that the clients doubled their income—an extraordinary  
500 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  
502 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  
504 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  
506 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  
508 stimulate wider social changes.

Second, we show that a woman's relationship with her partner is im-  
510 portant determinant of economic success. Clients who initially report poor  
relations do worse economically than those with better relationships, and es-  
512 sentially fare no better in terms of monthly earnings than women randomized  
to a control group waiting their turn to participate in the program. This  
514 suggests that economic assistance programs should support clients who report  
poor partner relations, possibly through a low-cost modification like W+.

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

526 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  
528 combining economic assistance programs for women with (i) 'gender' training  
and female discussion groups in South Africa (Pronyk et al., 2006) and (ii)  
530 mixed-gendered discussion groups focused on household economic issues while  
implicitly addressing gender norms in Cote D'Ivoire (Gupta et al., 2013). Both  
532 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  
534 current study, with a potentially more vulnerable conflict-affected population,  
we only observe a non-significant reduction in IPV (any physical or emotional  
536 abuse in past 8 months) of 13 percent in a per protocol analysis.

There are some key differences to consider, however. For instance, the  
538 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  
540 and Cote D'Ivoire trials involved regular meetings over roughly 15 months and  
5 months, respectively, compared to only one day focused on gender, commu-  
542 nication skills, and joint problem solving in the current study. Additionally,  
it is unclear how much time post-intervention is sufficient to detect impacts.  
544 Pronyk et al. (2006) waited 24 months, but Gupta et al. (2013)—like us—  
measured outcomes at 12 months post-intervention.

546 Taken together, the South Africa and Cote D'Ivoire studies suggest that  
pairing economic assistance and efforts to reduce IPV might be effective with  
548 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  
550 intervention studies are needed to draw firmer conclusions. It is critical to  
continue to examine dosage to find interventions that are cost-effective and  
552 have potential for scalability.

In terms of couples' relationships, we show that involving male part-  
554 ners, even with a light touch, can promote positive changes and increase the  
partner's support, even for traditionally-female chores. The sizes of the rela-  
556 tionship effects are impressive given that they are comparable to effect sizes  
observed in studies of formal couples therapy (Snyder & Halford, 2012), a much  
558 more expensive endeavor that has relied on professional therapists. Overall,  
we find partners are more supportive and less controlling when involved in the  
560 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,  
562 the right to go about daily life without asking for her husband's permission,  
and the right to freedom from abuse.

564 By having men participate in the initial training, watch role-plays, and  
practice communicating with their partners in front of the group, we aimed  
566 to stimulate social learning that would lead to behavior change (Bandura,  
1973). We found modest evidence that this process began for the W+ couples.  
568 Principles of operant conditioning (Skinner, 1953) suggest that, over time, men  
will be reinforced for supporting their wives as their behaviors are reinforced  
570 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

572 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.  
574 giving women freedom of movement helps them to be more productive business  
partners) and then seeks to resolve the dissonance by updating his beliefs.

576 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  
578 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  
580 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  
582 negotiate, so they step in and are heard more often, and also keep more control  
over things like business decision-making.

## 584 **Limitations**

This study has two main limitations. First, we relied on self-report IPV data.  
586 To the extent that clients were uncomfortable acknowledging abuse to our enu-  
merators, this would lead to an underreporting of IPV. It seems unlikely that  
588 any underreporting would be correlated with assignment to treatment in either  
study, but we cannot rule this out. If women assigned to immediate treatment  
590 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  
592 the intervention “dose” given the cluster-randomized design and power limi-  
tations. Nevertheless, this study of a slight reframing represents an important

594 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.

## 604 **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.

614 Some theory and evidence suggests that increasing women's incomes in-

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

## 622 References

- Aizer, A. (2010). The Gender Wage Gap and Domestic Violence. *The Amer-*  
624 *ican Economic Review*, 100, 1847–1859.
- Angelucci, M. (2008). Love on the rocks: Domestic violence and alcohol abuse  
626 in rural Mexico. *The BE Journal of Economic Analysis & Policy*, 8.
- Angrist, J. D., & Pischke, J.-S. (2008). *Mostly Harmless Econometrics: An*  
628 *Empiricist's Companion*. Princeton university press.
- Annan, J., Blattman, C., & Horton, R. (2006). The state of youth and youth  
630 protection in Northern Uganda: Findings from the survey of war affected  
youth. *UNICEF*, .
- 632 Bandura, A. (1973). *Aggression: A social learning analysis*.. Prentice-Hall.
- Barker, G., Ricardo, C., Nascimento, M., Olukoya, A., & Santos, C. (2010).

- 634 Questioning gender norms with men to improve health outcomes: Evidence  
of impact. *Global Public Health*, 5, 539–553.
- 636 Beydoun, H. A., Beydoun, M. A., Kaufman, J. S., Lo, B., & Zonderman, A. B.  
(2012). Intimate partner violence against adult women and its association  
638 with major depressive disorder, depressive symptoms and postpartum de-  
pression: A systematic review and meta-analysis. *Social Science & Medicine*,  
640 75, 959–975.
- Blattman, C., Green, E., Jamison, J., Lehmann, M. C., & Annan, J. (2014).  
642 The returns to cash and microenterprise support among the ultra-poor: A  
field experiment. URL: <http://ssrn.com/abstract=2439488>.
- 644 Bobonis, G. J., González-Brenes, M., & Castro, R. (2013). Public transfers  
and domestic violence: The roles of private information and spousal control.  
646 *American Economic Journal: Economic Policy*, 5, 179–205.
- Devries, K., Watts, C., Yoshihama, M., Kiss, L., Schraiber, L. B., Deyessa,  
648 N., Heise, L., Durand, J., Mbwambo, J., Jansen, H., Berhane, Y., Ellsberg,  
M., & Garcia-Moreno, C. (2011). Violence against women is strongly asso-  
650 ciated with suicide attempts: Evidence from the who multi-country study  
on women's health and domestic violence against women. *Social Science &*  
652 *Medicine*, 73, 79–86.
- Dixon, L., & Graham-Kevan, N. (2011). Understanding the nature and eti-  
654 ology of intimate partner violence and implications for practice and policy.  
*Clinical Psychology Review*, 31, 1145–1155.



- 656 Duflo, E. (2011). *Women's empowerment and economic development*. Technical Report National Bureau of Economic Research.
- 658 Ellsberg, M., Arango, D. J., Morton, M., Gennari, F., Kiplesund, S., Contreras, M., & Watts, C. (2014). Prevention of violence against women  
660 and girls: what does the evidence say? *The Lancet*, . doi:10.1016/S0140-6736(14)61703-7.
- 662 Fearon, J., & Hoeffler, A. (2014). *Peaceful, stable, and resilient societies*. Technical Report Paper prepared for the Copenhagen Consensus.
- 664 Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Stanford, CA: Stanford University Press.
- 666 Garcia-Moreno, C., Jansen, H. A., Ellsberg, M., Heise, L., & Watts, C. H. (2006). Prevalence of intimate partner violence: findings from the WHO  
668 multi-country study on women's health and domestic violence. *The Lancet*, *368*, 1260–1269.
- 670 Garcia-Moreno, C., & Watts, C. (2011). Violence against women: an urgent public health priority. *Bulletin of the World Health Organization*, *89*, 2–2.
- 672 Gupta, J., Falb, K. L., Lehmann, H., Kpebo, D., Xuan, Z., Hossain, M., Zimmerman, C., Watts, C., & Annan, J. (2013). Gender norms and  
674 economic empowerment intervention to reduce intimate partner violence against women in rural Côte d'Ivoire: a randomized controlled pilot study.  
676 *BMC International Health and Human Rights*, *13*, 46.

- Haushofer, J., & Shapiro, J. (2013). Household response to income changes:  
678 Evidence from an unconditional cash transfer program in Kenya. *Massachusetts Institute of Technology*, .
- 680 Hidrobo, M., & Fernald, L. (2013). Cash transfers and domestic violence. *Journal of Health Economics*, *32*, 304–319.
- 682 Hindin, M. J., Kishor, S., Ansara, D. L., Nilsson, J. E., Brown, C., Russell, E. B., Khamphakdy-Brown, S., Btoush, R., Haj-Yahia, M. M., & Serbanescu, F. (2008). Intimate partner violence among couples in 10 DHS  
684 countries: predictors and health outcomes. *Journal of Interpersonal Violence*, *23*, 1654–1663.  
686
- Hossain, M., Zimmerman, C., Kiss, L., Abramsky, T., Kone, D., Bakayoko-  
688 Topolska, M., Annan, J., Lehmann, H., & Watts, C. (2014). Working with men to prevent intimate partner violence in a conflict-affected setting: a pilot cluster randomized controlled trial in rural Cote d'Ivoire. *BMC Public Health*, *14*, 339.
- 690
- 692 Jewkes, R. (2002). Intimate partner violence: causes and prevention. *The Lancet*, *359*, 1423–1429.
- 694 Jewkes, R., Flood, M., & Lang, J. (2014). From work with men and boys to changes of social norms and reduction of inequities in gender relations: a conceptual shift in prevention of violence against women and girls. *The Lancet*, . doi:10.1016/S0140-6736(14)61683-4.
- 696
- 698 Jewkes, R., Nduna, M., Levin, J., Jama, N., Dunkle, K., Puren, A., &

