

Government Antipoverty Programming and Intimate Partner Violence in Ghana

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I. Introduction

Social protection programs represent a platform for reaching millions of the most vulnerable households and individuals globally and are integral to achieving 2030 Sustainable Development Goals (SDGs). According to the World Social Protection Report for 2017–19, nearly half of the world's population (45%) is covered by at least one social protection benefit; however, this figure is lower in low- and middle-income countries (LMICs), including in Africa

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(18%; ILO 2017).¹ Despite this comparatively low coverage in Africa, the breadth and coverage of noncontributory programs continue to grow. For example, by 2017, countries on the continent spent an average of 4.6% of all government spending on social safety nets, across an average of 15 programs (Beegle, Coudouel, and Monsalve 2018). Due in part to the unique coverage and demonstrated positive impacts of these programs, social protection plays a key role in targets for SDG goal 1, which seeks to end (extreme) poverty in all its manifestations, as well as goal 5, which is focused on gender equality and empowerment of women and girls everywhere.²

The explicit focus on gender within antipoverty programming is not new; however, only recently has gender equality been given intrinsic importance within social protection (Peterman et al. 2019). Part of this momentum has built on a growing body of literature demonstrating that cash transfers, in particular, have the ability to improve diverse outcomes for women, including promising impacts on nontraditional domains such as intimate partner violence (IPV; Buller et al. 2018). The most recent global evidence indicates that one in three ever-partnered women experience physical and/or sexual IPV in their lifetimes, making it an important health and human rights violation, with demonstrated detrimental effects on women, families, and society (Devries et al. 2013). While diverse interventions tackling harmful gender norms have shown promise in reducing levels of IPV within programmatic time frames, structural

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¹ According to the ILO (2017), social protection is defined as “the set of policies and programs designed to reduce and prevent poverty and vulnerability across the lifecycle. Social protection includes nine main areas: child and family benefits, maternity protection, unemployment support, employment injury benefits, sickness benefits, health protection, old-age benefits, disability benefits and survivors’ benefits” (2).

² SDG goal 1 is to end (extreme) poverty in all its manifestations by 2030, ensure social protection for the poor and vulnerable, increase access to basic services, and support people harmed by climate-related extreme events and other economic, social, and environmental shocks and disasters. Target 5.4 of goal 5 (gender equality) is aimed at “recognizing the value unpaid and domestic work through provision of public services, infrastructure and social protection policies” and suggests as a target the percentage of eligible populations covered by national social protection programs.

interventions addressing poverty may also be important tools (Ellsberg et al. 2015).

The relationship between gendered poverty, inequality, and violence is intuitive yet complex (Cools and Kotsadam 2017). Gendered economic inequalities, thought to underpin poverty and material deprivation, also contribute to marginalization and cycles of violence at the macro level (Haugen and Boutros 2014; Heise and Kotsadam 2015). Further, a systematic review examining the relationship between microlevel economic empowerment (including assets, income, and wealth) and IPV in LMICs generally showed protective relationships (Vyas and Watts 2009). Yet numerous studies demonstrate that linkages between poverty and violence at the micro level can be ambiguous and nonlinear and interact on different levels (personal, situational, and sociocultural; Heise 1998). In particular, diverse theories across disciplines indicate potential for both reduction in IPV and increase in IPV, depending on existing intra-household inequalities, gender norms, and whether benefits accrue to male or female partners (Hidrobo et al. 2016; Haushofer et al. 2019). Thus, it is not straightforward from a theoretical viewpoint whether and how antipoverty programs like social protection will affect IPV depending on context.

A growing literature concentrated on cash transfer interventions suggests that antipoverty programs can reduce IPV. A recent mixed-method review of diverse cash transfers in LMICs showed that 11 out of 14 quantitative studies (79%) and five out of eight qualitative studies (63%) demonstrated that cash transfers decrease IPV (Buller et al. 2018). Within the empirical studies, out of 56 measured outcomes, 20 showed statistically significant decreases in IPV. Studies tended to measure multiple IPV outcomes, and transfers appeared to reduce physical and/or sexual IPV more consistently than emotional abuse or controlling behaviors. Where significant, impacts were sizable, with decreases ranging from 11% to 66% over baseline (control) means. In addition, despite theoretical predictions that cash transfers could increase IPV, the review found little support for this outcome, with only two studies showing overall mixed or adverse impacts among full sample estimates. Yet several studies demonstrate there is potential for adverse effects within subgroups of women, highlighting the importance of understanding impacts within diverse target groups.

Although promising, there are many gaps in knowledge, both in terms of geographical and programmatic design features and understanding of underlying mechanisms responsible for impacts. For example, only a handful of studies were designed to measure and unpack mechanisms responsible for impacts. In addition, little is known about how programs may affect the frequency and severity of IPV. Further, out of the 14 quantitative studies identified, only three were outside Latin America—examining programs in Kenya, South Africa and

Bangladesh—and all three examined nongovernmental programs. This distinction is important, because government programs more accurately reflect large-scale implementation (including factors related to frequency and amount of payments, as well as amount of face-time interaction with implementers) and thus potential for impact at the population level. Finally, because poverty dynamics and underlying gendered norms are likely to vary by country and region, testing impacts and mechanism in diverse settings is essential for policy and program design implications. For example, although variable by country, poverty levels on the African continent are likely to be higher, paired with lower levels of service availability, less egalitarian gender norms, and higher rates of IPV compared with Latin America (Devries et al. 2013; Peterman et al. 2019). In addition, new evidence from West Africa suggests that family structure, particularly the common practice of polygamy, is an important factor to consider in understanding program impacts on IPV in the region (Heath, Hidrobo, and Roy 2020).

