The effect of cash, vouchers and food transfers on intimate partner violence: Evidence from a randomized experiment in Northern Ecuador

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Abstract

Despite the pervasive and far reaching consequences of intimate partner violence (IPV), there is little conclusive evidence on policy instruments to reduce or prevent violence. Using a randomized experiment in Northern Ecuador, this study provides evidence on whether cash, vouchers and food transfers targeted to women in poor urban areas and intended to reduce poverty and food insecurity also affected IPV. Results indicate that overall transfers reduce controlling behaviors and multiple forms of IPV including moderate physical and any physical or sexual violence by 6-7 percentage points. Impacts do not vary by transfer modality, which combined with the overall negative impacts on IPV, suggests that violence is not being used to forcefully extract resources. Instead, initial conditions and power dynamics between partners is important in determining the magnitude and significance of reductions in IPV.

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1. Introduction and motivation

Recent multi-country studies show that intimate partner violence (IPV) is widespread and common. One in three women globally have experienced physical and/or sexual violence by a partner during their lifetime (Devries et al. 2013; WHO 2013). In Ecuador, the country examined in this analysis, the lifetime prevalence of IPV is estimated at 35% for physical violence, 14.5% for sexual violence, and 43.4% for psychological violence (INEC 2011). Although regional variation exists across provinces within Ecuador, as well as within and between countries globally, the prevalence of partner violence remains high in most parts of the world.

Violence against women hinders development, including progress towards the achievement of the Millennium Development Goals (García-Moreno et al. 2005). The consequences of IPV are extensive, ranging from the direct physical and mental harm of women and their children to economic losses at the community and national level. Women who are victims of IPV are more likely to have poor health, acquire HIV infections, and develop chronic disease, mental illness, and substance abuse problems (Ackerson and Subramanian 2008; Coker et al. 2002; Jewkes et al. 2010; Ellsberg et al. 2008). Consequently, they are less able to work and contribute productively to society (Sabia, Dills, and DeSimone 2013). The ultimate consequence of IPV is suicide (Devries et al. 2011) and homicide (Stöckl et al. 2013). IPV has also been linked to negative health outcomes among the children of abused women, including low birth weight (Aizer 2011), elevated rates of morbidity (Karamagi et al. 2007), increased risk of acute malnutrition (Hasselmann and Reichenheim 2006), and increased risk of infant and child mortality (Åsling-Monemi et al. 2003; Ahmed, Koenig, and Stephenson 2006). Children who are exposed to intimate partner violence are also more likely to have lower IQs and develop emotional and behavioral problems (Koenen et al. 2003; Sternberg et al. 1993; Wolfe et al. 2003). Although the detrimental effects are well documented, there is less evidence on public policies and programs that could help reduce the prevalence of IPV.

Many poverty alleviation and gender programs throughout the developing world aim at empowering women through economic means such as labor, assets, microfinance, or cash transfers. Yet, across and within disciplines as varied as sociology, psychology, and economics, there is no consensus on the theories and predicted association between female economic empowerment and IPV (Heise 2012). While long researched in the other fields, the contribution of economics on the relationship between a woman's income and IPV has been fairly recent and depends on how violence is modeled in household bargaining models. In classic household bargaining models, individual control of resources matters because bargaining outcomes depend on threat points such as divorce (Manser and Brown 1980; McElroy and Horney 1981) or non-cooperative equilibriums (Lundberg and Pollak 1993). The more promising an individual's opportunities are outside the household, the more credible the threat point, and therefore, the

more likely that the intra-household distribution of resources will align more closely with that individual's preferences. In these bargaining models, an increase in a woman's income decreases violence by improving her threat point and thus her bargaining power within the household (Farmer and Tiefenthaler 1997). However, when violence is either *instrumental* and used to control the victim's behavior or allocation of resources within the household (Eswaran and Malhotra 2011; Tauchen, Witte, and Long 1991), or *extractive* and used to extract monetary transfers from the victim or her family (Bloch and Rao 2002), an increase in her income may in fact increase violence.

Given the lack of consensus on theories related to a woman's income and IPV, it is no surprise that the empirical evidence is also mixed. To add to the ambiguity, few studies have accounted for the endogeneity of economic status or income, and thus most of the evidence consists of basic associations that tell us little about the casual mechanisms (Heise 2011). For example, a recent study by Bajracharya and Amin (2013) finds that previous analysis that suggested that IPV increased in Bangladesh as a result of micro-credit membership was likely a result of selection bias where micro-credit participants were systematically more disadvantaged with respect to poverty and socioeconomic status as compared to non-members, and thus had a higher level of IPV risk. Once properly accounted for, the authors find a negative relationship between micro-credit membership and IPV. Other studies that have attempted to account for the endogeniety of income or economic status have used exogenous variation in either demand or supply of labor (Aizer 2010; Chin 2011) or randomized allocation of either job offers or microfinance (Hjort and Villanger 2011; Pronyk et al. 2006). However, there is still no conclusive direction of the relationship between economic empowerment and IPV and this may be due to contextual factors.

Building off a robust literature on the social impacts of cash transfer (CT) programs, a number of papers have examined linkages between CTs and IPV (Bobonis and Castro 2010; Bobonis, Gonzalez-Brenes, and Castro 2013; Hidrobo and Fernald 2013; Perova 2010; Angelucci 2008; Haushofer and Shapiro 2013). Over the last two decades, CTs have become one of the most popular policy interventions to tackle poverty and increase human capital in developing countries. Although the details of program design vary, all such programs transfer monetary resources to poor households, often conditional on them taking active measures to improve the human capital of their children (such as enrolling their children in school or taking them for regular health care visits). In the vast majority of cases, transfers are made to women because they are more likely to re-invest resources into the family's wellbeing (Thomas 1997; Quisumbing and Maluccio 2000; Hoddinott and Haddad 1995). While the impact of CTs on poverty, education, and health have been well studied, there is growing interest in understanding how such transfers impact intrahousehold dynamics. Of special interest is whether transfers have any consequences with respect to IPV.

Evidence on the relationship between IPV and CT programs is concentrated in Latin America. In Peru, Perova (2010) uses difference-in-difference and matching techniques to isolate the effect of Peru's conditional cash transfer (CCT) program, *Juntos*, on IPV, and finds that *Juntos* decreases physical and emotional violence by 9 and 11 percentage points, respectively. These impacts are concentrated among women who have fewer children, cash paying jobs and report not having been exposed to violence between their parents in childhood. Hidrobo and Fernald (2013) take advantage of the randomized roll out of Ecuador's national unconditional cash transfer (UCT) program, the *Bono Desarollo Humano* (BDH), and find that for women with more than primary education, transfers decrease emotional violence by 8 percentage points and controlling behaviors by 14 percentage points, but have no effect on physical or sexual partner violence. For women with primary education or lower, the effect depends on her education relative to her partners. Specifically, for women that have at least as much education as their partners, transfers increase emotional violence by 9 percentage points. Using non-experimental estimators Bobonis and colleagues (2013), find that after two to five years in the program, women in Mexico's CCT, *Oportunidades*, are 5 to 7 percentage points less likely to experience physical abuse in the last year, but are more likely to receive violent threats with no associated physical abuse. They also explore variations by women's bargaining power and find that these impacts are concentrated among women with low expected gains to marriage, as proxied by the interaction of an indicator for female secondary education with the education level of her partner. When longer-term impacts (five to nine years) of *Oportunidades* are examined, the previously mentioned program impacts are found to have dissipated, which is attributed largely to marital selection – or the types of couples that remain in a relationship as a result of the program (Bobonis and Castro, 2010). Finally, in the only study we are aware of outside Latin America, Haushofer and Shapiro (2013) examine the *GiveDirectly* cash transfer programme in Western Kenya and find that transfers lead to a 7-11 percentage point reduction in physical violence and a 5 percentage point reduction in sexual violence, but no impact on emotional violence. Additionally, they find that these reductions occur both in treatment households regardless of the sex of the recipient and in "spillover" households in treatment communities.

Using a randomized experiment conducted in 2011 in Northern Ecuador, this study evaluates whether cash, vouchers and food transfers targeted to women and intended to reduce poverty and food insecurity among the urban poor, also impact IPV. The design of the study is novel and contributes to the existing knowledge surrounding transfers and IPV in a number of important ways. First, the randomized study design and panel data on women's experience with IPV provide the most robust evidence on how transfers impact IPV. The randomization avoids issues of bias due to the endogeneity of income or selection into the program, and the panel data allows us to control for baseline patterns of violence.

Second, comparison of the three transfer modalities—cash, vouchers or food—provide evidence on whether the mode of transfer matters to impact. Economic theory predicts that cash and in-kind transfers of equal size will have similar impacts on a household's utility and consumption if the value of the in-kind transfer is less than what a household would have spent on that particular good ("infra-marginal") and if there are no transaction costs. Indeed, Hidrobo et al. (2014) find that the transfers from this study were infra-marginal and thus had similar impacts on the value of food, non-food, and total consumption. However, differences across modalities could emerge in who controls the transfer or the likelihood of it being commandeered by one partner. Descriptive statistics from endline suggest that food is significantly more likely to be controlled by the female spouse than cash or vouchers (60% for food compared to 50% and 48% for cash and voucher respectively), while cash and vouchers are significantly more likely than food to be controlled by household head and spouse together. Moreover, restrictions on how transfers can be used vary by modality. The food transfer, which is composed mainly of staple goods, is expected to be consumed by the household and thus presents little opportunity for generating conflict within the household.[1] Similarly, the food voucher is redeemable for only a predetermined list of nutritious foods at a specified supermarket within each urban center. The voucher is nontransferable and thus cannot be extracted and used for anything other than the pre-approved list of food items. Cash on the other hand can be utilized by the household to spend without restrictions and thus has more opportunity to lead to conflict over its use. Consequently, if partners use IPV as a tool to extract resources, then we should observe a larger increase in IPV among the cash households in comparison to the food and voucher households. Thus, comparison of transfer modalities provides further insight into theories on IPV, especially with regards to extraction theories, and addresses policy makers' fear that cash is more likely to lead to conflict over spending decisions and potential confiscation by partners.