- Duvvury, N. (2008). Impact of Stepping Stones on incidence of HIV and HSV-2 and sexual behaviour in rural South Africa: cluster randomised controlled trial. *BMJ : British Medical Journal*, 337.
- Jewkes, R. K., Dunkle, K., Nduna, M., & Shai, N. (2010). Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: a cohort study. *The Lancet*, 376, 41–48.
- Kim, J., Ferrari, G., Abramsky, T., Watts, C., Hargreaves, J., Morison, L., Phetla, G., Porter, J., & Pronyk, P. (2009). Assessing the incremental effects of combining economic and health interventions: the image study in south africa. *Bulletin of the World Health Organization*, 87, 824–832.
- Pronyk, P. M., Hargreaves, J. R., Kim, J. C., Morison, L. A., Phetla, G., Watts, C., Busza, J., & Porter, J. D. H. (2006). Effect of a structural intervention for the prevention of intimate-partner violence and HIV in rural South Africa: a cluster randomised trial. *The Lancet*, 368, 1973–1983.
- Saile, R., Neuner, F., Ertl, V., & Catani, C. (2013). Prevalence and predictors of partner violence against women in the aftermath of war: A survey among couples in Northern Uganda. *Social Science & Medicine*, 86, 17–25.
- Sen, A. (1999). *Development as Freedom*. Oxford University Press.
- Skinner, B. F. (1953). *Science and Human Behavior*. New York: MacMillan.
- Snyder, D. K., & Halford, W. K. (2012). Evidence-based couple therapy: current status and future directions. *Journal of Family Therapy*, 34, 229–249.

722 Stark, L., & Ager, A. (2011). A Systematic Review of Prevalence Studies  
of Gender-Based Violence in Complex Emergencies. *Trauma, Violence, &  
Abuse, 12*, 127–134.

724 Uganda Bureau of Statistics (UBOS), & Macro International Inc (2007).  
*Uganda Demographic and Health Survey 2006*. Technical Report UBOS  
726 and Macro International Inc Calverton, Maryland.

Vyas, S., & Watts, C. (2009). How does economic empowerment affect women's  
728 risk of intimate partner violence in low and middle income countries? A sys-  
tematic review of published evidence. *Journal of International Development,*  
730 *21*, 577–602.

World Bank (2011). *World Development Report 2012: Gender Equality and*  
732 *Development*. Technical Report World Bank Washington, D.C.

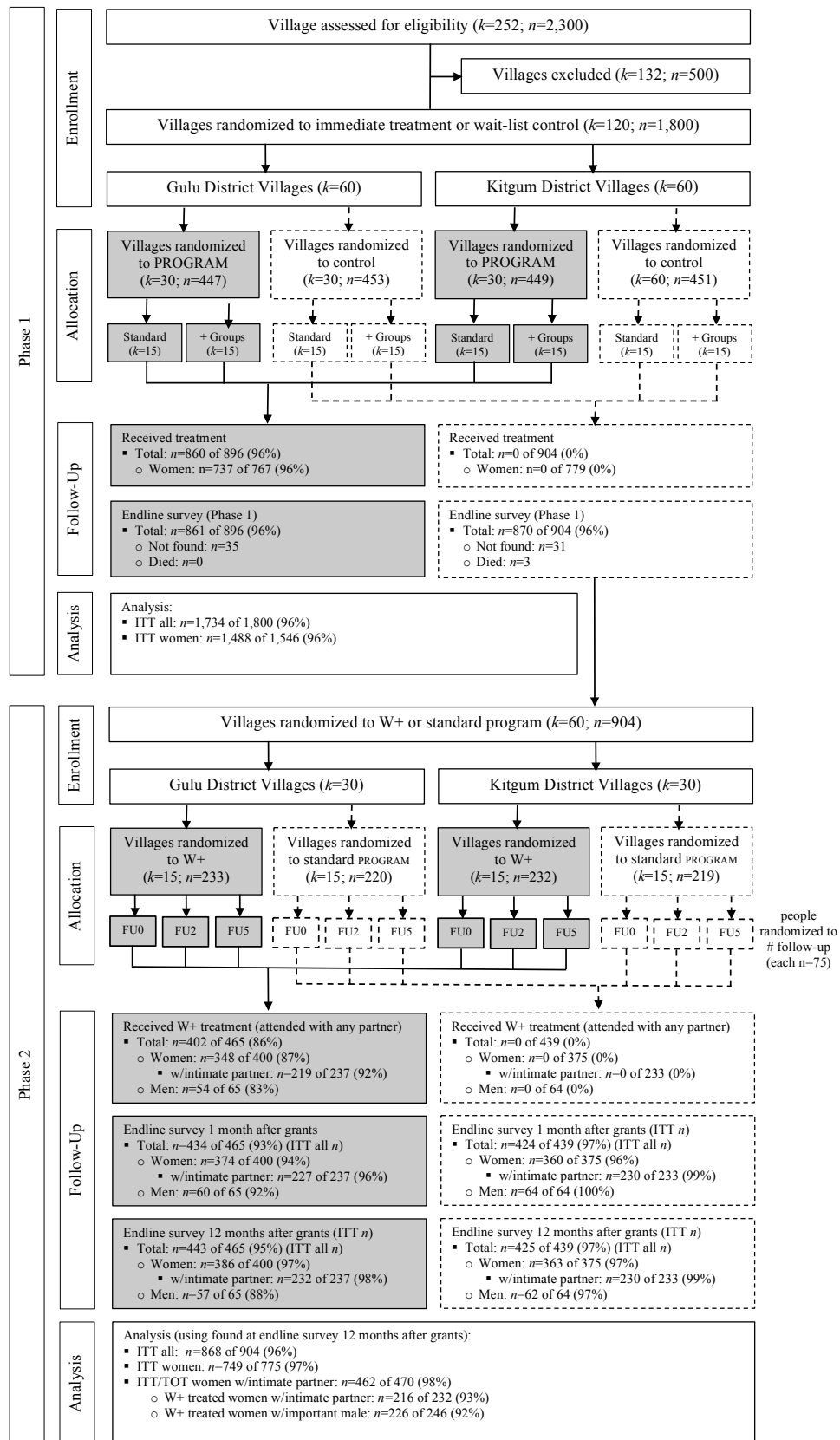


Figure 1: Participant flow diagram.

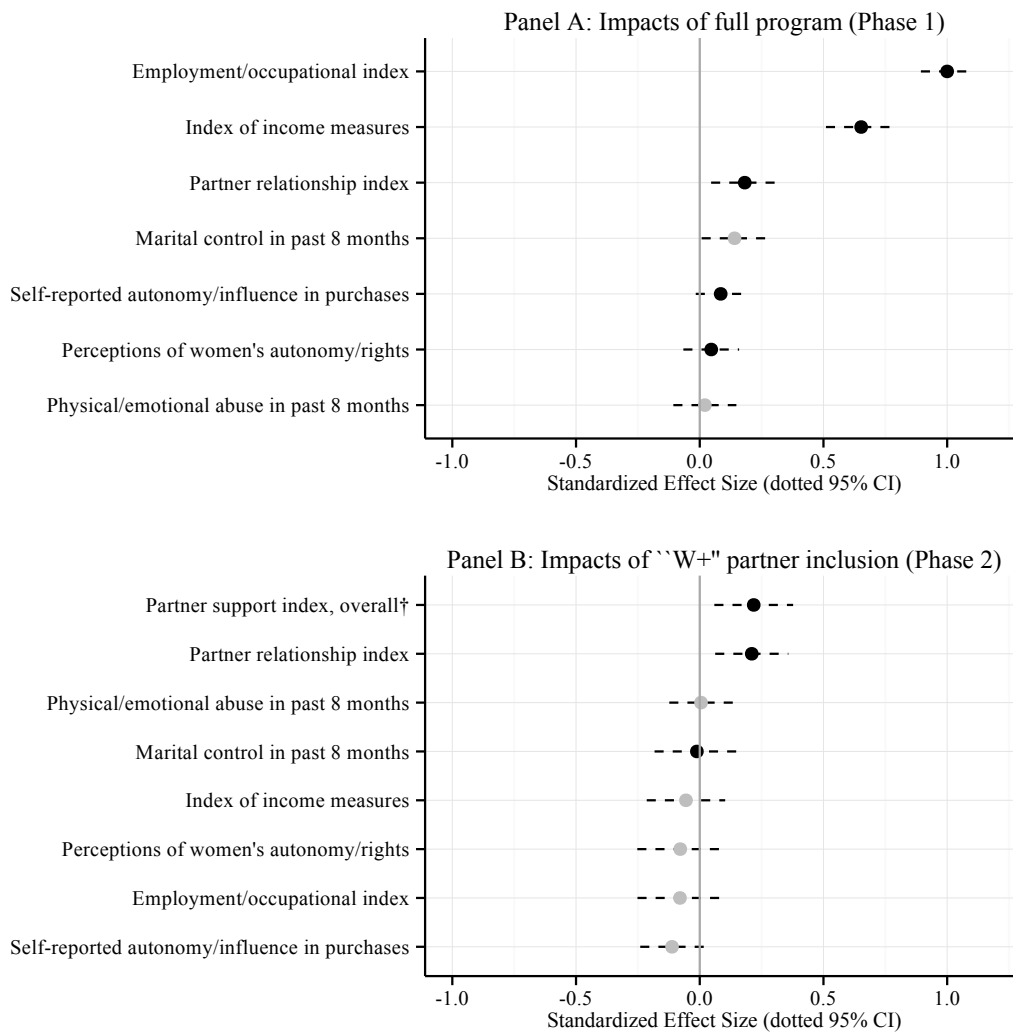


Figure 2: **PANEL A** Impacts of full program (Phase 1). Impacts of “W+” partner inclusion (Phase 2). These panels display the standardized results of intention-to-treat (ITT) ordinary least squares (OLS) regressions of each outcome on an indicator of assignment to treatment among women (immediate treatment 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  $\Delta$ ). Black dots represent point estimates in the hypothesized direction (grey 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.