We examine whether a government social protection program targeted to extremely poor, rural households in Ghana had an impact on past-year prevalence and frequency of IPV. The program is a component of Ghana's flagship social protection scheme, Livelihood Empowerment against Poverty (LEAP). We specifically evaluate LEAP 1000, which provides bimonthly cash transfers and premium waivers to enroll households into the National Health Insurance Scheme (NHIS) to women who are pregnant or have a child under the age of 12 months and who live in households that meet poverty-related criteria. LEAP 1000 was first piloted in 10 districts in northern Ghana and has since been scaled up into the LEAP program nationwide. The evaluation is a 24-month longitudinal study using quasi-experimental methods exploiting a cutoff threshold applied to a continuous program eligibility index to select the treatment and comparison groups and employing a difference-in-differences (DID) analysis. The evaluation took place from 2015 to 2017 and included 2,497 women from 131 communities across five districts in northern Ghana.

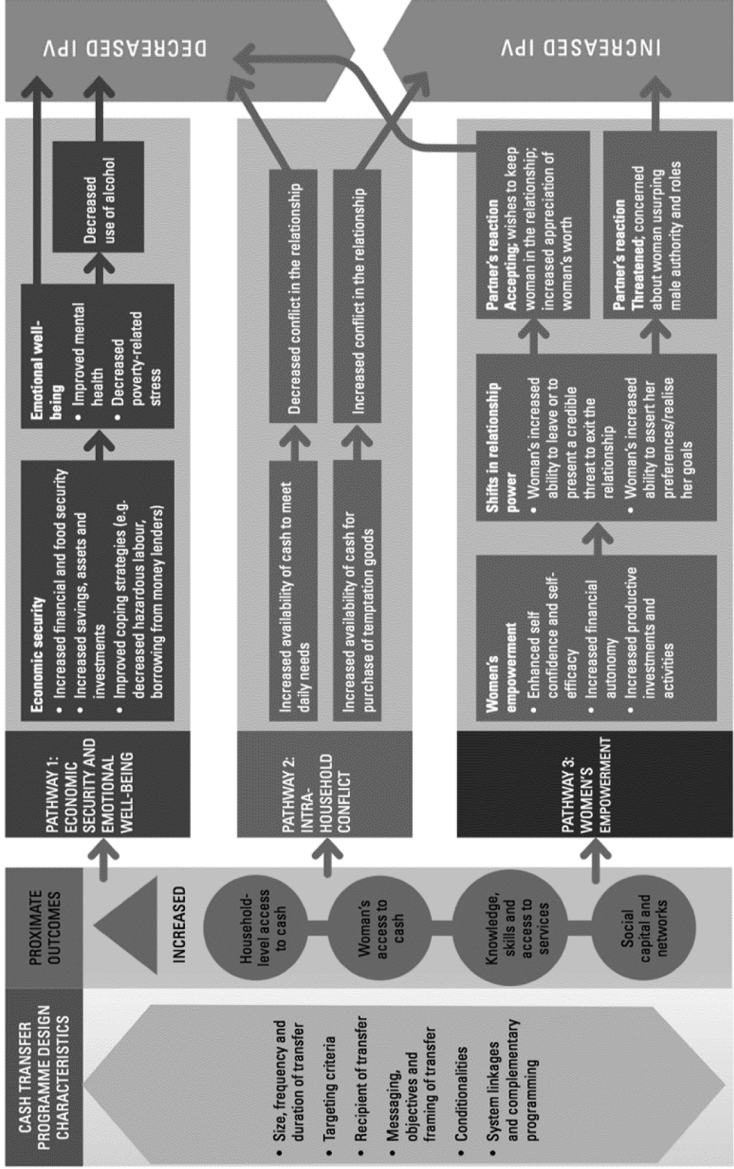
Findings indicate no impacts on the probability of experiencing IPV in the previous 12 months; however, there are significant decreases in the frequency of emotional, physical, and combined IPV in the same period (0.09–0.12 standard deviations). Further, among women in monogamous partnerships, there are decreases in 12-month experience of emotional IPV (6.2 percentage points), physical IPV (4.9 percentage points), and combined IPV (7.9 percentage points). No evidence is found supporting reductions on measures of sexual IPV or controlling behaviors. Analysis of pathways indicates that improvements in economic security (including reductions in household poverty and increases in expenditure) and women's empowerment (including increases in women's savings and social support) may account for reductions in IPV. While

we are not able to disentangle the added contribution of the health insurance waiver, we demonstrate that women participating in the program are more likely to both take up health insurance and seek health care for a recent illness. These factors may play a role in women's ability to disclose or receive information regarding IPV to health-care providers, as well as serve as a mitigating factor in their partners' decision to perpetrate IPV, particularly severe forms of visible physical IPV.

Our study contributes to the literature in a number of ways. It is among the first to examine the quantitative impacts of social protection on IPV in Africa, particularly among government programs at scale. In addition to contextual factors—namely, levels of poverty and gender norms—national programs in Africa are more likely to be unconditional compared with those in Latin America and thus have potential for diverse impacts. While there are no IPV evaluations comparing conditional models directly with unconditional models, some prior evidence suggests that conditionalities may increase women's participation in beneficial complementary programming—while others suggest that unconditional models place lower burdens on women's time and allow the most vulnerable households to retain benefits (Pellerano and Barca 2014). Similarly, although evidence from government programs are important for scalability and debates around external validity, evaluations of smaller NGO-implemented programs may be less prone to issues of implementation due to low capacity or mismanagement. Therefore, contrasting existing evidence with regional national programming is important. In addition, it is among the first study in the region to examine a “cash-plus,” or bundled, program. Further, we explicitly designed the study to explore potential behavioral mechanisms and pathways hypothesized in the literature to drive impacts. Finally, the program targets a population of poor, pregnant women and mothers of young children, with approximately one-third of the sample in polygamous marriages. Pregnant and postpartum women represent an important demographic, both for social protection targeting and health consequences of IPV, and thus findings are relevant for understanding this unique population.