Finally, we collect direct measures of women's bargaining power in the household, which allows us to explore whether baseline bargaining power influences the direction or size of impact. Economic models that predict an ambiguous relationship between a woman's income and IPV assert that the relationship between income and IPV depends on a woman's baseline bargaining power or autonomy. In Tauchen and colleagues model (1991), the relationship between a woman's income and IPV depends on whether her utility from marriage equals her out-of-marriage utility. In Eswaran and Malhotra (2011), the equilibrium level of violence depends on a woman's exercise of autonomy and whether an increase in her income or reservation utility leads her to allocate resources more in line with her preferences—so much so that it increases violence. Empirically, studies on CTs and IPV have found that impacts vary by a woman's bargaining power. However, these studies typically utilize indirect measures of bargaining

[1] Although it is possible that food could be extracted and sold for cash, there is little evidence that this occurred in this study.

power, such as education or age, which may be correlated with other outside factors, including household poverty. In contrast, we collect questions on women's decisionmaking within the household, which we use to operationalize her relative bargaining power.

Consistent with evidence on IPV from other studies, we find that transfers decrease the probability that women experience controlling behaviors, moderate physical, and any physical/sexual violence by 6 to 7 percentage points (or approximately a 38-43 percent). This effect does not vary significantly by treatment modality, a fact that combined with the observed reductions in IPV, suggests that violence is not being used to forcefully extract resources. Instead, we find that initial conditions and particularly power dynamics between partners determine the magnitude and significance of impacts. In particular, we find that the decrease in IPV is concentrated among woman with low decisionmaking power at baseline. We attempt to uncover the mechanism through which transfers decrease violence and find suggestive evidence that overall reductions in IPV may be due to decreases in poverty related stress and conflict.

The rest of this paper is structured in the following way. Section 2 introduces the program and study area; Section 3 presents the study design and data; Section 4 discusses the empirical methods used to evaluate the impact of transfers on IPV; Section 5 presents the impact results; Section 6 discusses the possible pathways that could explain our results, and Section 7 concludes with discussion of limitations and research implications for expanding the body of evidence.

2. Study area and intervention

In the last three decades, Ecuador's economic and political transitions have improved women's opportunity and rights. The first legislation specifically criminalizing violence against women in Ecuador, the *Law Against Violence Towards Women and the Family* was drafted in 1995 and accompanied in subsequent years, by revisions to the Constitution to guarantee equal rights for men and women (IACHR 2011). In addition, to facilitate reporting by women, female operated police stations offering a host of women-centered services, "*Comisarías de la Mujer y la Familia,"* were established in major urban centers throughout the country. Currently, Ecuadorian law criminalizes rape, including marital rape, with penalties of up to 25 years in prison (USDS 2011).

Despite progressive legislation and institutional action to address gender inequities and violence, prosecutions are rare and violence and discrimination against women remains high across socioeconomic groups in Ecuador. Women in Ecuador receive lower pay, have less access to social services, have less decisionmaking power, and experience high rates of violence and harassment (Vega 2004). The most recent national survey estimates lifetime prevalence of IPV among women aged 15 and older at nearly

48.7%[2] (INEC 2011). The prevalence of IPV varies across provinces from 36.1% in Manabí to 63.7% in Morano Santiago. In the study provinces of Carchi and Sucumbíos, the prevalence of lifetime IPV is approximately 49% and 41% respectively. In addition, IPV is highest among indigenous women, women with no formal education, and women with children.

In April 2011, the World Food Programme (WFP) expanded its assistance to address the food security and nutrition needs of Colombian refugees and poor Ecuadorians, and to support the integration of refugees into Ecuadorian communities. The new program was designed as a prospective randomized control trial and consisted of six monthly transfers of cash, vouchers, or food transfers to Colombian refugees and poor Ecuadorian households. In addition to improving the food consumption of poor households, a goal of the program was to improve the role of women in household decisionmaking, particularly related to food and nutrition.[3] Consequently, the program specifically targeted women within households. Although the program was not intended to impact IPV, there were concerns that transfers, and specifically cash, intended to improve the food security of poor households, could unintentionally increase conflict within the household.

The experiment was conducted in seven urban centers with large Colombian refugee populations in the provinces of Carchi and Sucumbíos in Northern Ecuador (Figure A.1 in Appendix). Despite sharing administrative borders, Carchi and Sucumbíos have markedly different economic, geographic, and agro-ecological characteristics. Carchi is located in the high-altitude highlands characterized by an industrial and agricultural-based economy including production of tobacco, dairy, floriculture and staple crops such as potatoes and maize. Sucumbíos is located in the Amazonian lowlands and its economy is driven by natural resource extraction, primarily oil, making it one of the most important economic areas in Ecuador. The seven urban centers were selected by WFP based on the following criteria: 1) the percent of refugees in the population exceeded 10%; 2) the poverty index exceeded 50%; 3) the presence of implementing partners for food distribution; and 4) the presence of financial institutions to distribute cash disbursements via ATMs. Neighborhoods (or *barrios*) within these urban centers were then pre-selected for the intervention by the WFP in consultation with the United Nations High Commissioner for Refugees (UNHCR) as areas that had large numbers of Colombian refugees and relatively high levels of poverty. As part of the enrollment exercise to determine program qualification status, all households within the pre-chosen *barrios* were visited, mapped and administered a short census survey. Households were ranked according to a proxy means test based on asset ownership, employment, food security,

[2] This includes physical, sexual, psychological, and patrimonial violence. Patrimonial violence is defined as the obstruction or retention of personal objects, properties, or values.

[3] Formally, the objectives of the program were threefold: 1) to improve food consumption by facilitating access to more nutritious foods, 2) to increase the role of women in household decisionmaking related to food consumption, and 3) to reduce tensions between Colombian refugees and host Ecuadorian populations.

demographics and nationality and a cut off score was determined based on project budget constraints. Based on point scores by nationality, the decision was made to automatically enroll all Colombian and mixed-nationality households. In addition, households were excluded from eligibility if they were current recipients of the government's social safety net, the BDH, which targeted poor households with school age and young children. The "Cash, Food, and Voucher" program targeted women as participants, although men were also allowed to participate if there was not a qualifying adult woman in the household at the time of enrollment. Among all beneficiary households, approximately 79% of registered beneficiary cardholders in Carchi and 73% of registered beneficiary cardholders in Sucumbíos were women (WFP-Ecuador 2011).

Participating households received benefits from April 2011 to September 2011. The value of the monthly transfer was standardized across all treatment arms and was equivalent to $40 per month per household for a total of $240 over the six month study period. The monthly value was approximately 11% of a household's pre-transfer monthly consumption. The food transfer contained rice (24 kg), lentils (8 kg), vegetable oil (4 liters) and canned sardines (8 cans each 0.425 kg). The food voucher was redeemable at local supermarkets for a pre-approved list of nutritious foods. The cash was distributed though preprogrammed ATM cards. The transfers were conditional on attendance of monthly nutrition trainings, which were standardized across treatment arms. Particular attention was given to ensure beneficiaries' experiences with the program would be similar across modalities. For example, the timing of disbursement, frequency and value of transfers were equalized across modalities to ensure that differences in outcomes were attributable to the modality and not to other confounding factors. Evaluation of the transfer program showed significant improvements in food consumption and dietary diversity across all transfer modalities thus demonstrating that the program met its goal of improving overall food security (Hidrobo et al. 2014).

3. Study design and key indicators

3.1 Study design

The program evaluation was based on random assignment. Due to the differences in socioeconomic and geographic characteristics of the study provinces, Sucumbíos and Carchi, the randomization was stratified at the province level. Randomization was conducted in two stages: first neighborhoods within the urban centers were randomized to either treatment or control groups; and second, clusters within the neighborhoods were randomized to either: cash, voucher or food. The two-stage randomization was done to ensure that households in control neighborhoods were in geographically distinct locations from those in treatment neighborhoods to help mitigate possible discontent among neighbors. The randomization into

modalities was assigned using percentages of 20/20 for the control and food arms, and 30/30 for the cash and food voucher arms, based on funding availability for each modality. In total 80 neighborhoods and 145 clusters were randomized into the four intervention arms – control, cash, vouchers and food.[4] Figure 1 depicts the randomization and sampling process. Analysis on the full sample of households that participated in the study indicates that the randomization was in general successful, with few differences on socio economic and demographic indicators at baseline across treatment and control groups, or across treatment modalities (Hidrobo et al. 2014).[5]

In order to evaluate the transfer program, baseline (March 2011) and follow-up surveys (October-November 2011) were conducted by IFPRI in collaboration with a local survey firm, *Centro de Estudios de Población y Desarrollo Social* (CEPAR). Twenty-seven households per control and food clusters and 20 households per food voucher and cash clusters were randomly selected to be interviewed in the baseline survey. In addition, since a main objective of the evaluation was to compare differences across nationalities, Colombian and Columbian-Ecuadorian households were oversampled to ensure a sufficient sample for comparative analysis. In total, 2,357 households were surveyed at baseline and 2,122 at follow-up. Household surveys collected information on household characteristics, demographics, food consumption, labor, education, and health. The survey also collected detailed information on women's status in the household, decisionmaking within the household, and IPV. Neighborhood and market questionnaires were also implemented to provide information on market access, food prices and other community-level factors. Further details about the sampling strategy, evaluation sample and intervention can be found in Hidrobo et al. (2014, 2012).

3.2 Violence and empowerment variables

Violence indicators were collected in accordance with the WHO protocol on ethical guidelines for conducting research on IPV (WHO 2001). In particular, we ensured adequate training of interviewers, enacted safety measures that guaranteed privacy during interviews, and interviewed only one woman per household to ensure that no other household member was aware that survey questions involved disclosing IPV. In addition, enumerators provided all women with de-identified contact information for local IPV support services for referral, regardless of disclosure of IPV. These services were woman centered and woman staffed "*Comisarías de la Mujer y la Familia,"* in each urban center and included female police

[4] Initially 81 neighborhoods and 146 clusters were surveyed for the census, but subsequently one cluster and neighborhood was dropped from the study given that the majority of households in the areas were receiving the BDH.