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

Outcome/Variable	Scale (>) (1)	2006 Uganda DHS (2)
<i>Hours awake spent with partner in a typical day</i>	hours (+)	
<i>Partner relationship index</i>	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 (+)	
<i>Partner support index, overall</i>	z (+)	
Partner support index, family	z (+)	
Partner's contribution to traditionally-female chores	0-7 (+)	
Partner support index, business	z (+)	
<i>Perceptions of women's autonomy/rights</i>	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)
<i>Self-reported autonomy/influence in purchases</i>	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
<i>Physical/emotional abuse in past 8 months</i>	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
<i>Marital control in past 8 months</i>	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.



Table 2: Baseline descriptive statistics and tests of balance

	Phase 1 ( $n=1,800$ ; $k=120$ )					Phase 2 ( $n=904$ ; $k=60$ )				
	Control		Treat		$p$	Control		Treat		$p$
	M	SD	M	SD		M	SD	M	SD	
Select baseline covariates	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Individual-level covariates</i>										
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
<i>Village-level covariates</i>										
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.

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

Outcome	Intent-to-treat estimates									
	Scale (>) (1)	Control			All men and women (N=1,734)			Women only (N=1,488)		
		Mean (2)	SD (3)	$\beta$ (4)	SE (5)	95%CI (6)	$\beta$ (7)	SE (8)	95%CI (9)	
Employment/occupational index	z (+)	-0.51	0.98	1.04	0.05***	(0.94 to 1.14)	0.98	0.05***	(0.88 to 1.09)	
Started enterprise since baseline	0-1 (+)	0.50	0.50	0.49	0.02***	(0.44 to 0.53)	0.47	0.03***	(0.42 to 0.52)	
Currently doing business	0-1 (+)	0.39	0.49	0.40	0.03***	(0.35 to 0.46)	0.39	0.03***	(0.34 to 0.45)	
Average work hours per week: Non-agricultural	hours (+)	5.34	9.76	5.88	0.67***	(4.55 to 7.21)	4.92	0.72***	(3.49 to 6.35)	
Index of income measures	z (+)	-0.26	0.87	0.60	0.06***	(0.48 to 0.71)	0.55	0.06***	(0.43 to 0.66)	
Monthly cash earnings	000s UGX (+)	15.53	36.80	16.92	3.12***	(10.74 to 23.1)	16.21	3.23***	(9.8 to 22.61)	
Durable assets	z (+)	0.07	0.87	0.41	0.05***	(0.3 to 0.51)	0.37	0.05***	(0.26 to 0.48)	
Non-durable consumption	z (+)	-0.22	0.88	0.46	0.06***	(0.35 to 0.58)	0.41	0.06***	(0.29 to 0.54)	
Perceptions of women's autonomy/rights	z (+)	-0.02	1.02	0.07	0.06	(-0.04 to 0.18)	0.05	0.06	(-0.07 to 0.17)	
Self-reported autonomy/influence in purchases	z (+)	-0.03	1.02	0.09	0.05*	(-0.01 to 0.18)	0.09	0.05*	(-0.02 to 0.19)	
Partner relationship index	z (+)	-0.04	1.00	0.19	0.06***	(0.07 to 0.32)	0.18	0.07***	(0.05 to 0.32)	
Physical/emotional abuse in past 8 months	z (-)						0.02	0.06	(-0.1 to 0.14)	
Marital control in past 8 months	z (-)						0.14	0.07**	(0.01 to 0.27)	

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;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.

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

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

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;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 (>) (1)	Control			Intent-to-treat estimates				
		Mean (2)	SD (3)	$\beta$ (4)	Women only (N=749)		Women w/partner only (N=462)		
					SE (5)	95%CI (6)	$\beta$ (7)	SE (8)	95%CI (9)
Employment/occupational index	z (+)	0.10	1.49	-0.12	0.13	(-0.38 to 0.14)	-0.14	0.20	(-0.53 to 0.25)
Started enterprise since baseline	0-1 (+)	0.96	0.21	0.02	0.02	(-0.01 to 0.06)	0.03	0.03	(-0.02 to 0.08)
Currently doing business	0-1 (+)	0.71	0.45	-0.09	0.05*	(-0.19 to 0)	-0.11	0.07*	(-0.25 to 0.02)
Average work hours per week: Non-agricultural	hours (+)	7.28	12.99	-1.01	0.93	(-2.87 to 0.84)	-1.23	1.36	(-3.95 to 1.48)
Index of income measures	z (+)	-0.02	1.03	-0.06	0.08	(-0.22 to 0.11)	-0.19	0.10*	(-0.4 to 0.02)
Monthly cash earnings	000s UGX (+)	16.89	31.94	-3.43	2.49	(-8.42 to 1.55)	-3.31	3.09	(-9.49 to 2.87)
Durable assets	z (+)	0.76	1.05	0.07	0.06	(-0.05 to 0.19)	0.00	0.09	(-0.17 to 0.18)
Non-durable consumption	z (+)	0.06	1.03	-0.06	0.10	(-0.26 to 0.13)	-0.28	0.10***	(-0.48 to -0.08)
Perceptions of women's autonomy/rights	z (+)	0.05	0.99	-0.08	0.09	(-0.25 to 0.09)	-0.01	0.11	(-0.22 to 0.2)
Self-reported autonomy/influence in purchases	z (+)	0.05	0.98	-0.11	0.06*	(-0.23 to 0.02)	-0.07	0.11	(-0.29 to 0.15)
Partner relationship index	z (+)	-0.23	1.09	0.23	0.08***	(0.07 to 0.39)	0.24	0.11**	(0.02 to 0.46)
Partner support index, overall†	z (+)	-0.17	0.97	0.21	0.08***	(0.06 to 0.36)	0.44	0.09***	(0.26 to 0.62)
Partner support index, family†	z (+)	-0.18	0.96	0.23	0.07***	(0.08 to 0.38)	0.45	0.11***	(0.23 to 0.66)
Partner support index, business†	z (+)	-0.10	1.02	0.13	0.09	(-0.06 to 0.31)	0.28	0.11***	(0.07 to 0.5)
Physical/emotional abuse in past 8 months	z (-)	0.03	1.17	0.01	0.08	(-0.14 to 0.16)	-0.08	0.06	(-0.2 to 0.04)
Marital control in past 8 months	z (-)	-0.01	1.06	-0.01	0.09	(-0.19 to 0.17)	-0.07	0.10	(-0.26 to 0.12)

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;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.

† Items refer to “partner who helps [client] make domestic and financial decisions” and may not refer specifically to intimate partner.

## **Appendix A. Training programs: Aims and curricula**

A copy of the training manual is available from AVSI USA on request (<http://www.avsi-usa.org/>).

### **Appendix A.1. Business skills training, standard WINGS program**

The stated objectives of the business skills training were to increase basic knowledge and skills of business management, develop confidence in enterprise initiation and management, and to help participants assess their own capabilities and motivation in entrepreneurial career and strengthen and develop business skills. The training was adapted from the CARE-Uganda Ecodev projects training manual which is based on CARE Bangladesh's Small Economic Activity Development Sector and Rural Maintenance Program.

Training and subsequent follow-up visits were led by AVSI resident field officers (RFOs), full time professional staff of the NGO. RFOs typically had tertiary education in social work, the slight majority were men, and most had at least a few years of experience on similar interventions. AVSI trained them in providing business support as well as psychological and social support. They were based in field offices at the sub-county level. Prior to administering the training, each RFO had participated in a two-week course led by an exter-

nal facilitator. RFOs were trained using the Participatory Rural Approach Manual and the Community Resilience and Dialogue (CRD) Manual, aimed for literate and non-literate persons, respectively. Training time was divided equally between each training manual.