II. Framework and Review of Literature

We utilize the general framework developed by Buller and colleagues (2018) based on their mixed-method review of literature linking cash transfer programs to IPV to guide our analysis. As shown in figure 1, there are three main pathways through which the literature suggests that cash transfers, including complementary services and programming, have potential to affect IPV, through (1) economic security and emotional well-being, (2) intrahousehold



CONTEXT: Gender regimes, social norms, laws and policy

Figure 1. Program theory linking cash transfers and intimate partner violence (IPV). Source: Buller et al. (2018).

conflict, and (3) women's empowerment. The potential and existence of each pathway depends critically on several factors. The first is the program design (as denoted by the figure's leftmost column), in particular, (1) the size, frequency, and duration of the transfer; (2) the target group; (3) the recipient of the transfer (or transfer beneficiary, in particular, whether female or male); (4) messaging, objectives, and framing of the transfer; (5) conditionalities; and (6) system linkages and complementary programming. The second factor of importance is the context in which the program is being implemented (as denoted by the bottom box), including underlying contextual factors such as gender regimes, social norms, and local laws and policies. These are by no means an exhaustive list, and in some contexts certain factors will be more and less important in delivering impacts.

The economic security pathway addresses the core objective of most anti-poverty programs, operating primarily through household-level mechanisms, regardless of who the beneficiary of the program is. The financial support received by households is hypothesized to strengthen the economic security of the household but also has potential to reduce poverty-related stress and improve emotional well-being. There is a large and robust set of rigorous research across regions, including in Africa, showing that the individual links within this pathway are well established (Attah et al. 2016; Bastagli et al. 2016; Handa et al. 2018b; Hidrobo et al. 2018). The marital dynamics and conflict pathway relies on behavioral changes within the household in response to cash and complementary services. For example, increased access to cash, particularly in very poor households, can lessen conflict by reducing arguments over overstretched budgets and lack of money needed for daily household expenses. Alternatively, if transfer funds are used for expenditures over which there is no household agreement—for example, to purchase alcohol or tobacco—cash could create new sources of marital conflict. Although there is some evidence, primarily qualitative, regarding the first hypothesis (Buller et al. 2016), the second is refuted in several reviews that show very little evidence for increases in spending on alcohol or tobacco in response to cash transfers (Evans and Popova 2017; Handa et al. 2018a). Finally, cash or complementary interventions have potential to empower women via increases in bargaining power, self-worth, and perceived value to the household, particularly if interventions are targeted to women (Bonilla et al. 2017). Complementary interventions can reinforce these factors as well as induce additional effects, including larger social networks and capital, female-specific savings or economic standing, and (as in this intervention) access to services, including health care. The evidence supporting effects of social protection on direct measures of empowerment is mixed, due in part to the large variation in program design, gendered cultural context, and measures used to proxy for

women's empowerment (van den Bold, Quisumbing, and Gillespie 2013). This pathway is hypothesized to have mixed effects depending on men's response. In one scenario, men may feel threatened, which could lead to increased IPV as men attempt to reassert control and their identity as the dominant decision maker and household provider. In another scenario, men may accept these changes and even gain more respect for women based on her ability to increase household welfare, leading ultimately to a decrease in IPV.

There are three main ways in which we anticipate that our program design and context is distinct from the generalized program theory, as laid out in figure 1. First, the LEAP 1000 program includes free enrollment in the NHIS for all beneficiaries (discussed in more detail in subsequent sections). Thus, the program can be thought of as social protection more broadly, or a cash-plus program. Insofar as this component encourages women to visit health facilities, there may be both increased disclosure of IPV or help seeking through increased interaction with health-care workers. Additionally, insofar as partners decrease perpetration due to a belief that they are at increased risk of being discovered as perpetrators, we posit that this program design variation component will increase the probability of reductions in IPV. Nevertheless, in contexts where IPV has high levels of acceptability and social and legal sanctions for perpetrators are rare, fear of disclosure/identification as a perpetrator may not have a large deterrent effect. Second, our target population is a unique group: pregnant women (at baseline) or mothers with infants and young children. Pregnancy is a period that can induce increased stress, and in times of stress, individual- and couple-level coping strategies may decrease, leading to increased conflict and aggression (Mitnick, Heyman, and Smith Slep 2009; Bodenmann et al. 2010; Hellmuth et al. 2013). A meta-analysis from 29 LMICs found that women who experience IPV had a 51% increased risk of pregnancy and 30% increased risk of unintended pregnancy resulting in a live birth, compared with women who did not experience IPV, suggesting a two-way cycle between IPV and pregnancy (Maxwell et al. 2017). These factors taken together suggest that women in our sample may be more vulnerable to IPV, but it is unclear how this increased risk may translate to either increased or decreased potential for program impacts. Finally, as many societies in Africa, and West Africa specifically, include diverse polygamous marital and household structures, we hypothesize this variation in partnership dynamics may affect risk of IPV and program effectiveness. Previous work in West Africa has suggested that polygamous households have higher levels of conflict and IPV (Behrman 2019). In addition, an evaluation in Mali found protective impacts of the national Jigisémèjiri program across controlling behaviors and emotional and physical IPV, ranging from 7 to 16 percentage point reductions; however, these were

driven by polygamous households (Heath, Hidrobo, and Roy 2020). The program was targeted to heads of households, who were primarily male, and reductions in men's stress and anxiety, as well as reported disputes, were greater among polygamous households—partially accounting for these differential results. As polygamy is widespread in the region, yet little evidence exists to inform whether and how program design and implementation should accommodate such household structures, we follow Heath, Hidrobo, and Roy (2020) and analyze heterogeneous impacts by marital status of the target woman.