[5] Across 132 difference-in-means tests between the treatment and control groups, only four are statistically different at the 5 percent level, which reveals that randomization was, for the most part, effective at balancing baseline characteristics (Hidrobo et al. 2014).

officers and social services.[6] To be eligible for interview of the IPV module, the woman had to be 15 years or older, been in a relationship in the last 6 months, and be either the household head or partner of the household head. Only women who could be interviewed in private were administered the IPV module.[7]

In order to elicit accurate assessments of violence, we administered multiple behaviorally specific questions on a range of abusive acts, a technique shown to maximize disclosure (Ellsberg et al. 2001). Indicators of internationally validated standardized IPV measures modified from the WHO Violence Against Women Instrument (Ellsberg and Heise 2005) and the Conflict Tactics Scales (CTS) (Straus 1979; Hindin, Kishor, and Ansara 2008) were administered and included three types of violence (physical, sexual, emotional) and controlling behaviors. To correspond with the length of the transfer period, we asked about violent acts experienced over the past 6 months as well as any violence experienced by the respondent.

Following WHO and Demographic and Health Survey (DHS) protocol, we construct binary indicators for the following five behaviors experienced in the last six months: 1) controlling behaviors, 2) emotional violence only, 3) moderate physical violence, 4) severe physical violence, and 5) any physical/sexual violence. In the follow-up survey there are six questions that are categorized as "emotional violence," four that are categorized as "controlling behavior," two that are categorized as "moderate physical violence," five that are categorized as "severe physical violence," and two that are categorized as "sexual violence" (see Appendix Table B.1) for questions and corresponding categories).[8] For controlling behaviors, moderate physical violence, and severe physical violence, we create indicators that equal one if the respondent answered yes to any of the corresponding violence questions within each category in the last six months. For physical or sexual violence we create an indicator that equals one if the respondent experienced any of the seven physical violence indicators (two moderate violence indicators in addition to the five severe violence indicators) or any of the two sexual violence indicators. Given that emotional violence generally co-occurs with physical and sexual violence, we construct an emotional violence **only** indicator for women who experienced one or more acts of emotional aggression

[6] Although we were not able to track specific women, or the number of women who accessed services, there were no adverse events reported by the survey teams in relation to implementation of the IPV module during the baseline or follow-up survey.

[7] Women who were not alone at the time of the interview could not be administered the IPV module. Instead enumerators were instructed to either find a place where they could be alone, or to come back to the household at another time when the woman would be alone. If neither of these two options were feasible, then the women was not administered the IPV module.

[8] The baseline survey only had 2 questions on controlling behaviors and 3 on emotional violence.

in the past six months but did not experience physical or sexual violence by a partner in the past 6 months.[9]

A strength of our analysis is that we collected information on direct measures of women's empowerment. Although empowerment can be defined in a number of ways across different disciplines, conceptualization generally refers to *"women's ability to make decisions and affect outcomes of importance to themselves and their families"* (Malhotra, Schuler, and Boender 2002). Within this definition, researchers have focused on both direct and indirect measures of empowerment. Direct measures generally focus on the expansion of a woman's set of available choices and the ability to transition these choices into desirable outcomes. Indirect, or proxy, measures generally focus on the possession of resources, both tangible such as assets, or intangible, such as education or social capital, which may then lead to or facilitate empowerment. Although there are numerous measures and proxies for women's empowerment, such as women's absolute and relative education, age, or security of marital arrangements, we use a direct measure of women's decisionmaking within the household.

To measure women's decisionmaking, we follow the approach used by the DHS, which asks women to consider their relative decisionmaking power across a number of domains. In both baseline and follow-up surveys we ask the same woman who answers the IPV module, who in the household generally has the final say in decisions across eight domains: 1) whether or not the woman works for pay, 2) children's education, 3) children's health, 4) woman's own health, 5) small daily food purchases, 6) large food purchases, 7) large asset purchases (such as furniture, TV, etc.), and 8) whether or not to use contraceptives. The responses to these questions could be the following: (a) the woman herself, (b) her spouse or partner, (c) the woman and spouse/partner together, (d) someone else in the household, (e) the woman and someone else together, (d) the decision is not applicable (for example, questions (2) and (3) in a household without children). We construct an indicator for high sole or joint decisionmaking if the respondent reports having sole or joint decisionmaking power across all applicable domains. Thus women with low decisionmaking are those that have no say in one or more decision domains i.e. only the man (or someone else) can decide regardless of her preferences.

3.3 Study sample and attrition

Of the 2,357 households interviewed at baseline, 2,101 had a female head of household or spouse eligible to be administered the household decisionmaking or IPV module. From these households, we restrict our

[9] We also conducted our analysis using an emotional violence indicator that equals one if a woman experienced one or more acts of emotional aggression regardless of whether she experienced physical and or sexual violence. Given that changes in emotional violence may be picking up changes in physical violence which tend to co-occur, we report impacts on emotional violence **only** indicator, but results are robust to an emotional violence indicator.

analysis to women 15 to 69 years who are married or in unions at baseline, for a total of 1,445 women.[10] We exclude women over the age of 69 (18 observations) because IPV is rare among this group and many of the indirect measures of empowerment, such as employment and labor income, no longer apply. Of the 1,445 women 15 to 69 years in relationships at baseline, 1,425 (or 98.6%) were alone at the time of the interview and thus administered the IPV module. Of these women, 1,266 were resurveyed at follow-up and 1,231were alone at the time of the interview and thus administered the IPV module. Thus, the sample for this analysis consists of 1,231 women ages 15 to 69 years in a relationship at baseline, with baseline and follow-up data on IPV.

As a consequence of the sensitivity and requirements for being administered the IPV questions described above, attrition in our sample is relatively high. Of the eligible baseline sample of 1,445 women age 15-69 years in a relationship, 85% (or 1,231) were administered the IPV questionnaire at baseline and follow-up. While most of the attrition is due to not finding the same household or women from baseline to follow-up, 4% is due to the woman not being alone at the time of the interview (either at baseline or follow-up). If attrition is correlated with treatment assignment, then this could potentially bias the estimates of the impact of a transfer on IPV. As Table 1 reveals, there are no significant differences in attrition rates between the control arm and any of the treatment arms.

Although attrition rates are similar across arms, differential attrition across treatment and control arms could threaten the internal validity of the study. In particular, if women who experience more IPV leave the treatment arm in greater proportions than the control arm, then our treatment estimates would be biased because any decrease in IPV would be due to both treatment and differential attrition. Table 2 examines baseline characteristics of eligible women who were administered the IPV module at both baseline and follow-up ("In study") and eligible women who were not ("Attrited"). Given the requirements for being administered the IPV, differences between those in the study sample and those not in the study sample may exist; however, the internal validity of the study is only threatened if characteristics of those that attrited are different between treatment and control arms. In order to examine if differential attrition threatens the internal validity of the study, we focus on columns 7 and 8 of Table 2. With the exception of the asset index and lifetime prevalence of any violence, there are no significant differences in baseline characteristics for those who attrited across treatment and control arms. However, both the asset index and any violence are balanced across treatment and control arms for those who stay in the study, thus, we conclude that attrition is not a meaningful source of bias in our analysis.

[10] Although IPV decreases with age, we do not restrict our sample to the more common age range of 15-49 years because we are interested in the impact on program participants and not a subsample of participants. Our results, however, are robust to restricting the analysis to women 15-49 years.

3.4 Baseline analysis

To ensure that the success of the initial randomization still holds for the sample of 1,231 women used in this analysis, we compare baseline characteristics across treatment and control women. Table 3 shows that randomization was largely effective at balancing baseline characteristics. Across 23 difference-in-means tests between treatment and control women, only two are statistically different at the 5 percent level. In particular, women in the control group have significantly larger households and are significantly less likely to have experienced moderate physical violence from their partner at baseline. While this imbalance in our outcome variable would most likely lead to an underestimate of our impact results, our empirical specifications minimize any bias by controlling for baseline levels of violence. Similar balance tests are conducted across the control arm and each treatment arm and across treatment arms, and again, show that randomization was in general successful (Appendix Table B.2). Across 138 (23 x 6) difference-in means tests, 6 are statistically different at the 5 percent level.

Table 3 also reveals that the baseline prevalence of IPV is high among the study sample, with 16% of women experiencing combined physical and/or sexual violence and 13% experiencing emotional violence only in the previous six months. With regards to severity of physical violence, a higher percentage of women at baseline experience moderate physical violence as compared to severe physical violence in the last 6 months (14% versus 7%). Similar to the national prevalence rate of IPV of 48.7%, lifetime prevalence rate of any violence – emotional, physical, or sexual – in our sample is 49 %. Women in the study sample have a mean age of 35 years, 39% have at least some secondary education or higher, and 42% are married. In addition, 36% of women were born in Colombia and 32% report working in the last 6 months. Almost half (46%) of the women in the sample have high decisionmaking power as defined by having sole or joint decisionmaking power across all applicable domains. Male partners in the sample are similar to women in terms of education (38% have at least some secondary education or higher), however, they are on average four years older and 96% report working in the last 6 months.

Given our interest in investigating whether impacts on IPV are mediated by a woman's bargaining power within the household we present cross tabulations of baseline decisionmaking variables and other indirect measures of empowerment in addition to IPV indicators. Table 4 shows that women with high decisionmaking power are significantly more likely to have some secondary education, have worked in the last 6 months, and significantly less likely to have experienced controlling behaviors and moderate, severe or sexual violence. Interestingly, women with high decisionmaking power are similar to those with low decisionmaking power in terms of age, marital status, and household poverty, as measured by the value of monthly per capita consumption.

Finally, since our sample is a unique group of urban and peri-urban residents, we compare key baseline descriptive statistics in Table 3 to those for women in marriages or partnerships of key age

ranges within two other data sources. The first is the baseline data from the government *BDH* evaluation collected in 2003-04 and the second is from the fifth round of the national *Encuestas de Condiciones de Vida* (ECV) collected in 2005-06 (Appendix Table B.3). For the latter, we report both national statistics as well as those for the provinces of Carchi and Sucumbíos. Although exact indicators and samples vary, in general we find that the average woman in our analysis sample is younger than the average woman in the national ECV data, however older than the average woman in the BDH data. Women in our sample have comparable education and likelihood of being indigenous and afro-Ecuadorian as in the ECV province specific sample; however, they are less likely to be married. In comparison to the BDH data, they reside in households with fewer young children ages 0 to 5 and are more likely (by definition) to be in urban or peri-urban locations.

4. Methodology

To estimate the impact of transfers on IPV, we take advantage of the randomized experimental design and conduct an intent-to-treat analysis. This approach avoids bias that may occur due to selection into and out of the program. Also, with random assignment, the probability that a household is assigned to a treatment arm is independent of baseline household characteristics. Consequently, systematic differences between beneficiaries and non-beneficiaries should be eliminated, leaving little risk of bias due to selection effects. As a result, we can interpret average differences in outcomes across the groups post intervention as being truly caused by the program.