During this business skills training, participants were asked to address five key questions: a) Can I operate this IGA? b) Will people buy my products? c) Is the IGA profitable? d) How much money do I need to start and operate the IGA? e) Will the income from the IGA when added to other family income, be enough to pay household incomes? These key questions were practically presented to participants through lectures, small group discussion, group games, storytelling, dramatizations and role-playing by participants, large group sharing of experiences, and drawings. participants were also constantly asked to recite the five key questions that they have to ask themselves as they think about starting their businesses. After the training, participants were given two weeks to develop a business plan, at which point AVSI staff would return to review plans individually.

The curriculum outline was as follows:

- Business identification strategy and start-up process
  - Business identification games
  - Characteristics of an entrepreneur or good business person
  - Steps to become a businessperson
  - Business experience sharing
- Business management

- Constraints on business growth and performance
- Advantages and disadvantages of being in business
- Importance of monitoring activities and progress, avoiding delays and taking timely corrective actions
- Sales and sales promotion
- Choosing location and prices
- Whether to sell on cash or credit
  - What are credit sales?
  - Advantages and disadvantages of credit
- Financial management
  - Separation of home and business finances
  - Simple record keeping
  - Simple income and expenditure tracking
  - Costing of products and services
  - Simple budgeting
- Developing a business plan
  - Definition and purpose of a business plan
  - How to prepare a simple business plan
- Basic management of a group savings and credit fund
  - Reasons for saving
  - Structure of a group savings system
  - Reasons for a credit system
  - Structure of a group credit system

## **Appendix A.2. Business skills training, Women Plus (W+)**

In this version of the program, facilitators taught the same business content in addition to and introducing three new topics:

- Culture, gender, and finances (societal barriers to female entrepreneurship)
  - Discuss typical gender roles
  - Consider how men and women can work together to achieve common goals
- Communication
  - Identify good and bad communication patterns
  - Learn and practice active listening skills
- Joint-problem solving
  - Understand the importance of active problem solving with partners
  - Learn and practice problem solving methods

Three core strategies ran throughout the training: (a) In-session modeling/practice (social cognitive theory); (b) Open discussion of barriers and cultural issues (motivational interviewing); and (c) Encouragement of reflection on personal experience and verification of concepts/lessons.



## Appendix B. Measurement of Primary Outcomes

Our primary endpoints included IPV, attitudes toward gender norms, quality of relationship with partner, support from partner, and autonomy and influence in household purchases. Items 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.

**Intimate partner violence** We asked female clients a subset of questions about intimate partner violence from the 2006 Uganda DHS (Uganda Bureau of Statistics (UBOS) & Macro International Inc, 2007). Our subset about abuse included two questions about emotional abuse (partner threatened harm; partner humiliated her in front of others), two questions about physical abuse (partner recently beat or kicked/hit client), and one question about sexual abuse (not able to refuse sex). See Table 1 in the main text for specific details. Due to space limitations in the survey, it was not possible to administer the entire domestic violence module. We analyzed 2006 Uganda DHS and found that our subset of 2 emotional abuse items and 2 physical abuse items correlated 0.87 with the full set of 12 emotional and physical violence items in the DHS (0.86 when restricted to only cases from the north).

Clients indicated whether they experienced these behaviors “often” (3), “sometimes”, “rarely”, or “never” (0) since a common reference point of the Easter holiday (i.e., in the past 8 months). We standardized then summed responses on these four variables to create a composite abuse score. Addition-

ally, we created dichotomous indicators of experiencing any physical abuse, any emotional abuse, or any physical and/or emotional abuse. Responses were coded 1 (any) if “often”, “sometimes”, or “rarely”.

Our selection of this reference point—since Easter—was a conscious decision, since our priority was to maximize accuracy of our measures in the local context and the internal validity of the experimental estimates, over comparability to standard prevalence measures. In a prevalence study this would be deeply problematic. In a program evaluation, which focuses on within-sample comparisons, we felt it was the right choice.

For instance, as a result of pretesting, we did not believe that the 12 months approach minimized recall bias. Women in our sample have almost zero education, and are more attuned to seasons and holidays than the Western calendar. “In the last 12 months” is not a typical way of thinking about activity in this context. Therefore, we opted to use a common reference point of “since last Easter” to promote recall. In practice, this meant that we asked about the past 8 months rather than the past 12 months. Since we are primarily interested in the difference in IPV experiences between the treatment and control groups at endline, the choice of 8 vs 12 month recall is arbitrary. It would be problematic if we were more interested in studying the epidemiology of IPV to compare the prevalence of IPV to other studies.

Clients used the same 4-point response scale to indicate how frequently they experienced four marital control behaviors (partner accused client of being unfaithful, tried to limit her contact, taken money against her will, refused

money for household needs) and reported whether or not they must get permission from their partner to transact in the market. We standardized all five marital control items and summed responses to create a composite marital control score.

**Attitudes toward gender norms** We modified several “yes/no” questions from the 2006 Uganda DHS (Uganda Bureau of Statistics (UBOS) & Macro International Inc, 2007, p.420) regarding beliefs about whether a husband is justified in beating his wife in certain scenarios and asked clients to rate their agreement with several statements on a 4-point scale from “Strongly Disagree” to “Strongly Agree”. We also asked clients to rate their agreement with five statements about a wife’s autonomy to disagree with her husband, to purchase goods without permission, to refuse sex, and to insist on condom use.

**Partner relationship** We created a composite partner relationship score by standardizing clients’ responses to seven questions. Three items asked clients to imagine a 10-step ladder and indicate on which step (1-10) they or their partner stood in terms of relationship quality, communication patterns, and listening skills. Clients also responded to four questions about relationship quality, communication, and dispute frequency on a 4-point scale from “often” (0), “sometimes”, “rarely”, or “never” (3).

**Partner support** We constructed two composite scores for partner support of household and business activities, and we combined these scores into an

overall partner support composite. Household support was measured by asking clients to indicate “yes/no” whether their partner helped with 7 traditionally female chores (e.g., washing clothes, cooking) and 2 traditionally male chores (keeping the animals, hunting), in addition to providing an overall rating of the partner’s helpfulness with chores since the program. Business support was measured by asking clients to rate their partner’s support for the business—“often” (3), “sometimes”, “rarely”, or “never” (0)—and involvement in the business (1-10 ladder).

**Autonomy/Influences in purchases** We constructed a composite 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). Clients responded on a 4-point scale: “often” (3), “sometimes”, “rarely”, or “never” (0).