III. Program and Context

A. *Intimate Partner Violence and Gender Relations in Ghana*

In Ghana, the most recent national estimates indicate that 39% of ever-partnered women aged 15–49 have ever experienced physical, sexual, or emotional IPV from their current or most recent partner, and 28%–35% have experienced IPV in the past 12 months (GSS, GHS, and ICF Macro 2009; IDS and GSS 2016). A recent mixed-methods study in Ghana found that socioeconomic risk factors for 12-month experience of IPV included primary education levels (compared with none or secondary), low and intermediate wealth status (compared with high), and rural residence (though sexual IPV risk was higher in urban areas; IDS and GSS 2016). Qualitative evidence from the same study reinforced that poverty, unemployment, economic stress, and associated tensions were determinants of IPV. Given the risk factors identified, it is plausible that poverty alleviation programs such as LEAP 1000 can reduce IPV through several of the pathways outlined in section II.

Cultural norms and gender power dynamics, including those that reinforce women's subjugation to men, may also contribute to IPV. The proportion of both men and women in Ghana who report that it is acceptable for men to perpetrate violence against their wives is high (Mann and Takyi 2009; IDS and GSS 2016), particularly in scenarios where women are seen as not fulfilling marital roles and obligations, highlighting the link between gender norms and violence (Mann and Takyi 2009). Relatedly, bride-price, widely practiced in Ghana, may reinforce the idea among some men that they "own" their wives (Mann and Takyi 2009), contributing further to power differentials between men and women. Polygamy is formally prohibited in Ghana under civil code and has declined over the past decade, but restrictions are rarely enforced. According to most recent nationally representative statistics, 16% of married women have at least one cowife, with 2.4% reporting two or more wives (GSS, GHS, and ICF International 2015). This percentage varies by region, with the highest rates found in the regions of the current study, the Northern and Upper East Regions (34% and 27% with at least one cowife, respectively).

Despite high rates of social acceptability of IPV, Ghana has made significant progress in addressing IPV in national legislation, starting with the Domestic Violence Act (Act 732) enacted in 2007. The legislation is seen as taking a broad, culturally sensitive approach, recognizing that perpetrators do not need be a legal spouse, including acts of harassment and economic and psychological abuse, and allowing for out-of-court settlement via alternative dispute mediation (IDS and GSS 2016). However, there are many challenges to implementation of the law and social services for survivors, including limited legal staff, counseling, and emergency shelters, among others.

B. LEAP 1000

Ghana's LEAP 1000 is an extension of the government of Ghana's flagship social protection program, LEAP, which is designed to fight extreme poverty and improve resilience among vulnerable populations. Started in 2008 with 1,654 extremely poor households in 21 districts, LEAP is implemented by the LEAP Management Secretariat at the Ministry of Gender, Children and Social Protection (MoGCSP). It provides bimonthly cash payments to extremely poor households and was originally targeted to households with orphans and vulnerable children, the elderly with no productive capacity, and persons with acute disability. Recognizing that the original LEAP targeting led to few eligible households with young children, LEAP 1000 was designed in 2015 as a pilot extension to address poverty-related drivers of poor nutritional outcomes in the critical window before young children's first 1,000 days. The program was first rolled out in 10 districts in northern Ghana where rates of chronic malnutrition remain persistently high. Communities in these districts were targeted using district-level official poverty rankings based on census data, and LEAP 1000 was rolled out to communities not already participating in the larger LEAP program. LEAP 1000 is now mainstreamed into the overall LEAP program nationwide and represents approximately 8% of all LEAP beneficiary households (LEAP 1000 Evaluation Team 2018). As of December 2017, LEAP reached more than 213,000 extremely poor families in all 216 districts of Ghana, with plans to further expand in the future.

LEAP 1000 provides unconditional cash transfers to households on a bimonthly basis to women via electronic debit cards, with amounts varying based on number of eligible household members.³ On average, transfers are equivalent

³ Prior to March 2016, payments were made manually in cash, and afterward payments were made via an electronic payment system, which relies on biometric (fingerprint) identification. The amounts of payments range from C64 for one eligible member to C76 for two eligible members, C88 for three eligible members, and a maximum of C106 for households with four or more eligible members.

to 13.9% of preprogram household consumption (corresponding to either C64, C76, C88, or C106, depending on household demographic composition). To be deemed eligible, women had to be pregnant or have a child under the age of 12 months. An innovative feature of LEAP 1000 is the link of transfers to a demand side intervention meant to encourage use of health services. LEAP beneficiaries and members of their households are eligible for exemptions of all fees, including card processing fees, premiums, and renewals to enroll in the NHIS.⁴ This gives households access to free outpatient and inpatient services, dental services, and maternal health services (however, enrolment is not automatic and must be renewed annually in person).

Targeting for LEAP 1000 occurred between March and July 2015 via mobile units, which advertised the program and encouraged eligible women to apply. Women had to present antenatal cards if pregnant or birth certificates and weighing cards for children under 12 months during enrolment. Then, those who applied were subsequently subjected to the standard LEAP proxy means test (PMT) to ensure they met the poverty criteria. Payments began in September 2015, and households in the evaluation sample studied here received 13 payments between baseline and endline surveys. As described in more detail in section IV.A, data used in this paper come from a 2-year, mixed-method impact evaluation. Findings indicated that LEAP 1000 had good operational performance and delivery, with payments consistently delivered on time, transparency of the program, low leakage, and high reported satisfaction of payment method (LEAP 1000 Evaluation Team 2018).