Moreover, we take advantage of baseline data and estimate the treatment effect using Analysis of Covariance (ANCOVA), which controls for the lagged outcome variable. ANCOVA estimates are preferred over difference-in-difference estimates when the autocorrelation of outcomes is low (McKenzie 2012). Intuitively, if autocorrelation is low, then difference-in-difference estimates will overcorrect for baseline imbalances. ANCOVA estimates on the other hand will adjust for baseline imbalances according to the degree of correlation between baseline and follow-up and lead to a more efficient estimation of impact. Given that the autocorrelation between baseline and follow-up of our IPV outcomes is relatively low (between 0.18 to 0.36) and that the indicators of interest are binary, we estimate the treatment effect using the following ANCOVA probit model for pooled treatment[11]:

$$(1) \qquad Prob\left(Y_{ij1} = 1\right) = \Phi\left(\propto + \beta_T Treat_j + \gamma Y_{ij0} + \delta P_{ij}\right)$$

where Y_{ij1} is the IPV outcome of interest for woman i from cluster j at follow-up and Y_{ij0} is the IPV outcome of interest at baseline. As previously mentioned, our five outcomes are measures within the last

[11] Results are robust to using a linear probability model.

6 months of: 1) any controlling behaviors, 2) emotional violence only, 3) any moderate physical violence, 4) any severe physical violence, and 5) any physical/sexual violence. Φ is the cumulative distribution function of the standard normal distribution. $Treat_j$ is an indicator that equals one if cluster j is in any treatment arm, and β_T represents the intent-to-treat estimator, or the effect of being assigned to any treatment arm. P_{ij} is an indicator for the level of stratification or province and equals one if a woman resides in Carchi at baseline. In all regressions we adjust standard errors for clustering.

Given the relative success of the random assignment, the inclusion of baseline controls is not necessary to obtain unbiased estimates of β. For most estimates, however, we account for baseline socioeconomic characteristics in order to increase the precision of the estimates and control for any minor differences between treatment and control arms at baseline. The core group of baseline control variables are: woman's age (years), partner's age (years), indicator for whether woman has at least some secondary education, indicator for whether partner has at least some secondary education, indicator for whether she was born in Colombia, indicator for whether woman is married, indicators for whether she is indigenous or Afro Ecuadorian, indicator for whether she worked in the last 6 months, indicator for whether she has high sole or joint decisionmaking power, number of children 0–5 years old in the household, number of children 6–15 years old in the household, household wealth indicators, and indicators for province of residence. The household wealth indicators (4 indicators, or one for each wealth quartile) are constructed from a wealth index that is created using the first principal from a principal components analysis (PCA). Variables used to construct the index are housing infrastructure indicators (for example, type of floor, roof, toilet, light, fuel, water source) and 11 asset indicators (for example, refrigerator, mobile phone, TV, car, computer).

To estimate whether the impact on IPV varied by modality, we estimate the following equation:

$$(2) \qquad Prob(Y_{ij1} = 1) = \Phi(\propto + \beta_f food_j + \beta_c cash_j + \beta_v voucher_j + \gamma Y_{ij0} + \delta P_{ij})$$

The indicators $food_j$, $cash_j$, and $voucher_j$ are equal to 1 if cluster j is in the corresponding treatment arm. Coefficients β_f, β_c, β_v represent the intent-to-treat estimators, or the effect of being assigned to the specific treatment arm. To test whether the estimators are statistically different by treatment arm, we conduct tests of equality and report the p-values.

Lastly, we estimate the differential effect of treatment by a woman's baseline decisionmaking power by creating an interaction term of the pooled treatment indicator ($Treat_j$) with the indicator for whether or not a woman has high sole or joint decisionmaking power (D_i). Specifically, we estimate:

$$(3) \qquad Prob(Y_{ij1} = 1) = \Phi(\propto + \beta_1 Treat_j + \beta_2 Treat_j * D_i + \sigma D_i + \gamma Y_{ij0} + \delta P_{ij})$$

In this equation, β_1 corresponds to the impact of being in the treatment arm for women with low decisionmaking power at baseline, while $\beta_1 + \beta_2$ corresponds to the impact of being in the treatment arm for women with high decisionmaking power at baseline. Thus, β_2 is the differential impact with respect to decisionmaking of the pooled treatment.

5. Results

5.1 Impact of pooled treatment

Table 5 presents ANCOVA estimates (Equation 1) of the pooled treatment on controlling behaviors and IPV outcomes. The first column for each outcome presents coefficients controlling only for the level of stratification (or province) and baseline prevalence, whereas the second column includes the full set of control variables. Coefficients from probit models are converted to marginal effects evaluated at the mean of the independent variable. Table 5 reveals that there are significant program impacts leading to decreases in controlling behaviors, moderate physical, and physical/sexual violence ranging from 6 to 7 percentage points. Compared to baseline averages, these are decreases ranging from 38% for any physical and/or sexual violence to 43% for moderate physical violence. There are no significant impacts on emotional violence or severe physical violence. In all cases, the inclusion of control variables has very little impact on the size or significance of coefficients.

Table 5 also reveals that women who are older, have at least some secondary education, are married, and did not work in the last 6 months, are less likely to experience controlling behaviors by their partner. Similarly, women who are married and have fewer children 0-5 years old, are less likely to experience emotional violence only. Married women are also less likely to experience any physical or sexual violence in comparison to women in cohabiting unions or other partnerships.

5.2 Impact by treatment modality

Table 6 explores whether there are differences in impact across modalities (Equation 2). For all estimations we include a full set of control variables, however, we only present the marginal effects of program impact. P-values from tests of differences on the size of impact across modalities are presented at the bottom of the table. We find that food transfers result in significant and negative impacts on moderate physical violence, and physical/sexual violence; cash results in significant and negative impacts on controlling behaviors and moderate physical violence; and vouchers result in significant and negative impacts on all three (controlling behaviors, moderate physical, and physical/sexual violence). Impacts for these three outcomes are similar in magnitude to the pooled treatment effect, ranging from 5 to 8 percentage point reductions. As shown by the p-values at the bottom of the table, the effects across

transfer modality are not statistically distinguishable from each other, thus, revealing no significant differences in impact across modalities.

5.3 Heterogeneous effects

Although we find that on average transfers lead to large decreases in IPV, past research suggests that the initial condition of bargaining power between the woman and her partner may be an important factor in realizing impacts. We test for the importance of initial bargaining power by analyzing the interaction between women's decisionmaking power and the treatment indicator (Equation 3). Results indicate that the marginal effect of pooled treatment for women with low sole or joint decisionmaking is large and significant for 4 out of 5 outcomes. In particular, women with low decisionmaking are 11 percentage points less likely to experience controlling behaviors, 10 percentage points less likely to experience moderate physical violence, 5 percentage points less likely to experience severe physical violence, and 11 percentage points less likely to experience any physical/sexual violence (Table 7). The interaction term, between decisionmaking and the treatment indicator is positive and significant for three out of the five outcomes, which reveals that the impact on IPV for women with high decisionmaking is significantly smaller in magnitude than that for women with low decisionmaking. For women with high decisionmaking, the impact on controlling behaviors and IPV is close to zero across all outcomes.

To demonstrate that these heterogeneous impacts are not a function of other factors related to decisionmaking, including education, employment or province of residence, we replicate the analysis controlling simultaneously for interactions between these three additional factors and the pooled treatment (Table 8). While there is a small decrease in the size of the coefficient of the treatment indicator, the same general relationship holds for program impact across outcomes and decisionmaking status. In particular, the decrease in IPV is significantly smaller in magnitude for women with high decisionmaking power.

Finally, we replicate the analysis on heterogeneity with respect to baseline decisionmaking power by treatment modality (Table 9). In general the food and voucher arms reveal the same pattern: among low decisionmaking women, transfers lead to large and statistically significant decreases in IPV and this impact is significantly different from that of women with high decisionmaking power. However, among women with low decisionmaking power the impact of cash is only significant for moderate physical violence and any physical/sexual violence. Across controlling behaviors and three IPV outcomes the impact of cash is smaller than that of food or vouchers and the difference is statistically significant for controlling behavior. In particular, women with low decisionmaking power who receive vouchers experience a 15 percentage point reduction in controlling behaviors, while women in households receiving cash experience a nonsignificant 7 percentage point reduction. For the cash group, the differential effect with respect to baseline decisionmaking power is not significant for any outcome.

6. Possible Mechanisms

While our results provide strong evidence that transfers reduce IPV among the study population, the pathway or mechanism through which this occurs is unclear. There are a couple of plausible explanations for why we might see a negative impact of transfers on IPV and no difference across modalities. The first is related to economic household bargaining models. In these models transfers improve a woman's reservation utility, or options outside of marriage, thus strengthening her bargaining power within the household. In order to keep the woman from leaving the relationship, theory predicts that her partner would respond to the improvement in her reservation utility by reducing the amount of violence inflicted on her. If the pathway through which we observe a decrease in IPV is through improvements in her bargaining power, then we would also expect to see an improvement in other domains of bargaining such as decisionmaking within the household. However, table 10 reveals that the transfers did not improve a woman's decisionmaking as measured by sole/joint decisionmaking across any of the 8 domains or the high decisionmaking indicator, and in fact worsened decisionmaking with respect to family planning. One potential reason for a lack of impact on decisionmaking is that the transfers were short term and beneficiaries understood that the period of transfers was only 6 months. Consequently, any change in her reservation utility due to an increase in her income is temporary, and thus may only weakly improve her threat point and bargaining power within the household. Another possible explanation is that the decisionmaking domains included in the survey do not capture the specific areas that are most likely to be affected by the transfer, or that the decisionmaking questions in general do not capture all aspects of empowerment or improvements in bargaining.