## **Appendix C. Supplemental Figures and Tables**

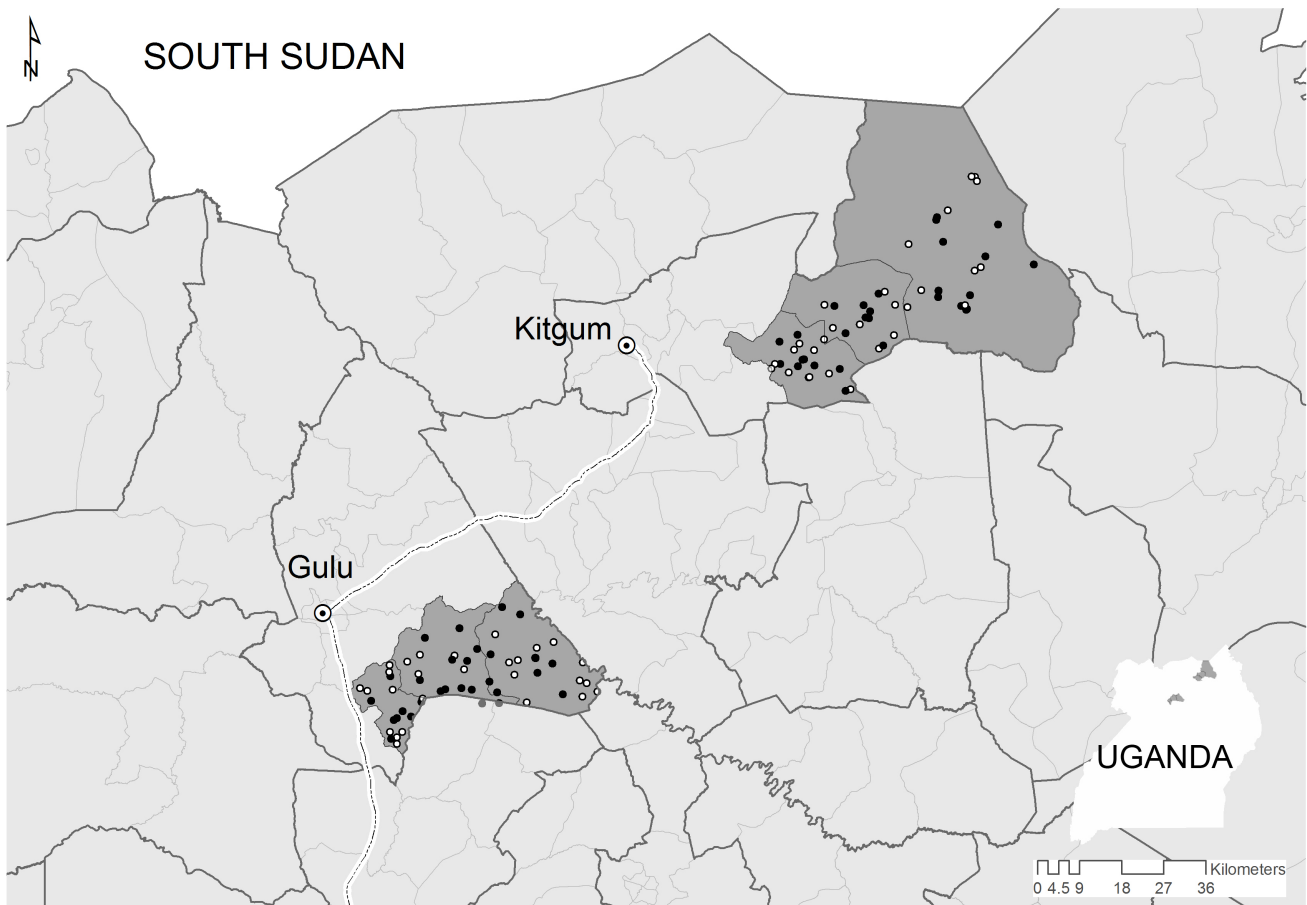


Figure C.1: Map of study villages. Thick and thin lines indicate district and sub-county boundaries. Villages assigned to Phase 1 are represented by black circles. Villages assigned to Phase 2 are hollow circles.

Table C.1: Pre-treatment covariates

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Variable
<i>Baseline:</i>
Age
Female
Household size
Married or living with partner
Sole earner in HH
# of children
Non-Acholi
Currently in school
Highest grade reached at school
Literate
Speaks english
Month of training
Digit recall score
Reports positive hours in petty business
Hours worked:
Farming for self or caring for own animals (capped at p99)
Agricultural labor for others (capped at p99)
Casual labor (capped at p99)
Brewing (capped at p99)
Petty trading/business (capped at p99)
Other skilled and unskilled labor (capped at p99)
Average hours of chores per week (capped at p99)
No employment hours in past month
Durable assets (z-score)
Monthly cash earnings (000s UGX)
Montly gross cash earnings of other HH earner

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Table C.1 – continued from previous page

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Variable
Member of a savings group
Savings stock (000s UGX)
Total outstanding loans (000s UGX)
Can obtain 15,000 UGX loan
Can obtain 100,000 UGX (\$50) loan
Family support index, z-score
Community participation, z-score
Friends/neighbors support index (z-score)
Number of groups in
Community maltreatment in past year
Domestic violence, z-score
Decision-making index, z-score
Attitudes towards women's independence, z-score
Related to a traditional chief or LC1
Additive index of health (higher: better)
Reports having HIV or AIDS
Depression Index
Total traumatic war events (z-score)
Forcibly recruited into rebel group
Carried gun within rebel group
Forcibly married within rebel group
Bore a child in a forced marriage
Index of risk aversion (z-score)
Patience index (z-score)
Village Characteristics:
Village population
Mean Education
Experimental respondents per village
Remoteness: Index

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Table C.1 – continued from previous page

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Variable
Price level: Index
Cost of renting land (sq root)
Village was a camp
Total NGOs in village
Number of vendors
Number of kiosks
Number of shops in village
Number of tailors
Number of hotels/restaurants
Commodity market visits
Distance to capital (km)
Gulu dummy
Average inverse distance to simulated treatment villages
Inverse distance measure to treated villages within district and within radius of 4 km
<i>Phase 1 endline:</i>
Married or living with a partner
Reports positive hours in petty trading
Currently doing business
Started enterprise since baseline
Average employment hours per week: Agricultural
Average employment hours per week: Non-agricultural
Average hours of chores per week
No employment hours in past month
Main occupation is agricultural
Durable assets (z-score)
Monthly gross cash earnings
Non-durable consumption (z-score)
Member of a savings group
Savings (000s UGX)

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**Table C.1 – continued from previous page**

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Variable
Debts (000s UGX)
Perceived access to credit (z-score)
Community participation (z-score)
Friends/neighbors support index (z-score)
Decision-making index, z-score
Autonomy/influence in purchases (z-score)
Social support received (z-score)
Attitudes towards women's independence, z-score
Number of groups in
Additive index of health (z-score)
Depression Index
Patience index (z-score)

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Table C.2: Comparison of clients to non-clients within the village  
(Control villages only, at Phase 1 endline)

Covariate	Clients (N=917)	Non-clients 17- 40 (N=1,116)
	Mean (1)	Mean (3)
Female	85%	56%
Age	28	30
Years of education	2.8	4.8
Average weekly work hours	15.0	24.7
Agricultural weekly hours	9.7	18.1
Working on your own farm	3.5	11.6
Agricultural labor for others	1.8	3.4
Taking care of own animals	4.3	3.1
Non-agricultural weekly hours	5.5	6.5
Brewing alcohol/beer	0.9	0.7
Petty trading	1.4	0.9
Casual non-agricultural labor	1.9	1.3
Skilled non-agricultural labor	0.5	2.5
Other	0.8	1.2
No employment in past month	8%	5%
Reports any hours in petty business	16%	17%
Monthly cash earnings, 000s UGX	15.8	13.8
Monthly household consumption, 000s UGX	108.4	141.1
Durable assets (z-score)	-0.18	0.02
Thatch roof	0.00	0.01
Number of goats	0.97	1.29
Number of bicycles	0.39	0.63
Number of mobile phones	0.14	0.39

*Notes:* Individual-level covariates come from a self-reported survey of all respondents. All Ugandan shilling (UGX)-denominated variables and all hours worked variables were top-censored at the 99th percentile to contain outliers. Column 1 reports the mean of all 917 phase 1 endline respondents who were not treated in phase 1. Column 2 reports the mean for 1787 non-client respondents ages 17 to 40, and Column 3 reports the means for all 2420 adult non-client respondents.

Table C.3: Survey response rates

Survey round	Median survey date (MM/YY) (1)	Observations			Response rates			
		Total sought (2)	Final # of Obs. (3)	All (4)	Control (5)	Treatment (6)	Difference (7)	p-value (8)
Phase 1								
Baseline	5/09	1,800	1,800	100.0%	100.0%	100.0%	0.0%	
Endline	12/10	1,800	1,734	96.3%	96.6%	96.1%	-0.5%	0.62
Phase 2								
Baseline	12/10	904	882	97.6%	97.8%	97.4%	-0.4%	0.72
Endline (1 mo.)	9/11	904	858	94.9%	93.1%	95.9%	2.8%	0.13
Endline (1 yr.)	7/12	904	868	96.0%	95.0%	96.6%	1.6%	0.29

*Notes:* Column (1) reports the median survey date. Column (2) reports the full study sample sought in each phase. Column (3) reports the final number of observations by survey round. Columns (4)-(7) report the corresponding response rates overall, by treatment status, and the treatment-control difference (calculated via regression, controlling for baseline district). Column (8) reports p-value on the difference term, using robust standard errors clustered by village. There were 1800 study subjects in Phase 1. Baseline data in Phase 2 includes the 847 original sample members from 2009, plus 2011 data on the 57 new respondents who replaced those who died or left the village.

Table C.4: Correlates of attrition

	Dependent variable: Unfound	
	Coeff.	Std. Err.
Assigned to treatment at P1	0.0119	[.012]
Assigned to group dynamics	-0.0170	[.013]
Assigned to 2 follow-ups	-0.0220	[.015]
Assigned to 5 follow-ups	0.0107	[.015]
Phase 2 dummy	0.0179	[.013]
Gulu district	-0.0264	[.008]***
Age	-0.0028	[.001]***
Female	-0.0187	[.014]
Married or living with partner	-0.0132	[.008]
Highest grade reached at school	-0.0032	[.001]***
Currently in school	0.0532	[.021]***
Average farm work hours per week	-0.0001	[0000]
Average nonfarm work hours per week	-0.0003	[0000]
Durable assets, z-score	0.0069	[.009]
Monthly cash earnings, 000s UGX	-0.0002	[0000]
Activities of daily life, z-score	-0.0062	[.005]
Symptoms of distress, z-score	0.0004	[.004]
Village population	0.0000	[0000]
Village remoteness, z-score	-0.0025	[.004]
Observations	2704	
R2	0.0283	
P(baseline covariates are jointly insignificant)	0.0000	
P(treatment assignments are jointly insignificant)	0.4457	