IV. Data and Methods

A. Data and Evaluation Design

Data used in this study come from an impact evaluation carried out by UNICEF Office of Research–Innocenti and the University of North Carolina at Chapel Hill (UNC), in collaboration with the Institute of Statistical, Social and Economic Research (ISSER) of the University of Ghana and Navrongo Health Research Center (NHRC). LEAP 1000 was originally piloted in 10 districts in northern Ghana, and these districts were chosen in collaboration with the United States Agency for International Development. Five of these 10 districts (Yendi, Karaga, East Mamprusi in the Northern Region and Bongo and Garu Tempane in the Upper East Region) were selected purposively for the impact evaluation to reflect demographic diversity of districts comprising the pilot (for a map of the study region, see fig. A1; figs. A1 and A2 are available in the online

⁴ Premium amounts are stipulated at the district level within the range set by the government of C22–C48 per individual (Palermo et al. 2019).

appendix). The study design to examine impacts is a quasi-experimental methodology exploiting scores for the PMT used for targeting that take into account household poverty-related characteristics. This approach was pursued as randomization was not an option due to political constraints around program roll-out. Targeting was done through mobile recruitment; in selected districts, mobile units were deployed to advertise the program and encourage eligible women to apply. Data on household demographics and living conditions were collected from those applying to determine PMT scores. After these data were assessed, the PMT score cut point for program eligibility was determined by the government based on the budget available to enroll approximately 6,000 households to receive transfers for at least 3 years. The quantitative study underwent ethical review by the Ethics Committee for the Humanities of the University of Ghana, and the qualitative study underwent review by the UNC Institutional Review Board and the NHRC Institutional Review Board. The trial is registered in the International Initiative for Impact Evaluation (3ie) Registry for International Development Impact Evaluations (RIDIE study ID no. 55942496d53af).

The sampling frame used was targeting data provided by MoGCSP and included 8,058 households who applied for LEAP 1000. According to the cutoff for eligibility determined by MoGCSP, 3,619 of those households qualified for the program in the five districts selected for the study. Based on primary outcomes of interest related to child nutritional status, it was determined that a sample size of 2,500 was needed for the evaluation. Households in the targeting data were sorted according to their PMT score, and the evaluation aimed to sample 1,250 households above the threshold (comparison households) and 1,250 households below the threshold (treatment households). Ten percent of the required sample size was also identified for replacement purposes, if needed. Baseline surveys, including household and health facility surveys, were conducted from July to September of 2015 using computer-assisted personal interviewing (CAPI). Enumerators were all female, and teams were divided across districts based on language groups, including Dagbani, Mampruli, Frafra, Hausa, and Kussal. The baseline survey was administered to 2,497 women who were either pregnant or recently pregnant (within the past 14 months) and from poor, rural households meeting specific poverty and demographic targeting criteria. Among these women interviewed, 2,434 women aged 15–49 were eligible for the IPV module as they were currently or previously in a relationship (63 women that never married or cohabited were not eligible). However, because of our interest in establishing whether the program had an impact on IPV, we further restrict the analysis to only those women currently married or cohabiting (dropping 40 women, for a total of 2,394). An additional 60 women were not

asked the IPV questions, as no privacy was ensured for the administration of the module. The final baseline analytic sample was 2,331 women who answered all questions on IPV and had complete data on pathway and control variables of interest for this analysis. Endline surveys, including household and community surveys, were collected between June and August 2017. A total of 2,083 women in the original analytic sample were both reinterviewed and administered the IPV module at endline. Figure A2 displays the full and analytic sample for this analysis.

B. Key Measures

The main outcomes in this study are women's experience of IPV in the past year (12 months), including controlling behaviors and emotional, physical, and sexual violence. Past-year measures are utilized instead of lifetime measures, as the former were potentially affected by the intervention. Question items are a modified form of the Conflict Tactics Scale and were adapted from the World Health Organization (WHO) Multi-Country Study on Women's Health and Domestic Violence (Garcia-Moreno et al. 2006). Female enumerators administered the survey instrument, and specialized training was provided to ensure enumerators were familiar with the ethical and safety protocol for IPV. Further, enumeration for the IPV module was conducted only when it was possible to interview the woman in private, and referral numbers for district social welfare officers were provided to all women without further identifying information in the event that they would like to call and seek help related to IPV experiences. Alternatively, women were given the option of having the enumerator record their contact information and the best time to find them in a referral form, requesting that a district social welfare officer contact them directly. District social welfare officers in the study districts were consulted prior to data collection and were made aware of this response plan.

In total, 20 behaviorally specific questions were asked regarding 12-month measures of IPV across controlling behaviors and emotional, physical, and sexual violence. Women were coded as having experienced controlling behaviors if they answered affirmatively to their husband or partner exhibiting any of the following seven behaviors within the previous 12 months: (1) tries to keep you from seeing your friends, (2) tries to restrict contact with your family, (3) insists on knowing where you are at all times, (4) ignores you and treats you indifferently, (5) gets angry if you speak with another man, (6) is often suspicious that you are unfaithful, or (7) expects you to ask his permission before seeking health care. Women were coded as having experienced emotional IPV if they responded affirmatively to their husband or partner exhibiting any of the following four behaviors within the previous 12 months: (1) insults you or makes you feel bad

about yourself, (2) belittles or humiliates you in front of other people (3) does things to scare or intimidate you on purpose, or (4) threatens to hurt you or someone you care about. Women were coded as having experienced physical IPV if they responded affirmatively to their husband or partner exhibiting any of the following seven behaviors within the past 12 months: (1) pushes you, shakes you, or throws something at you; (2) slaps you; (3) twists your arm or pulls your hair; (4) punches you with his fist or with something that could hurt you; (5) kicks you, drags you, or beats you up; (6) tries to choke you or burns you on purpose; or (7) threatens or attacks you with a knife, gun, or any other weapon. Finally, women were coded as having experienced sexual IPV if they answered affirmatively to their husband or partner exhibiting any of the following two behaviors within the previous 12 months: (1) physically forces you to have sexual intercourse with him even when you do not want to or (2) forces you to perform any sexual acts you do not want to.⁵