Alternatively, the decrease in IPV may be due to reductions in conflict and conflict–related stress in the relationship. Absolute resource theory and stress theory from sociology predict that IPV decreases with transfers by improving a household's economic situation and food security thereby reducing poverty-related stressors on couples and households (Fox et al. 2002; Vyas 2012). Since arguments over money is a frequent trigger for violence, reducing poverty-related stress, could reduce IPV. If this is the case, then we would expect transfers to men or women to have similar impacts on IPV. To further explore this hypothesis we estimate the impact of transfers on IPV by sex of the household member who usually received the transfer, however, we do so with the caveat that the sex of the recipient is not exogenous, and thus should be interpreted with caution. Since the intervention was explicitly targeted and publicized as a woman-centered program, households in which men receive the transfer are arguably different than those with female recipients. However if we believe that male recipients are more likely to be controlling, then we would expect the impact of treatment for male beneficiary households to be biased towards zero. Results indicate that transfers to both males and females decrease IPV and that there are no significant

differences across gender (Table 11), which suggests that decreases in poverty-related stress is a plausible mechanism through which transfers decrease IPV.

7. Discussion and conclusion

Important policy questions around linkages between IPV and women's income remain unanswered due to lack of evidence and consensus on theories and mechanisms. With one in three women experiencing lifetime IPV globally, and one in three female homicides perpetrated by an intimate partner, it is essential to better understand how wealth and economic development contribute to declines in prevalence (Stöckl et al. 2013; WHO 2013). Further, it is crucial that programs and policies that transfer cash or other in-kind assets or assistance understand how their programs may affect intrahousehold dynamics, including potential conflict in both intended and unintended ways. The majority of current evidence linking poverty or wealth and IPV is from cross-sectional analysis and few studies are able to identify casual impacts.

This study uses a randomized design to investigate whether cash, vouchers and food transfers targeted to women in poor urban areas and intended to reduce poverty and food insecurity also impact IPV. We find that transfers decrease the probability that a woman experiences controlling behaviors, moderate physical, and any physical/sexual violence by 6 to 7 percentage points or approximately a 38%-43% decrease from baseline means. These results are similar in magnitude to studies in Peru, Mexico and Kenya which find that CTs decreased physical IPV by 5-11 percentage points (Bobonis, Gonzalez-Brenes, and Castro 2013; Haushofer and Shapiro 2013; Perova 2010). Unlike in Mexico where decreases in physical violence were accompanied by increases in threats of violence, we find no evidence that partners use violence to forcefully extract transfers. Instead, we find decreases in violence that are similar in magnitude across transfer modality. Results from our study provide promising evidence that transfers not only have the potential to decrease multiple forms of IPV in the short-term, but also that cash – that is intended to reduce food insecurity - is just as effective as inkind transfers in decreasing IPV.

We also find that initial conditions and power dynamics between partners is important in determining the magnitude and significance of impacts. In particular, we find that decreases in IPV are concentrated among woman with low sole or joint decisionmaking power at baseline. These findings are in contrast to heterogeneous effects found in Ecuador and Peru where impacts are stronger among women who are relatively advantaged in terms of proxy measures for empowerment (education, fewer children, and cash paying jobs) (Hidrobo and Fernald 2013; Perova 2010). However, it is clear from the sensitivity analysis that included interactions for other proxy measures (education and employment in Table 8), that direct measures such as those used in this study and indirect indicators used in previous studies are measuring different factors. Further, the large differential effect with respect to baseline decisionmaking is more pronounced in the food and voucher arms, and not the cash arm. To our knowledge, only one

other study uses decisionmaking as a direct measure of bargaining power, and finds that increases in threats of violence are concentrated among women with moderate or high decisionmaking power in Mexico's *Oportunidades* CCT (Bobonis, Gonzalez-Brenes, and Castro 2013). However, they are unable to statistically distinguish these impacts from the group of women with low decisionmaking power. Taken together, the results from our analysis indicate that transfers in certain settings may work to equalize power dynamics in household with high levels of initial inequity.

Although we cannot isolate the mechanism leading to a decrease in IPV, it is unlikely that the decrease is due primarily through strengthening a woman's bargaining power since we find no evidence of improvements in a woman's decisionmaking within the household as a result of the transfer. Instead, we find support for theories related to stress and that by improving a household's food security and economic situation, transfers reduced poverty-related stress and conflict, and consequently IPV. Although we are not able to validate this mechanism due to lack of stress indicators in our data, preliminary evidence from Kenya's *GiveDirectly* evaluation on stress suggest that this is a potential pathway through which some transfer programmes may affect IPV.

While we find no evidence that transfers are being extracted or leading to conflict within relationships, we cannot dismiss extraction or male backlash theories completely. The program's transfers were framed as part of a wider food security intervention and did not challenge traditional gender roles. Evidence from our qualitative study supports findings that show that how the intervention is framed and labeled affects subsequent behavior (Benhassine et al. 2013). Consequently, transfers may not have led to extraction or conflict because they were perceived to be for the benefit of the entire household and household nutrition is typically thought of as being a domain traditionally controlled by women and mothers.

Our study's uniqueness must be taken into account when generalizing results to other contexts. First, the sample is a select population of urban poor living in Northern Ecuador, with a high percentage of Colombian born nationals. Moreover, since households receiving the government social protection program, BDH, are excluded from the program, the demographics of the study sample exclude many households with young children. Second, the intervention and period of study was 6 months. The shortness of the intervention may have led beneficiaries to behave differently than they would have under a longer term program. Unfortunately, we are limited in our ability to measure anything but short term impacts of increases in income, although the short 6 month intervention period minimizes the possibility that impacts are due to selection into marriage or marriage dissolution through divorce. Third, we only measure violence that is perpetrated by an intimate partner where the aggressor is male and the victim female. The contribution of violence by a female partner or by other household members is likely to vary by context and in some regions may result in very different findings and conclusions. Fourth, all transfer

recipients participated in monthly nutrition education sessions, which may have had an empowering effect due to increased information and social networking with fellow recipients in their neighborhoods. Although we are not able to directly model the potential contribution of these nutrition sessions, our conclusions by modality would not be affected since all participants received identical exposure and information. Finally, as previously mentioned, the transfer was labeled and perceived by beneficiaries to be a transfer intended to improve the nutrition and health of families, which is typically in the domain of females. A differently framed transfer such as a transfer tied to more male dominated domains, may have very different impacts.

Although evaluations of CT programs are a promising starting place for research on IPV and female income, further experiments exploring dynamics with employment, micro-credit and other economic empowerment programs are equally important. Impacts from employment and micro-credit programs are likely to differ from those from CT programs, given that employment and micro-finance may have additional psychological and time allocation effects (Heath 2012). In addition, there is need for evidence on medium and long-term impacts of transfer programs, carefully accounting for changes in partnership dynamics, as evidence has shown that the relationship between IPV and income may reverse over time. Lastly, better data on conflict within the household, stress, and bargaining power are needed in order to better understand the pathway through which transfers impact IPV.

When designing and implementing transfer programs, it should not be assumed that giving cash to women will a priori cause larger increases in intrahousehold violence, as compared to inkind transfers. Indeed, evidence from this study as well as others indicates that on average IPV is likely to decrease as a result of a transfer. However, there is a lack of understanding on the theories and mechanisms surrounding IPV and income. Quantitative as well as qualitative work is needed that will validate and triangulate findings and pathways through which receipt of transfers translate into changes in IPV.

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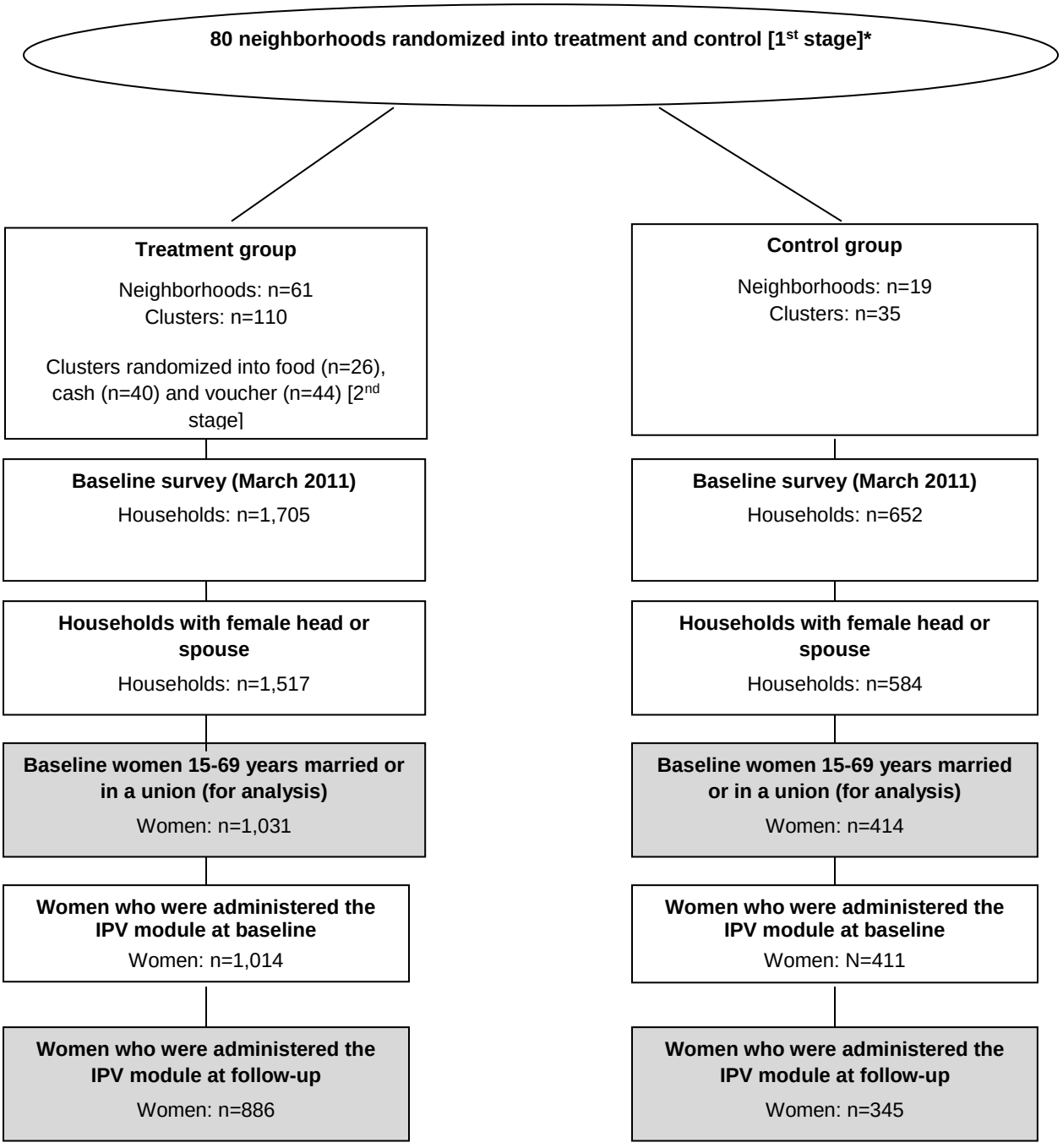
Figures

Figure 1: Flow of Participants and Randomization



Tables

Table 1: Attrition analysis

	Means					P-value of difference			
	Control	Pooled	Food	Cash	Voucher	Control-Pooled	Control-Food	Control-Cash	Control-Voucher
Attrition rates	0.17	0.14	0.13	0.15	0.14	0.31	0.28	0.70	0.32
N	414	1,031	289	355	387				

P-values are reported from Wald tests on the equality of means of control and different treatment arms. Pooled treatment refers to all three treatment arms. Standard errors are clustered at the cluster level.