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

Table C.5: Impacts of “W+” partner inclusion (Phase 2): Economic outcomes

Outcome	Scale (>) (1)	Control		Intent-to-treat estimates					
		Mean		Women only (N=749)		Women w/partner only (N=462)			
		(2)	(3)	$\beta$ (4)	SE (5)	$\beta$ (7)	SE (8)	95%CI (9)	
<i>Occupational choice &amp; employment</i>									
Employment/occupational index	z (+)	0.10	1.49	-0.12	0.13	-0.14	0.20	-0.38 to 0.14	(-0.53 to 0.25)
Started enterprise since baseline	0-1 (+)	0.96	0.21	0.02	0.02	0.03	0.03	(-0.01 to 0.06)	(-0.02 to 0.08)
Currently doing business	0-1 (+)	0.71	0.45	-0.09	0.05*	-0.11	0.07*	(-0.19 to 0)	(-0.25 to 0.02)
Average work hours per week	hours (+)	32.95	26.66	1.54	2.41	2.65	3.41	(-3.27 to 6.36)	(-4.18 to 9.48)
Average work hours per week: Agricultural	hours (0)	25.67	23.60	2.56	2.34	3.88	3.35	(-2.13 to 7.24)	(-2.82 to 10.58)
Average work hours per week: Non-agricultural	hours (+)	7.28	12.99	-1.01	0.93	-1.23	1.36	(-2.87 to 0.84)	(-3.95 to 1.48)
<i>Income</i>									
Index of income measures	z (+)	-0.02	1.03	-0.06	0.08	-0.19	0.10*	(-0.22 to 0.11)	(-0.4 to 0.02)
Monthly cash earnings	000s UGX (+)	16.89	31.94	-3.43	2.49	-3.31	3.09	(-8.42 to 1.55)	(-9.49 to 2.87)
Durable assets	z (+)	0.76	1.05	0.07	0.06	0.00	0.09	(-0.05 to 0.19)	(-0.17 to 0.18)
Non-durable consumption	z (+)	0.06	1.03	-0.06	0.10	-0.28	0.10***	(-0.26 to 0.13)	(-0.48 to -0.08)
Average hours of chores per week	hours (-)	36.51	18.44	1.31	1.66	1.33	2.19	(-2.02 to 4.63)	(-3.05 to 5.72)
No employment hours in past month	0-1 (-)	0.05	0.22	-0.02	0.02	-0.03	0.02	(-0.05 to 0.02)	(-0.07 to 0.02)
Member of a savings group	0-1 (+)	0.69	0.46	0.06	0.04	0.08	0.05	(-0.02 to 0.15)	(-0.03 to 0.19)
<i>Financial access</i>									
Perceived access to credit	z (+)	-0.08	0.97	0.08	0.10	0.03	0.11	(-0.11 to 0.28)	(-0.19 to 0.25)
Could get a loan of 10000 UGX in next month	0-1 (+)	0.41	0.49	-0.00	0.05	-0.01	0.05	(-0.1 to 0.09)	(-0.12 to 0.1)
Could get a loan of 15000 UGX in next month	0-1 (+)	0.81	0.39	0.04	0.04	0.06	0.04	(-0.03 to 0.11)	(-0.02 to 0.15)
Access to business advice	z (+)	-0.07	0.93	0.15	0.09	0.01	0.12	(-0.03 to 0.32)	(-0.22 to 0.25)
People in village you can go to for business advice	count (+)	2.44	1.48	0.19	0.15	-0.01	0.20	(-0.12 to 0.5)	(-0.42 to 0.4)
People outside village you can go to for business advice	count (+)	1.56	1.80	0.37	0.17**	0.13	0.26	(0.02 to 0.71)	(-0.39 to 0.65)
People in village you can go to for price/market information	count (+)	2.12	1.72	-0.04	0.18	-0.08	0.16	(-0.4 to 0.32)	(-0.39 to 0.24)
People outside village you can go to for price/market information	count (+)	1.33	1.62	0.25	0.13*	0.04	0.18	(0 to 0.51)	(-0.32 to 0.4)

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;0.01

Note. This table presents intention-to-treat (ITT) results from Phase 2 among women and women with intimate male partners before Phase 2 began. 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 standard program variant (control). Columns 4 and 5 report the coefficients and standard errors from an ordinary least squares (OLS) regression of each outcome on an indicator of assignment to treatment (W+) among women, a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. Column 6 reports 95 percent confidence intervals around the estimates in Column 4. Columns 7 and 8 report the coefficients and standard errors from an OLS regression of each outcome on an indicator of assignment to treatment (W+) among women with intimate male partners before Phase 2 began, a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. Column 9 reports 95 percent confidence intervals around the estimates in Column 7. All standard errors are robust and clustered at the village level.

Table C.6: Impacts of “W+” partner inclusion (Phase 2): Grant use and expenditures

Outcome	Scale (>) (1)	Intent-to-treat estimates									
		Control		Women only (N=749)			Women w/partner only (N=462)				
		Mean (2)	SD (3)	$\beta$ (4)	SE (5)	95%CI (6)	$\beta$ (7)	SE (8)	95%CI (9)		
<i>Self-reported grant control</i>											
Felt very/somewhat free to spend the grant as wanted	0-1 (+)	0.93	0.25	0.01	0.02	(-0.03 to 0.04)	0.02	0.03	(-0.04 to 0.08)		
Degree of control over how grant was spent	0-2 (+)	1.86	0.39	-0.05	0.05	(-0.14 to 0.05)	-0.01	0.07	(-0.14 to 0.13)		
Did not agree with some expenses paid for with grant	0-1 (-)	0.03	0.16	-0.00	0.02	(-0.03 to 0.03)	0.01	0.02	(-0.03 to 0.05)		
Grant money given to household members	000s UGX (-)	0.50	6.08	2.13	1.68	(-1.23 to 5.48)	2.27	1.77	(-1.27 to 5.82)		
Grant money given to community members	000s UGX (-)	0.16	1.51	-0.07	0.09	(-0.25 to 0.11)	0.09	0.12	(-0.15 to 0.34)		
<i>Self-reported allocation of grant spending</i>											
Business investments and expenditures	0-1 ( )	0.31	0.27	0.02	0.04	(-0.05 to 0.09)	0.04	0.05	(-0.05 to 0.13)		
Large household assets or home improvements	0-1 ( )	0.09	0.18	0.02	0.02	(-0.03 to 0.07)	0.01	0.03	(-0.05 to 0.07)		
Food clothing personal items small household items	0-1 ( )	0.02	0.04	-0.01	0.00	(-0.01 to 0)	-0.00	0.01	(-0.01 to 0.01)		
Gifts contributions or celebrations	0-1 ( )	0.00	0.01	0.00	0.00**	(0 to 0)	0.00	0.00	(0 to 0)		
Health or education	0-1 ( )	0.03	0.08	-0.00	0.01	(-0.01 to 0.01)	-0.01	0.01	(-0.03 to 0.01)		
Saved or unspent	0-1 ( )	0.53	0.30	-0.02	0.04	(-0.09 to 0.05)	-0.01	0.05	(-0.11 to 0.1)		
<i>Self-reported allocation of all spending</i>											
Total weekly spending	000s UGX ( )	29.52	16.03	-1.54	1.41	(-4.36 to 1.28)	-4.01	1.69**	(-7.39 to -0.63)		
Food	0-1 ( )	0.94	0.08	-0.00	0.01	(-0.01 to 0.01)	-0.00	0.01	(-0.02 to 0.01)		
Small household goods	0-1 ( )	0.01	0.02	-0.00	0.00	(0 to 0)	-0.00	0.00	(0 to 0)		
Health and education	0-1 ( )	0.05	0.07	0.01	0.01	(0 to 0.02)	0.00	0.01	(-0.01 to 0.02)		
Gifts	0-1 ( )	0.00	0.00	0.00	0.00	(0 to 0)	0.00	0.00*	(0 to 0)		
Home improvements	0-1 ( )	0.00	0.02	0.00	0.00	(0 to 0)	0.00	0.00	(0 to 0)		
<i>Stocks of assets by category</i>											
Livestock and crops	0-1 ( )	-0.06	0.89	-0.08	0.07	(-0.22 to 0.06)	-0.00	0.08	(-0.17 to 0.16)		
Agricultural equipment	0-1 ( )	-0.10	0.95	0.07	0.05	(-0.03 to 0.18)	0.13	0.10	(-0.07 to 0.32)		
Women's assets	0-1 ( )	-0.13	0.92	0.09	0.07	(-0.04 to 0.22)	-0.06	0.09	(-0.24 to 0.12)		
Small household durables	0-1 ( )	-0.05	0.97	0.02	0.07	(-0.13 to 0.17)	-0.07	0.10	(-0.27 to 0.12)		
Large household durables	0-1 ( )	0.05	1.25	-0.18	0.07***	(-0.31 to -0.05)	-0.09	0.07	(-0.23 to 0.06)		

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;0.01

Note. This table presents intention-to-treat (ITT) results from Phase 2 among women and women with intimate male partners before Phase 2 began. 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 standard program variant (control). Columns 4 and 5 report the coefficients and standard errors from an ordinary least squares (OLS) regression of each outcome on an indicator of assignment to treatment (W+) among women, a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. Column 6 reports 95 percent confidence intervals around the estimates in Column 4. Columns 7 and 8 report the coefficients and standard errors from an OLS regression of each outcome on an indicator of assignment to treatment (W+) among women with intimate male partners before Phase 2 began, a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. Column 9 reports 95 percent confidence intervals around the estimates in Column 7. All standard errors are robust and clustered at the village level.