In addition to the typologies of IPV above, we create a combined indicator of any IPV, defined as women who have experienced any emotional, physical, or sexual IPV. Finally, in addition to the discrete IPV outcomes, following variations in recent literature, we analyze measures taking into account frequency of violence experienced, where responses of “none” are coded as 0 for each behaviorally specific outcome, responses of “sometimes” are coded as 1, and responses of “often” are coded as 2 (Haushofer et al. 2019; Heath, Hidrobo, and Roy 2020). This means that for the severity measure related to physical IPV, the raw frequency ranges from 0 to 14, as there are seven behaviorally specific questions. We then standardize the frequency measures by subtracting the comparison group mean for each round and dividing by the comparison standard deviation. While this construction makes assumptions about the comparability of each act of violence, as well as the value of categorical responses (“sometimes” and “often”), we provide robustness checks on functional form using aggregation via principal component analysis (PCA). These frequency measures were created for emotional, physical, and sexual violence but not for controlling behaviors, where frequency questions were not asked. For controlling behaviors, we simply sum each behaviorally binary-specific indicator, and the raw frequency ranges from 0 to 7. We use standardized indexes for the impact analysis but present raw frequencies for descriptive tables and figures for ease of interpretation.

⁵ We treated missing values in the IPV indicators as follows: We created a flag indicator for whether the respondent had at least one missing answer to any question for emotional, physical, and sexual IPV. At baseline, we dropped those observations that had at least one missing value in any of the indicators. At endline, we considered as part of the attritors those that had some missing in any of the responses. The number of excluded women is low and can be found in fig. A2.

We complement the analysis with indicators representing pathways of economic security and emotional well-being, intrahousehold conflict, and women's empowerment following the framework laid out in figure 1. We analyzed indicators for the first pathway as follows: (1) household-level poverty (binary as per the national poverty line), (2) household-level extreme poverty (binary as per the national extreme poverty line), (3) household adult equivalent monthly expenditures (Ghanian cedis, \mathcal{C}), (4) household adult equivalent monthly food expenditures (\mathcal{C}), (5) woman's perceived stress (Cohen perceived stress scale), and (6) women's life satisfaction (binary, satisfied with life some/most/all of the time). These indicators are meant to represent the impact of the program on household-level economic security and overall emotional well-being. Indicators for the second pathway include the following: (1) partner often drunk (binary), (2) partner sometimes/often drunk (binary), and (3) household monthly expenditure on alcohol (\mathcal{C}). These indicators are meant to capture incidence of intrahousehold conflict. Indicators for the third pathway include the following woman-level indicators: (1) agency index (aggregate of agency in six items), (2) locus of control based on a vignette, (3) decision-making ability assessed based on a vignette, (4) saving money (binary), (5) amount of money saved in previous month (\mathcal{C}), (6) social support score (aggregate of social support in eight items), (7) valid NHIS card (binary), and (8) sought care for illness or injury in the past 2 weeks (binary). These indicators are meant to represent aspects of women's empowerment, including social and financial measures, as well as increased linkages to the health sector via the health insurance waiver. Pathway indicators are not a full set of all possible pathways but are categorized and build on the framework presented by Buller et al. (2018). We note both limitations and potential corroborating evidence from the main impact evaluation in the discussion section. All monetary values are adjusted to endline (August 2017) values using a price index constructed using Greater Accra as the reference region. For all index or scale indicators, we present raw values in descriptive tables but analyze standardized variables similar to IPV outcomes in regression analysis. Table A1 (tables A1–A10 are available in the online appendix) provides a detailed description of the construction of these indicators.

C. Statistical Analysis

To examine program effects on IPV and pathways, the study exploited the use of a cutoff threshold applied to a continuous program eligibility index (PMT score) to identify treatment and comparison groups. Thus, results are valid for the population around the threshold and do not represent the full distribution of socioeconomic status in study communities. As a discontinuity is used for the assignment of the treatment, we verify the conditions that normally must

hold for a typical regression discontinuity design approach to be valid in our analysis, including no manipulation at the threshold or knowledge of the formula by potential beneficiaries to influence their eligibility status. These robustness checks are given in the baseline evaluation report (LEAP 1000 Evaluation Team 2016). The formal test of balance between comparison and treatment groups is also reported for the current sample in tables 2 and 3 (col. 10). In the overall targeting exercise conducted, the PMT scores ranged from -3.294 to 4.601 z -scores, while in the evaluation sample, the PMT scores range from -0.571 to 0.324 z -scores, with the program eligibility cutoff at -0.106 z -scores (standard deviation = 0.32).⁶ Households were systematically sampled around the cutoff for evaluation purposes, and the resulting households in the treatment sample are within 0.46 standard deviations of the cutoff, and all comparison households are within 0.43 standard deviations of the cutoff. Given the small threshold of the distribution of sampled households around the PMT score, a simple DID was used to evaluate the impacts of the program.⁷

$$Y_{ijt} = \beta_0 + \beta_1 P_{ij} + \beta_2 T_t + \beta_3 P_{ij} \times T_t + \beta_4 \mathbf{X}_{ijt} + \lambda_j + \varepsilon_{ijt}. \quad (1)$$

In equation (1), Y_{ijt} is the IPV or pathway outcome for woman i who lives in community j at time t ; P_{ij} is a binary variable equal to 1 if woman i in community j is eligible for the LEAP 1000 program and 0 if she is ineligible; T_t is a binary time variable equal to 1 if the observation is from the endline and 0 if from the baseline; $P_{ij} \times T_t$ is the interaction term between LEAP 1000 and time; \mathbf{X}_{ijt} represents a set of observed individual and household characteristics, including the PMT score; λ_j represents a full set of community fixed effects included in the model to control for unobserved characteristics of the communities that do not change in the evaluation interval; and ε_{ijt} is the error term. The intent-to-treat (ITT) program impact is given by β_3 , and standard errors were adjusted for clustering at the community level.