Table 2: Attrition analysis by baseline characteristics

	Control			Treatment			Difference among attrited	
	Attrited (1)	In study (2)	P-value (3)	Attrited (4)	In study (5)	P-value (6)	Col(1)-Col(4) (7)	P-value (8)
Mother characteristics								
Born in Colombia	0.59	0.39	0.00	0.47	0.34	0.01	0.13	0.15
Age	35.52	35.19	0.84	33.37	34.60	0.29	2.15	0.26
Some secondary education or higher	0.36	0.38	0.73	0.40	0.39	0.84	-0.04	0.64
Married	0.36	0.41	0.50	0.36	0.43	0.14	0.00	0.96
Indigenous	0.06	0.03	0.44	0.08	0.04	0.18	-0.02	0.63
Afro-Ecuadorian	0.07	0.06	0.78	0.03	0.07	0.04	0.04	0.33
Worked in the last 6 months	0.41	0.30	0.06	0.43	0.33	0.01	-0.02	0.74
High sole or joint decisionmaking	0.51	0.51	0.98	0.50	0.44	0.24	0.01	0.88
Partner characteristics								
Some secondary education or higher	0.40	0.36	0.53	0.44	0.39	0.30	-0.04	0.64
Age	39.63	39.14	0.74	37.22	38.40	0.40	2.41	0.22
Worked in the last 6 months	0.95	0.96	0.85	0.92	0.96	0.06	0.04	0.30
Household characteristics								
Male household head	0.97	0.97	1.00	0.92	0.98	0.03	0.05	0.11
Household size	4.48	4.57	0.72	4.17	4.29	0.38	0.31	0.27
Number of children 0-5 years	0.67	0.72	0.64	0.66	0.76	0.14	0.00	0.97
Number of children 6-15 years	0.72	1.02	0.02	0.83	0.88	0.57	-0.10	0.43
Asset index	0.61	0.69	0.81	-0.25	0.34	0.00	0.86	0.03
Value of total monthly consumption per capita (USD)	111.85	107.83	0.67	109.30	109.02	0.97	2.56	0.83
IPV indicators								
Controlling behavior	0.21	0.17	0.52	0.25	0.17	0.05	-0.04	0.57
Emotional only	0.20	0.15	0.40	0.13	0.13	0.80	0.06	0.28
Moderate physical	0.18	0.11	0.15	0.17	0.15	0.60	0.01	0.85
Severe physical	0.11	0.06	0.28	0.12	0.07	0.17	-0.01	0.81
Physical and or sexual	0.21	0.13	0.15	0.20	0.18	0.45	0.01	0.88
Lifetime any violence	0.59	0.52	0.16	0.45	0.48	0.41	0.15	0.02

P-values are reported from Wald tests on the equality of means of Treatment and Control for each variable. Standard errors are clustered at the cluster level. High sole or joint decisionmaking equals one if a woman has sole or joint decisionmaking over all applicable domains. Lifetime any violence is an indicator that equals one if a women has experienced lifetime emotional, physical, or sexual violence.

Table 3: Baseline means by pooled treatment arm

	N	All	Control	Treatment	P-value of diff.
Mother characteristics					
Born in Colombia	1,231	0.36	0.39	0.34	0.40
Age	1,231	34.77	35.19	34.60	0.46
Some secondary education or higher	1,231	0.39	0.38	0.39	0.86
Married	1,231	0.42	0.41	0.43	0.77
Indigenous	1,231	0.04	0.03	0.04	0.54
Afro-Ecuadorian	1,231	0.07	0.06	0.07	0.67
Worked in the last 6 months	1,231	0.32	0.30	0.33	0.49
High sole or joint decisionmaking	1,229	0.46	0.51	0.44	0.16
Partner characteristics					
Some secondary education or higher	1,224	0.38	0.36	0.39	0.45
Age	1,224	38.61	39.14	38.40	0.37
Worked in the last 6 months	1,224	0.96	0.96	0.96	0.66
Household characteristics					
Male household head	1,231	0.98	0.97	0.98	0.51
Household size	1,231	4.37	4.57	4.29	0.02
Number of children 0-5 years	1,231	0.75	0.72	0.76	0.52
Number of children 6-15 years	1,231	0.92	1.02	0.88	0.06
Asset index	1,231	0.44	0.69	0.34	0.10
Value of total monthly consumption per capita (USD)	1,228	108.69	107.83	109.02	0.84
IPV indicators					
Controlling behavior	1,231	0.17	0.17	0.17	0.82
Emotional only	1,231	0.13	0.15	0.13	0.29
Moderate physical	1,231	0.14	0.11	0.15	0.04
Severe physical	1,231	0.07	0.06	0.07	0.56
Physical and or sexual	1,231	0.16	0.13	0.18	0.06
Lifetime any violence	1,231	0.49	0.52	0.48	0.25

P-values are reported from Wald tests on the equality of means of Treatment and Control for each variable. Standard errors are clustered at the cluster level. High sole or joint decisionmaking equals one if a woman has sole or joint decisionmaking over all applicable domains. Lifetime any violence is an indicator that equals one if a women has experienced lifetime emotional, physical, or sexual violence.

Table 4: Baseline means on women's empowerment and IPV indicators, by decisionmaking status

	Low decisionmaking	High decisionmaking	P-value of difference
Age	34.53	35.09	0.45
Some secondary education or higher	0.33	0.45	0.00
Married	0.41	0.44	0.31
Worked in the last 6 months	0.27	0.38	0.00
Value of total monthly consumption per capita (USD)	94.61	100.57	0.11
IPV indicators			
Controlling behavior	0.21	0.13	0.00
Emotional only	0.15	0.12	0.15
Moderate physical	0.17	0.10	0.00
Severe physical	0.09	0.05	0.01
Physical and or sexual	0.20	0.11	0.00

P-values are reported from Wald test on the equality of means of low and high decisionmaking for each variable. Standard errors are clustered at the cluster level.

Table 5: Impact of pooled treatment on IPV measures

	Controlling		Emotional Only		Moderate physical		Severe physical		Physical or Sexual	
Pooled Treatment	-0.06	-0.07	0.00	0.00	-0.06	-0.06	-0.02	-0.02	-0.06	-0.06
	(0.03)**	(0.03)**	(0.02)	(0.02)	(0.02)**	(0.02)**	(0.02)	(0.02)	(0.03)**	(0.03)**
Born in Colombia		-0.04		-0.01		-0.02		-0.02		-0.04
		(0.03)		(0.03)		(0.02)		(0.02)		(0.02)*
Age		-0.00		0.00		0.00		0.00		-0.00
		(0.00)**		(0.00)		(0.00)		(0.00)		(0.00)
Some secondary education or higher		-0.07		-0.03		0.00		-0.02		0.01
		(0.03)**		(0.03)		(0.02)		(0.02)		(0.03)
Married		-0.07		-0.05		-0.04		-0.02		-0.05
		(0.03)**		(0.02)**		(0.02)		(0.02)		(0.02)**
Indigenous		0.04		0.00		-0.08		-0.02		-0.01
		(0.07)		(0.05)		(0.05)		(0.04)		(0.05)
Afro-Ecuadorian		-0.05		-0.05		0.00		0.02		0.01
		(0.06)		(0.04)		(0.04)		(0.03)		(0.04)
Worked in the last 6 months		0.06		0.02		-0.00		0.01		0.01
		(0.03)**		(0.02)		(0.02)		(0.02)		(0.02)
High sole or joint decisionmaking		-0.02		-0.02		-0.02		-0.02		-0.02
		(0.03)		(0.02)		(0.02)		(0.02)		(0.02)
Partner has some secondary education or higher		0.03		0.02		-0.01		-0.03		-0.01
		(0.03)		(0.02)		(0.02)		(0.02)*		(0.02)
Partner's age		0.00		0.00		-0.00		-0.00		-0.00
		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)
Number of children 0-5 years in household		0.02		0.03		-0.00		0.02		0.00
		(0.02)		(0.01)**		(0.01)		(0.01)*		(0.01)
Number of children 6-15 years in household		0.01		0.00		0.00		0.00		0.01
		(0.01)		(0.01)		(0.01)		(0.01)		(0.01)
Wealth index: 2nd quartile		-0.00		0.00		-0.06		-0.03		-0.06
		(0.04)		(0.04)		(0.03)*		(0.03)		(0.03)*
Wealth index: 3rd quartile		0.05		-0.01		-0.03		-0.01		-0.02
		(0.04)		(0.03)		(0.03)		(0.03)		(0.03)
Wealth index: 4th quartile		0.05		0.03		-0.05		-0.00		-0.02
		(0.04)		(0.03)		(0.03)		(0.03)		(0.03)
Carchi	-0.06	-0.05	-0.08	-0.07	0.01	0.01	0.01	0.00	0.00	0.01
	(0.03)**	(0.03)	(0.02)***	(0.02)***	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)
Baseline controlling	0.30	0.28								
	(0.03)***	(0.03)***								
Baseline emotional only			0.16	0.15						
			(0.02)***	(0.02)***						
Baseline moderate physical violence					0.22	0.21				
					(0.02)***	(0.02)***				
Baseline severe physical violence							0.21	0.20		
							(0.02)***	(0.02)***		
Baseline physical and or sexual									0.26	0.25
									(0.02)***	(0.02)***
N	1,231	1,224	1,231	1,224	1,231	1,224	1,231	1,224	1,231	1,224
Pseudo R2	0.06	0.09	0.04	0.06	0.11	0.12	0.11	0.13	0.12	0.13