Table C.7: Impacts of “W+” partner inclusion (Phase 2): Relations with partner

Outcome	Scale (>) (1)	Intent-to-treat estimates								
		Control			Women only (N=749)			Women w/partner only (N=462)		
		Mean (2)	SD (3)	$\beta$ (4)	SE (5)	95%CI (6)	$\beta$ (7)	SE (8)	95%CI (9)	
Hours awake spent with partner in a typical day†	hours (+)	2.51	2.06	0.00	0.18	(-0.36 to 0.37)	0.68	0.22***	(0.23 to 1.12)	
Partner relationship index	z (+)	-0.23	1.09	0.23	0.08***	(0.07 to 0.39)	0.24	0.11**	(0.02 to 0.46)	
Relationship with partner	1-10 (+)	6.42	2.86	0.44	0.26*	(-0.09 to 0.97)	0.50	0.26*	(-0.03 to 1.03)	
Freq of communication with partner about family†	0-3 (+)	1.86	0.78	-0.04	0.05	(-0.15 to 0.07)	0.04	0.09	(-0.14 to 0.23)	
Degree of communication with partner	1-10 (+)	6.66	2.34	0.43	0.17**	(0.09 to 0.77)	0.60	0.22***	(0.16 to 1.04)	
Partner’s listening skills	1-10 (+)	6.91	2.31	0.52	0.21**	(0.11 to 0.93)	0.49	0.25*	(-0.01 to 1)	
Frequency of major disputes with partner	0-3 (+)	2.71	0.72	0.03	0.06	(-0.09 to 0.15)	0.00	0.08	(-0.15 to 0.15)	
Partner treats well	0-3 (+)	2.23	0.92	0.26	0.07***	(0.11 to 0.4)	0.20	0.07***	(0.06 to 0.34)	
Can express opinion when disagrees with partner	0-3 (+)	2.22	0.90	0.00	0.08	(-0.17 to 0.17)	-0.04	0.10	(-0.24 to 0.16)	
Partner support index, overall†	z (+)	-0.17	0.97	0.21	0.08***	(0.06 to 0.36)	0.44	0.09***	(0.26 to 0.62)	
Partner support index, family†	z (+)	-0.18	0.96	0.23	0.07***	(0.08 to 0.38)	0.45	0.11***	(0.23 to 0.66)	
Partner’s contribution to traditionally-female chores†	0-7 (+)	3.00	2.36	0.32	0.18*	(-0.03 to 0.68)	0.86	0.23***	(0.41 to 1.32)	
Partner support index, business†	z (+)	-0.10	1.02	0.13	0.09	(-0.06 to 0.31)	0.28	0.11***	(0.07 to 0.5)	

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;0.01

Note. This table presents intention-to-treat (ITT) results from Phase 2 among women and women with intimate male partners before Phase 2 began. 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 standard program variant (control). Columns 4 and 5 report the coefficients and standard errors from an ordinary least squares (OLS) regression of each outcome on an indicator of assignment to treatment (W+) among women, a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. Column 6 reports 95 percent confidence intervals around the estimates in Column 4. Columns 7 and 8 report the coefficients and standard errors from an OLS regression of each outcome on an indicator of assignment to treatment (W+) among women with intimate male partners before Phase 2 began, a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. Column 9 reports 95 percent confidence intervals around the estimates in Column 7. All standard errors are robust and 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.



Table C.8: Impacts of “W+” partner inclusion (Phase 2): IPV and attitudes about gender norms

Outcome	Scale (>) (1)	Control			Women only (N=749)			Intent-to-treat estimates			Women w/partner only (N=462)		
		Mean	SD		$\beta$	SE	95%CI	$\beta$	SE	95%CI	$\beta$	SE	95%CI
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)				
Perceptions of women's autonomy/rights	z (+)	0.05	0.99	-0.08	0.09	(-0.25 to 0.09)	-0.01	0.11	(-0.22 to 0.2)				
A wife can express opinions when disagrees with partner	0-3 (+)	2.12	0.75	-0.17	0.07**	(-0.32 to -0.02)	-0.16	0.13	(-0.41 to 0.1)				
A wife can transact in market without permission	0-3 (+)	0.98	0.76	-0.02	0.05	(-0.11 to 0.08)	-0.01	0.07	(-0.15 to 0.13)				
A wife may buy clothing with own money without permission	0-3 (+)	1.17	0.77	-0.10	0.07	(-0.23 to 0.04)	-0.11	0.10	(-0.31 to 0.09)				
A wife may insist on condom use if partner has disease	0-3 (+)	2.17	0.69	0.01	0.06	(-0.11 to 0.13)	0.03	0.08	(-0.13 to 0.2)				
A wife may refuse sex partner has sex with other women	0-3 (+)	1.86	0.84	0.07	0.07	(-0.06 to 0.21)	0.05	0.10	(-0.15 to 0.25)				
A husband may not beat wife for refusing him sex	0-3 (+)	1.64	0.78	0.06	0.08	(-0.1 to 0.21)	0.10	0.10	(-0.09 to 0.29)				
A husband may not beat wife for burning meal	0-3 (+)	1.83	0.77	-0.02	0.09	(-0.2 to 0.16)	0.08	0.10	(-0.13 to 0.29)				
A husband may not beat wife for leaving without permission	0-3 (+)	1.53	0.79	-0.07	0.06	(-0.2 to 0.06)	-0.00	0.07	(-0.14 to 0.13)				
Self-reported autonomy/influence in purchases	z (+)	0.05	0.98	-0.11	0.06*	(-0.23 to 0.02)	-0.07	0.11	(-0.29 to 0.15)				
Can decide how to spend small amounts of money	0-3 (+)	2.45	0.99	-0.06	0.07	(-0.21 to 0.09)	0.00	0.12	(-0.24 to 0.24)				
Can spend earned money without permission	0-3 (+)	1.69	1.33	-0.23	0.09**	(-0.41 to -0.06)	-0.12	0.14	(-0.39 to 0.15)				
Can have input on spending decisions on expensive goods	0-3 (+)	2.46	0.86	-0.01	0.07	(-0.15 to 0.13)	-0.06	0.12	(-0.31 to 0.18)				
Physical/emotional abuse in past 8 months	z (-)	0.03	1.17	0.01	0.08	(-0.14 to 0.16)	-0.08	0.06	(-0.2 to 0.04)				
Partner has recently threatened harm	0-3 (-)	0.13	0.47	-0.01	0.04	(-0.08 to 0.07)	-0.05	0.03	(-0.11 to 0.02)				
Partner has recently humiliated in front of others	0-3 (-)	0.05	0.33	-0.01	0.02	(-0.06 to 0.03)	-0.01	0.04	(-0.08 to 0.06)				
Partner has recently beaten	0-3 (-)	0.05	0.27	0.01	0.02	(-0.03 to 0.05)	-0.01	0.02	(-0.05 to 0.02)				
Partner has recently kicked or hit	0-3 (-)	0.06	0.30	0.01	0.02	(-0.04 to 0.06)	-0.02	0.02	(-0.06 to 0.03)				
Does not refuse if partner wants to have sex	0-3 (-)	1.56	1.04	0.04	0.10	(-0.17 to 0.24)	-0.02	0.11	(-0.23 to 0.2)				
Marital control in past 8 months	z (-)	-0.01	1.06	-0.01	0.09	(-0.19 to 0.17)	-0.07	0.10	(-0.26 to 0.12)				
Partner has recently accused of being unfaithful	0-3 (-)	0.03	0.25	-0.02	0.02	(-0.06 to 0.01)	-0.02	0.01	(-0.05 to 0.01)				
Partner has recently tried to limit contact	0-3 (-)	0.15	0.57	-0.02	0.03	(-0.09 to 0.05)	-0.09	0.04**	(-0.18 to -0.01)				
Partner has recently taken money against will	0-3 (-)	0.10	0.39	-0.00	0.03	(-0.06 to 0.06)	0.01	0.05	(-0.08 to 0.11)				
Cannot transact in market without partner's permission	0-1 (-)	2.25	1.08	0.09	0.09	(-0.09 to 0.26)	0.05	0.10	(-0.15 to 0.25)				
Partner has recently refused money for household needs	0-3 (-)	0.43	0.90	-0.05	0.08	(-0.21 to 0.11)	-0.03	0.08	(-0.19 to 0.13)				
Has recently had to give money to partner	0-3 (-)	0.46	0.84	0.11	0.08	(-0.05 to 0.26)	0.10	0.10	(-0.1 to 0.3)				
Physical abuse in past 8 months	0-1 (-)	0.05	0.22	0.01	0.02	(-0.03 to 0.05)	-0.00	0.02	(-0.04 to 0.04)				
Emotional abuse in past 8 months	0-1 (-)	0.08	0.28	0.01	0.02	(-0.04 to 0.06)	-0.01	0.03	(-0.06 to 0.04)				
Physical or emotional abuse in past 8 months	0-1 (-)	0.10	0.30	0.01	0.03	(-0.05 to 0.06)	-0.01	0.03	(-0.07 to 0.05)				

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;0.01

Note. This table presents intention-to-treat (ITT) results from Phase 2 among women and women with intimate male partners before Phase 2 began. 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 standard program variant (control). Columns 4 and 5 report the coefficients and standard errors from an ordinary least squares (OLS) regression of each outcome on an indicator of assignment to treatment (W+) among women, a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. Column 6 reports 95 percent confidence intervals around the estimates in Column 4. Columns 7 and 8 report the coefficients and standard errors from an OLS regression of each outcome on an indicator of assignment to treatment (W+) among women with intimate male partners before Phase 2 began, a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. Column 9 reports 95 percent confidence intervals around the estimates in Column 7. All standard errors are robust and clustered at the village level.