Control variables utilized in the analysis included individual- and household-level indicators and community-level fixed effects.⁸ At the individual level, we

⁶ Due to sensitivity regarding levels of the PMT score and program eligibility at the national level, we have converted all descriptive statistics displaying PMT scores to z -scores but maintain levels as control variables in regressions.

⁷ The choice of the DID approach was supported by tests on the most appropriate functional form. As suggested by Lee and Lemieux (2010), the Akaike information criterion (AIC) provides an indication of the most appropriate functional form. We test for linear, with and without the treatment \times PMT interaction, and quadratic, with and without the treatment \times PMT interaction. The linear functional form presents the lowest AIC values, an indication of preferred functional form.

⁸ For sampling purposes, a household was defined as a person or group of related or unrelated persons who live together in the same housing unit, who acknowledge one adult male or female as the head of the household, who share the same housekeeping and cooking arrangements, and who are considered

controlled for age (in years) and indicators for any formal education of both woman and partner.⁹ Further, in analysis of the full sample, we control for being in a polygamous partnership (reference group is nonpolygamous or, for ease of description, a monogamous partnership). Household-level control variables included household size and the PMT score.¹⁰ We report the means of all district indicator variables in descriptive balance and attrition tables; however, as we include community-level fixed effects, these indicators are not included in regression analysis (districts: East Mamprusi, Karaga, and Yendi in the Northern Region and Bongo and Garu Tempene in the Upper East Region). To assess variations by family structure, we interact the indicator for polygamous partnership with the treatment indicator, time indicator, and impact estimate (creating a triple interaction term):¹¹

$$\begin{aligned}
 Y_{ijt} = & \beta_0 + \beta_1 P_{ij} + \beta_2 T_t + \beta_3 P_{ij} \times T_t + \beta_4 \text{Poly}_{ij} \\
 & + \beta_5 P_{ij} \times \text{Poly}_{ij} + \beta_6 T_t \times \text{Poly}_{ij} \\
 & + \beta_7 T_t \times P_{ij} \times \text{Poly}_{ij} + \beta_8 \mathbf{X}_{ijt} + \lambda_j + \varepsilon_{ijt}.
 \end{aligned} \tag{2}$$

We report both the triple interaction term, which indicates the differential impact of the program for women in polygamous households (β_7) compared with the impact on women in monogamous households (β_3). In addition, we calculate the net effect of the treatment on polygamous households in all regressions ($\beta_3 + \beta_7$). The estimates of heterogenous impacts by household structure are summarized in the even-numbered columns of tables 5–8.

as one unit. For polygamous households, enumerators were instructed as follows: “If a man does not live in the same house as his wife or wives, the man and his wife/wives must be considered as separate households. Any children and others must be included in the household of the one in whose house they sleep. Thus, if a man and his wife live in different houses and their two sons sleep in the father’s house after eating in their mother’s house, the children must be included in the father’s household, while the mother is listed as a single-person household.”

⁹ We use any formal education, as the variation in educational attainment is low in our sample: only 19% of women have had any formal education, and only 20% of partners have had any formal education. Using attainment instead of a binary indicator does not change results.

¹⁰ Although we control for the PMT score in all regression analysis, our results (available on request) are robust to excluding this control variable.

¹¹ We use marital status at baseline in order to avoid issues of endogenous response to the treatment. There are indeed some women who change marital status from baseline to endline, which could be due to actual changes (e.g., partner takes another wife, partnerships dissolve) or data collection errors. When we examine the data, 162 women (7.78%) change marital status from being in a monogamous relationship at baseline to a polygamous one at endline, while 106 (5.09%) change from being in a polygamous marriage at baseline to a monogamous one or to not in a relationship. In addition to ensuring this change does not differ by treatment status, we also run a robustness check using marital status at endline and get consistent results.

TABLE 1
 ATTRITION OF WOMEN ANSWERING THE IPV MODULE AT BASELINE,
 OVER THE PANEL PERIOD, BY TREATMENT STATUS

	N	All	Comparison	Treatment	p-Value of Difference
Attrition rate	2,311	.10	.10	.09	.35

Note. Shown are the p -values obtained from a Wald test on the equality of means of treatment and comparison attrition rates. Standard errors are clustered at the community level.

D. Attrition

Attrition over the panel period has potential to threaten the internal validity and generalizability of the findings. Overall attrition in our analytic sample is approximately 10%, slightly higher than the overall household sample rate of 6.6%, and does not vary significantly between treatment and comparison samples (p -value = .35 using a simple t -test; table 1). Further, we investigate whether the sample lost to follow-up differs significantly from our panel sample in terms of IPV outcomes, control variables, or pathway indicators (tables 2, 3). Column 7 shows the mean difference between the sample lost to follow-up in the treatment group, as compared with the same in the comparison group. Column 8 shows the p -value of this difference derived from a regression using treatment to predict the specific indicator, controlling for the PMT score and restricting to attriters. Table 2 shows that across 12 background characteristics and 14 pathway variables, only one is significant at the $p < .05$ level (there is a statistically significantly higher proportion of the treatment group lost to follow-up as compared with the comparison group in Bongo district). Table 3 shows that across 15 outcome indicators, the only ones to show evidence of differential attrition at $p < .05$ or lower are those measuring the frequency of sexual IPV (means of those lost to follow-up in the comparison group are slightly higher at .28 vs. the treatment group at .26). These results indicate that the potential for bias in overall findings due to attrition is low. Despite these promising results, we do find that women leaving our sample across both treatment arms differ in terms of background characteristics from those who remain in our sample (p -values shown in cols. 3 and 6). For example, women who leave the sample are generally younger, better educated, in monogamous partnerships (vs. polygamous), and live in smaller households. This may be reflective of rural-to-urban migration or other mobility patterns, although these differences are not generally observed for pathway variables, including indicators of economic standing.