Standard errors in parenthesis clustered at the cluster level. * $p<0.1$ ** $p<0.05$; *** $p<0.01$

Table 6: Impact of treatment modalities on IPV measures

	Controlling	Emotional Only	Moderate Physical	Severe Physical	Physical or sexual
Treatment==Food	-0.06	0.01	-0.06	-0.02	-0.07
	(0.04)	(0.03)	(0.03)**	(0.03)	(0.04)**
Treatment==Cash	-0.08	-0.02	-0.05	-0.01	-0.05
	(0.04)**	(0.03)	(0.03)*	(0.03)	(0.03)
Treatment==Voucher	-0.06	0.01	-0.05	-0.03	-0.06
	(0.03)*	(0.03)	(0.03)*	(0.02)	(0.03)*
N	1,224	1,224	1,224	1,224	1,224
Pseudo R2	0.09	0.06	0.12	0.13	0.13
P-value: Food=Voucher	0.97	0.94	0.75	0.86	0.60
P-value: Cash=Voucher	0.60	0.21	0.94	0.53	0.86
P-value: Food=Cash	0.65	0.30	0.69	0.67	0.51

Standard errors in parenthesis clustered at the cluster level. * $p<0.1$ ** $p<0.05$; *** $p<0.01$. All estimations control for women characteristics (age, education, ethnicity, race, marital status, employment status, decision-making power); partner characteristics (age and education), household characteristics (number of children 0-5, number of children 6-15, wealth quartiles), baseline outcome variable, and contain province fixed effects.

Table 7: Differential impact with respect to baseline decisionmaking power

	Controlling	Emotional Only	Moderate Physical	Severe Physical	Physical or sexual
Pooled Treatment	-0.11	0.00	-0.10	-0.05	-0.11
	(0.04)***	(0.03)	(0.03)***	(0.02)**	(0.04)***
Pooled Treatment X High sole or joint decisionmaking	0.08	-0.01	0.10	0.08	0.10
	(0.06)	(0.05)	(0.04)***	(0.03)***	(0.04)**
High sole or joint decisionmaking	-0.07	-0.02	-0.09	-0.08	-0.10
	(0.05)	(0.04)	(0.03)***	(0.03)***	(0.04)***
N	1,224	1,224	1,224	1,224	1,224
Pseudo R2	0.09	0.06	0.13	0.14	0.14
Treatment effect for women with high sole or joint decisionmaking	-0.03	-0.00	0.00	0.03	-0.00
	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)

Standard errors in parenthesis clustered at the cluster level. * $p<0.1$ ** $p<0.05$; *** $p<0.01$. All estimations control for women characteristics (age, education, ethnicity, race, marital status, employment status, decision-making power); partner characteristics (age and education), household characteristics (number of children 0-5, number of children 6-15, wealth quartiles), baseline outcome variable and contain province fixed effects.

Table 8: Differential impact with respect to baseline decision making power, controlling for confounding factors

	Controlling	Emotional Only	Moderate Physical	Severe Physical	Physical or sexual
Pooled Treatment	-0.11	-0.01	-0.07	-0.03	-0.07
	(0.05)**	(0.04)	(0.03)**	(0.03)	(0.04)*
Pooled Treatment X High sole or joint decisionmaking	0.08	0.01	0.09	0.08	0.08
	(0.06)	(0.05)	(0.04)**	(0.03)**	(0.04)*
High sole or joint decisionmaking	-0.07	-0.02	-0.08	-0.08	-0.08
	(0.05)	(0.04)	(0.03)**	(0.03)***	(0.04)**
Pooled Treatment X Some secondary education or higher	0.08	-0.02	0.06	0.06	0.07
	(0.07)	(0.07)	(0.04)	(0.04)	(0.05)
Some secondary education or higher	-0.13	-0.02	-0.04	-0.07	-0.04
	(0.06)**	(0.06)	(0.04)	(0.04)*	(0.04)
Pooled Treatment X Worked in the last 6 months	-0.09	-0.02	-0.01	-0.09	-0.05
	(0.06)	(0.05)	(0.04)	(0.03)**	(0.04)
Worked in the last 6 months	0.12	0.03	0.01	0.07	0.05
	(0.06)**	(0.05)	(0.04)	(0.03)**	(0.04)
Pooled treatment X Carchi	0.00	0.06	-0.09	-0.03	-0.11
	(0.07)	(0.05)	(0.05)*	(0.04)	(0.06)*
Carchi	-0.05	-0.11	0.07	0.02	0.08
	(0.07)	(0.05)**	(0.05)	(0.04)	(0.06)
N	1,224	1,224	1,224	1,224	1,224
Pseudo R2	0.09	0.06	0.14	0.15	0.15

Standard errors in parenthesis clustered at the cluster level. * $p<0.1$ ** $p<0.05$; *** $p<0.01$. All estimations control for women characteristics (age, education, ethnicity, race, marital status, employment status, decision-making power); partner characteristics (age and education), household characteristics (number of children 0-5, number of children 6-15, wealth quartiles), baseline outcome variable, and contain province fixed effects.

Table 9: Differential impact with respect to baseline decisionmaking power, by treatment modalities

	Controlling	Emotional Only	Moderate Physical	Severe Physical	Physical or sexual
Treatment==Food	-0.10	0.01	-0.11	-0.06	-0.14
	(0.06)*	(0.04)	(0.04)***	(0.03)*	(0.05)***
Treatment==Cash	-0.07	-0.02	-0.09	-0.03	-0.07
	(0.05)	(0.04)	(0.04)**	(0.03)	(0.04)*
Treatment==Voucher	-0.15	0.02	-0.10	-0.08	-0.11
	(0.05)***	(0.04)	(0.04)***	(0.03)**	(0.04)***
Food Treatment X High sole or joint decisionmaking	0.07	0.01	0.12	0.09	0.15
	(0.07)	(0.06)	(0.05)**	(0.04)**	(0.05)***
Cash Treatment X High sole or joint decisionmaking	-0.04	-0.00	0.08	0.04	0.04
	(0.07)	(0.06)	(0.05)	(0.04)	(0.05)
Voucher Treatment X High sole or joint decisionmaking	0.20	-0.02	0.12	0.12	0.13
	(0.07)***	(0.06)	(0.05)**	(0.04)***	(0.05)**
High sole or joint decisionmaking	-0.08	-0.02	-0.09	-0.08	-0.10
	(0.05)	(0.04)	(0.03)***	(0.03)***	(0.04)***
N	1,224	1,224	1,224	1,224	1,224
Pseudo R2	0.09	0.06	0.13	0.14	0.14
P-value: Food=Voucher	0.33	0.78	0.82	0.61	0.54
P-value: Cash=Voucher	0.06	0.35	0.57	0.11	0.28
P-value: Food=Cash	0.58	0.54	0.44	0.31	0.11

Standard errors in parenthesis clustered at the cluster level. * $p<0.1$ ** $p<0.05$; *** $p<0.01$.All estimations control for women characteristics (age, education, ethnicity, race, marital status, employment status, decision-making power); partner characteristics (age and education), household characteristics (number of children 0-5, number of children 6-15, wealth quartiles), baseline outcome variable, and contain province fixed effects.

Table 10: Impact of transfers on sole or joint decisionmaking by domains

	Work for pay		Children's edu		Children's health		Own health		Daily food purchases		Large food purchases		Other large purchases		Family planning		High decisionmaking	
Pooled Treatment	0.01		-0.01		0.00		0.03		0.00		0.00		0.02		-0.06		0.04	
	(0.03)		(0.03)		(0.03)		(0.02)		(0.03)		(0.03)		(0.03)		(0.03)*		(0.04)	
Treatment==Food		0.02		0.06		0.05		0.03		0.00		0.03		0.05		-0.03		0.07
		(0.04)		(0.04)		(0.04)		(0.03)		(0.03)		(0.04)		(0.04)		(0.03)		(0.04)
Treatment==Cash		0.00		-0.05		-0.03		0.02		0.01		-0.02		-0.04		-0.09		-0.00
		(0.04)		(0.04)		(0.04)		(0.03)		(0.04)		(0.04)		(0.04)		(0.03)***		(0.05)
Treatment==Voucher		0.01		-0.01		0.01		0.03		-0.01		0.01		0.05		-0.04		0.05
		(0.04)		(0.04)		(0.04)		(0.03)		(0.03)		(0.04)		(0.05)		(0.04)		(0.05)
N	1,204	1,204	905	905	990	990	1,221	1,221	1,209	1,209	1,090	1,090	1,079	1,079	930	930	1,224	1,224
P-value: Food=Voucher		0.72		0.15		0.35		0.93		0.74		0.75		0.88		0.69		0.74
P-value: Cash=Voucher		0.97		0.45		0.33		0.68		0.68		0.34		0.08		0.13		0.27
P-value: Food=Cash		0.68		0.03		0.07		0.62		0.92		0.21		0.04		0.04		0.13

Standard errors in parenthesis clustered at the cluster level. * $p<0.1$ ** $p<0.05$; *** $p<0.01$.All estimations control for women characteristics (age, education, ethnicity, race, marital status, employment status); partner characteristics (age and education), household characteristics (number of children 0-5, number of children 6-15, wealth quartiles), baseline outcome variable, and contain province fixed effects.