Table C.9: Sensitivity

Dependent variable	Phase 1			Phase 2			
	Program impact under alternative models			W+ impact under alternative models (all women)			
	ITT estimate		Attrition bounds	ITT estimate		Attrition bounds	
	Main Specification (1)	Without baseline covariates (2)	Replace missing with 90/10 percentiles (3)	Main specification from Table 4 (4)	Without baseline covariates (5)	Difference-in- differences estimate (6)	Replace missing with 90/10 percentiles (7)
Started Enterprise Since Baseline	0.486 [.023]***	0.476 [.026]***	0.467 [.023]***	0.023 [.017]	0.005 [.014]	0.135 [.049]***	0.031 [.016]*
Currently doing business	0.405 [.026]***	0.405 [.028]***	0.350 [.026]***	-0.094 [.048]*	-0.095 [.046]**	-0.039 [.055]	-0.089 [.052]*
Index of income measures (z-score)	0.596 [.06]***	0.507 [.073]***	0.508 [.059]***	-0.058 [.082]	-0.072 [.105]	-0.090 [.093]	-0.029 [.084]
Monthly cash earnings, 000s UGX	16.919 [3.121]***	15.709 [3.167]***	15.043 [2.949]***	-3.434 [2.493]	-4.962 [2.307]**	-2.936 [3.316]	-1.777 [2.289]
Durable assets, z-score	0.406 [.054]***	0.287 [.075]***	0.318 [.055]***	0.071 [.06]	0.206 [.129]	0.137 [.075]*	0.089 [.067]
Non-durable consumption, z-score	0.464 [.059]***	0.437 [.062]***	0.388 [.057]***	-0.063 [.097]	-0.158 [.1]	-0.157 [.107]	-0.060 [.097]
Perceptions of women's autonomy/rights	0.066 [.056]	0.044 [.063]	-0.025 [.056]	-0.078 [.086]	-0.143 [.108]	-0.232 [.093]**	-0.076 [.091]
Self-reported autonomy/influence in purchases	0.088 [.048]*	0.054 [.062]	-0.011 [.046]	-0.109 [.063]*	-0.171 [.085]**	-0.266 [.09]***	-0.118 [.069]*
Partner relationship index	0.195 [.063]***	0.073 [.07]	0.052 [.062]	0.228 [.08]***	0.269 [.083]***	0.246 [.102]**	0.239 [.092]**
Physical/emotional abuse in the past 8 months	0.025 [.062]	0.099 [.065]	-0.069 [.058]	0.006 [.075]	-0.024 [.077]	0.116 [.087]	-0.022 [.072]
Marital control in the past 8 month	0.141 [.065]**	0.207 [.069]***	0.036 [.063]	-0.012 [.091]	0.013 [.096]	-0.001 [.132]	-0.026 [.091]

Notes: Column 1 reports the coefficients and standard errors on an indicator for assignment to immediate treatment (Phase 1) from ordinary least squares regressions of each outcome on treatment, a Gulu district (strata) fixed effect, and the vector of baseline covariates reported in the online appendix. Column 2 replicates Column 1, removing the baseline covariates. Column 3 replicates Column 1, but imputes missing values at the 90th percentile in the distribution for control individuals and at the 10th percentile in the distribution of treatment individuals. Column 4 reports the coefficients and standard errors on an indicator for assignment to W+ (Phase 2) from ordinary least squares regressions of each outcome on treatment, a Gulu district (strata) fixed effect, and the vector of baseline covariates reported in the online appendix. Column 5 replicates Column 4, removing the baseline covariates. Column 6 reports the difference in differences estimate for outcomes that were collected at the baseline survey. Column 7 replicates Column 4, but imputes missing values at the 90th percentile in the distribution for control individuals and at the 10th percentile in the distribution of treatment individuals

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table C.10: Treatment-on-treated and per protocol impacts of “W+” partner inclusion (Phase 2): IPV and attitudes about gender norms

Outcome	Scale (>) (1)	Control			Treatment-on-treated (TOT) (N=462)			Per protocol (PP) (N=399)		
		Mean	SD	$\beta$	SE	95%CI	$\beta$	SE	95%CI	
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Employment/occupational index	z (+)	0.10	1.49	-0.15	0.19	(-0.53 to 0.22)	-0.31	0.29	(-0.9 to 0.27)	
Started enterprise since baseline	0-1 (+)	0.96	0.21	0.03	0.03	(-0.02 to 0.08)	0.02	0.03	(-0.05 to 0.08)	
Currently doing business	0-1 (+)	0.71	0.45	-0.12	0.06*	(-0.25 to 0)	-0.08	0.07	(-0.23 to 0.07)	
Average work hours per week: Non-agricultural	hours (+)	7.28	12.99	-1.36	1.33	(-3.97 to 1.25)	-2.62	1.50*	(-5.62 to 0.39)	
Index of income measures	z (+)	-0.02	1.03	-0.20	0.10**	(-0.41 to 0)	-0.13	0.13	(-0.38 to 0.13)	
Monthly cash earnings	000s UGX (+)	16.89	31.94	-3.64	3.00	(-9.53 to 2.25)	-2.11	3.60	(-9.31 to 5.1)	
Durable assets	z (+)	0.76	1.05	0.00	0.09	(-0.16 to 0.17)	0.07	0.10	(-0.14 to 0.28)	
Non-durable consumption	z (+)	0.06	1.03	-0.31	0.10***	(-0.5 to -0.11)	-0.25	0.12*	(-0.5 to 0)	
Perceptions of women's autonomy/rights	z (+)	0.05	0.99	-0.01	0.10	(-0.21 to 0.19)	0.15	0.12	(-0.09 to 0.38)	
Self-reported autonomy/influence in purchases	z (+)	0.05	0.98	-0.07	0.11	(-0.29 to 0.14)	0.03	0.12	(-0.22 to 0.28)	
Partner relationship index	z (+)	-0.23	1.09	0.26	0.11**	(0.05 to 0.47)	0.22	0.14	(-0.07 to 0.51)	
Partner support index, overall†	z (+)	-0.17	0.97	0.48	0.09***	(0.31 to 0.66)	0.54	0.12***	(0.3 to 0.78)	
Partner support index, family†	z (+)	-0.18	0.96	0.49	0.11***	(0.28 to 0.7)	0.58	0.13***	(0.31 to 0.84)	
Partner support index, business†	z (+)	-0.10	1.02	0.31	0.10***	(0.11 to 0.52)	0.33	0.12***	(0.09 to 0.56)	
Physical/emotional abuse in past 8 months	z (-)	0.03	1.17	-0.09	0.06	(-0.2 to 0.02)	-0.10	0.06*	(-0.22 to 0.02)	
Marital control in past 8 months	z (-)	-0.01	1.06	-0.08	0.09	(-0.26 to 0.1)	-0.17	0.10*	(-0.37 to 0.03)	

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;0.01

Note. This table presents results from Phase 2 among women with intimate male partners who participated in the program with someone else. 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 standard program variant (control). Columns 4-7 report the results of two-stage least squares regressions that estimate the average treatment effect on the treated (TOT). For these regressions, “treated” is defined as receiving the grant, attending the training sessions, and having a partner who attended at least 2 of the 3 days of the training session. The program had 100 percent attendance among the grant recipients, so noncompliance in W+ is related to partners' attendance. The results reported here are based on an analysis of the subset of female clients who reported having an intimate male partner in the survey that took place immediately before the program was implemented. Columns 4 and 5 report the coefficients and standard errors from two-stage least squares regressions of each outcome on an indicator of assignment to treatment (W+), a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. The effect of the “first stage” (i.e. the effect of assignment on bring a partner) yields a coefficient of 0.87 and a standard error of .02 on assigned to W+ in Phase 2. Column 6 reports 95 percent confidence intervals around the estimates in Column 4. Columns 7-9 report the results of a per protocol analysis among women with intimate male partners. Women were included in the treated dataset if they participated in the program with an intimate male partner. Columns 7 and 8 report the results of an ordinary least squares regression of each outcome on an indicator of assignment to treatment (W+), a stratum fixed effect, and baseline covariates measured immediately before Phases 1 and 2. Column 9 reports 95 percent confidence intervals around the estimates in Column 7. All standard errors are robust and clustered at the village level.