Table 11: Impact of transfers on IPV, by gender of recipient

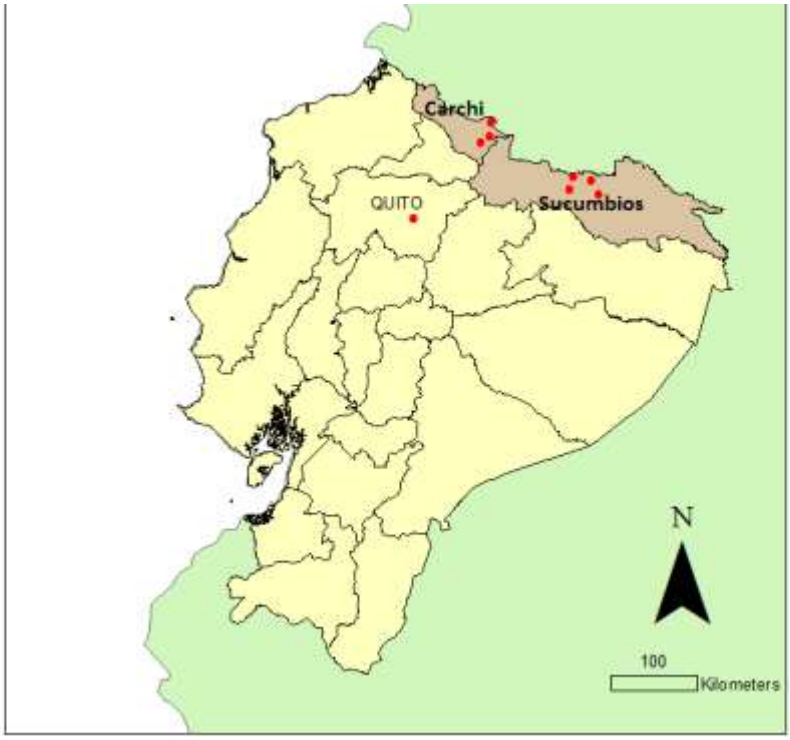
	Controlling	Emotional Only	Moderate physical	Severe physical	Physical or Sexual
Pooled treatment (recipient Male)	-0.10	-0.01	-0.07	-0.04	-0.10
	(0.04)**	(0.04)	(0.03)**	(0.03)	(0.04)***
Pooled treatment (recipient Female)	-0.08	-0.00	-0.06	-0.02	-0.06
	(0.03)**	(0.03)	(0.03)**	(0.02)	(0.03)**
N	1,037	1,037	1,037	1,037	1,037
Pseudo R2	0.08	0.06	0.12	0.13	0.14
P-value: Male=Female	0.55	0.79	0.63	0.35	0.17

Standard errors in parenthesis clustered at the cluster level. * $p<0.1$ ** $p<0.05$; *** $p<0.01$.All estimations control for women characteristics (age, education, ethnicity, race, marital status, employment status, decision-making power); partner characteristics (age and education), household characteristics (number of children 0-5, number of children 6-15, wealth quartiles), baseline outcome variable, and contain province fixed effects.

Appendix

A. Figures

Figure A.1 Map of intervention provinces and urban centers



B. Tables

Table B.1 Intimate Partner Violence questions

Cuando dos personas se casan o viven juntas, ellos usualmente comparten los buenos y los malos momentos. ¿Su esposo (compañero/pareja) alguna vez:		1 = Si, 2 = No, >> Siguiente pregunta	¿En los últimos 6 meses? 1 = Si 2 = No	Su esposo (compañero) alguna vez:		1 = Si, 2 = No >> Siguiente pregunta	En los últimos 6 meses? 1 = Si 2 = No
		A	B			A	B
T10	Le acusó de serle infiel? *(Controlling behaviors)*			**T28**	Le humilló o insulto en frente de otras personas? *(Emotional violence)*		
T11	Trató de limitarle sus contactos con su familia con el objeto de hacerla sentir mal? *(Controlling behaviors)*			**T19**	La trató de estrangularla o quemarla? (*Severe physical violence)*		
				T20	La atacó/agredió con un cuchillo, pistola u otro tipo de arma? (*Severe physical violence)*		
T12	La humilló o insultó en términos como "no sirves para nada," "nunca haces nada," o "eres una bruta." *(Emotional violence)*			**T21**	La amenazó con un cuchillo, pistola u otro tipo de arma? (*Severe physical violence)*		
T13	La amenazó con abandonarla? *(Emotional violence)*			**T22**	Ha utilizadó la fuerza física para obligarla a tener relaciones sexuales aunque usted no quería? (*Sexual violence*)		
T14	La amenazó con quitarle a sus hijos? *(Emotional violence)*			**T23**	La obligó a realizar actos sexuales que usted no aprueba? (*Sexual violence*)		
T24	La amenazó con hacerle daño a usted o a alguien que sea importante para usted? *(Emotional violence)*			**T15**	La empuja, sacude o le tira algo? *(Moderate physical violence)*		
T25	Trató de limitar sus contactos con amigos(as)? *(Controlling behaviors)*			**T16**	La abofeteó le retorció el brazo? *(Moderate physical violence)*		
T26	Quiso saber en donde esta en todo momento? *(Controlling behaviors)*			**T17**	La golpeó con el puño o con algo que pudo hacerle daño? (*Severe physical violence)*		
T27	Le ignoró o fue indiferente con usted? *(Emotional violence)*			**T18**	La ha pateadó o arrastradó? (*Severe physical violence)*		

Table B.2 Baseline means by intervention arms

	N	Means				P-value of diff.					
		Control	Food	Cash	Voucher	Food - Control	Cash - Control	Voucher -Control	Food - Cash	Food - Voucher	Cash - Voucher
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Mother characteristics											
Born in Colombia	1,231	0.39	0.32	0.37	0.33	0.35	0.76	0.36	0.46	0.87	0.47
Age	1,231	35.19	34.08	34.91	34.72	0.32	0.79	0.66	0.50	0.62	0.88
Some secondary education or higher	1,231	0.38	0.35	0.39	0.42	0.61	0.94	0.45	0.57	0.22	0.52
Married	1,231	0.41	0.43	0.41	0.43	0.75	0.98	0.73	0.74	0.98	0.72
Indigenous	1,231	0.03	0.04	0.05	0.04	0.95	0.40	0.69	0.46	0.74	0.69
Afro-Ecuadorian	1,231	0.06	0.03	0.10	0.07	0.18	0.18	0.70	0.01	0.13	0.39
Worked in the last 6 months	1,231	0.30	0.33	0.34	0.31	0.47	0.43	0.86	0.94	0.61	0.56
High sole or joint decisionmaking	1,229	0.51	0.47	0.46	0.41	0.46	0.35	0.06	0.86	0.22	0.26
Partner characteristics											
Some secondary education or higher	1,224	0.36	0.39	0.39	0.40	0.60	0.62	0.42	0.97	0.82	0.78
Age	1,224	39.14	37.66	38.11	39.21	0.24	0.30	0.95	0.73	0.25	0.32
Worked in the last 6 months	1,224	0.96	0.96	0.97	0.97	0.84	0.50	0.59	0.41	0.46	0.84
Household characteristics											
Male household head	1,231	0.97	0.96	0.98	0.98	0.66	0.29	0.30	0.21	0.20	0.90
Household size	1,231	4.57	4.36	4.36	4.19	0.21	0.14	0.00	0.97	0.32	0.21
Number of children 0-5 years	1,231	0.72	0.81	0.72	0.75	0.25	0.98	0.72	0.28	0.44	0.74
Number of children 6-15 years	1,231	1.02	0.86	0.92	0.85	0.18	0.34	0.05	0.60	0.93	0.42
Asset index	1,231	0.69	0.31	0.22	0.49	0.21	0.05	0.35	0.75	0.50	0.16
Value of total monthly consumption per capita (USD)	1,228	107.83	110.35	108.83	108.18	0.79	0.89	0.96	0.87	0.81	0.91
IPV indicators											
Controlling behavior	1,231	0.17	0.17	0.15	0.18	0.98	0.50	0.92	0.48	0.94	0.41
Emotional only	1,231	0.15	0.13	0.11	0.13	0.49	0.17	0.61	0.65	0.80	0.40
Moderate physical	1,231	0.11	0.15	0.15	0.16	0.12	0.19	0.06	0.80	0.82	0.62
Severe physical	1,231	0.06	0.05	0.07	0.10	0.43	0.90	0.12	0.38	0.02	0.17
Physical and or sexual	1,231	0.13	0.17	0.16	0.19	0.20	0.26	0.04	0.83	0.54	0.39
Lifetime any violence	1,231	0.52	0.49	0.46	0.49	0.49	0.17	0.50	0.52	0.96	0.48

Columns 2-5 report baseline means by intervention arm for women in the study analysis. Columns 6-11 report p-values from tests on the equality of means for each variable. Standard errors are clustered at the cluster level. High sole or joint decisionmaking equals one if a woman has sole or joint decisionmaking over all applicable domains. Lifetime any violence is an indicator that equals one if a women has experienced lifetime emotional, physical, or sexual violence

Table B.3: Comparison of baseline means of women in marriage or partnership within key age ranges by data source

	(A)		(B)		(C)			
	Cash and voucher evaluation baseline data among women aged 15 to 69 (2011)		*Bono Desarollo Humano* evaluation baseline data among mothers of eligible pre-school aged children (2003-04)		*Encuestas de Condiciones de Vida* 5th round data among women aged 15 to 69 (2005-06)			
					National sample		Carchi and Sucumbíos Provinces	
	N	Mean	N	Mean	N	Mean	N	Mean
Woman's characteristics								
Born in Colombia	1,231	0.36	NA	NA	NA	NA	NA	NA
Age	1,231	34.77	1,250	23.6	9,017	39.74	509	40.03
Some secondary education or higher	1,231	0.39	1,250	7.54[a]	9,017	0.46	509	0.39
Married	1,231	0.42	1,250	0.45	9,017	0.69	509	0.74
Indigenous	1,231	0.04	1,250	0.05	9,017	0.11	509	0.04
Afro-Ecuadorian	1,231	0.07	1,250	0.10	9,017	0.05	509	0.06
Partner characteristics								
Some secondary education or higher	1,224	0.38	1,250	7.31[a]	9,017	0.46	509	0.36
Age	1,224	38.61	NA	NA	9,017	43.69	509	44.14
Household characteristics								
Male household head	1,231	0.98	NA	NA	9,017	0.99	509	0.98
Household size	1,231	4.37	NA	NA	9,017	4.68	509	4.54
Number of children 0-5 years	1,231	0.75	1,250	1.78	9,017	0.71	509	0.62
Number of children 6-15 years	1,231	0.92	NA	NA	9,017	1.15	509	1.17
Urban or peri-urban	1,231	1.00	1,250	0.51[b]	9,017	0.58[b]	509	0.49[b]

Sample A comes from the evaluation data and is equal to the descriptive statistics reported in Table 3. Sample B comes from the *Bono Desarollo Humano* evaluation data as reported in Hidrobo and Fernald (2013). Sample C data are author's calculations from the fifth round of the *Encuestas de Condiciones de Vida* from 2005-06.

[a] Reported as years of schooling; [b] Defined as urban only