V. Results

A. Descriptive Results

We first investigate the internal validity of the analysis via baseline balance tests of background characteristics at the individual and household levels, IPV

outcomes, and pathway indicators between the treatment and comparison groups (tables 2 and 3, mean values in cols. 2 and 5 for the comparison and treatment, test of difference in col. 10). The average age of women in the sample is approximately 29–31 years, and only about one out of five women has any formal education. On average, partners are older (36–38 years old) with similarly low levels of formal education. Approximately 31%–32% of the analysis sample of women report being in polygamous partnerships. Average household size is six to seven individuals, and monthly average per capita expenditures are approximately C120, with 86%–88% of the sample under the national poverty line. Across all indicators, there is only one showing significant differences between treatment and control groups at baseline at the $p < .05$ level: the indicator of having sought care for an illness or injury in the previous 2 weeks (col. 10).

For our key outcome indicators, at baseline, approximately 81%–82% of the women experienced any controlling behaviors and 59%–62% any emotional, 34%–38% any physical, and 18%–19% any sexual IPV in the previous 12 months. When examining aggregate indicators, approximately 65%–68% experienced any emotional, physical, or sexual violence in the previous 12 months. These rates are higher than those reported in the most recent Demographic and Health Surveys collecting IPV among ever-married women, estimated nationally at 31% for emotional, 18% for physical, and 5% for sexual IPV in the previous 12 months (GSS, GHS, and ICF Macro 2009). This suggests that our sample of poor and pregnant or recently pregnant women are at higher risk of IPV, at nearly double the rates reported in the national sample. Similar to background characteristics and pathway indicators, there are no IPV indicators showing significant differences between treatment and comparison groups at baseline at the $p < .05$ level while controlling for PMT score.

As we are particularly interested in the differential effects across diverse household structures, we also provide descriptive statistics of outcomes and controls for women in monogamous and polygamous households. Table 4 shows that women in monogamous and polygamous partnerships differ significantly on background demographics as well as IPV outcomes but are similar with regards to pathway indicators. For example, women in monogamous partnerships tend to be younger and more educated—with partners following the same trend. In addition, the age and education gaps between partners are larger for polygamous partnerships (on average, a 10-year gap vs. 6 years for monogamous partnerships). Only 9% of women in polygamous partnerships have any formal education (vs. 24% in monogamous partnerships) and only 13% of partners in polygamous partnerships have any formal education (vs. 23% in monogamous partnerships). IPV prevalence is higher for all measures

TABLE 2
BASELINE BALANCE AND DIFFERENTIAL ATTRITION BASED ON BACKGROUND CHARACTERISTICS AND PATHWAY INDICATORS
AMONG WOMEN ANSWERING IPV MODULE AT BASELINE, BY TREATMENT STATUS

	Comparison		p-Value (3)	Treatment		p-Value (6)	Difference (Attritors)		p-Value (8)	Balance (Panel)		
	Attritors (1)	Panel (2)		Attritors (4)	Panel (5)		Col. 1 – Col. 4 (7)	Col. 2 – Col. 5 (9)		p-Value (10)		
A. Background Characteristics												
Woman's age (years)	26.64	28.77	.00	26.80	30.68	.00	.61	.75	.51	.37	.75	
Woman any formal education (0,1)	.33	.20	.00	.36	.18	.00	.11	.33	.70	.01	.33	
Monogamous marriage or consensual union (0,1)	.79	.69	.01	.75	.68	.14	-.01	.95	.72	.01	.95	
Polygamous marriage (0,1)	.21	.31	.01	.25	.32	.14	.01	.95	.72	-.01	.95	
Partner's age (years)	34.41	36.31	.02	35.05	38.34	.00	-.70	.78	.82	.19	.78	
Partner any formal education (0,1)	.22	.22	.96	.16	.18	.52	-.05	.61	.40	-.03	.61	
Household size	5.60	6.38	.00	5.85	7.03	.00	-.08	.87	.11	.32	.87	
District East Mamprusi	.29	.35	.24	.27	.33	.18	-.15	.21	.48	-.03	.21	
District Karaga	.15	.21	.11	.12	.18	.06	.02	.79	.63	.02	.79	
District Yendi	.10	.16	.05	.14	.17	.27	-.02	.80	.36	.03	.80	
District Bongo	.18	.14	.21	.28	.16	.01	.20	.05	.37	.03	.05	
District Garu-Tempene	.28	.14	.00	.20	.16	.33	-.05	.60	.18	-.05	.60	

	B. Pathway Indicators									
Poverty status (0,1)	88.24	85.83	.45	90.83	88.02	.36	5.08	.53	-1.41	.60
Extreme poverty status (0,1)	62.18	59.82	.66	64.22	63.21	.86	1.02	.93	-4.25	.30
Household monthly AE expenditure (£)	128.69	122.61	.44	113.35	118.30	.56	-26.06	.31	11.75	.08
Household monthly AE food expenditure (£)	99.50	90.61	.22	83.29	87.34	.49	-32.03	.14	4.82	.34
Cohen perceived stress scale (10-50)	32.39	31.61	.09	31.69	31.83	.76	-26	.79	-1.12	.77
Satisfied with life (some of the time or more; 0,1)	.56	.58	.64	.60	.58	.71	-.04	.75	.01	.79
Partner sometimes drunk (0,1)	.03	.02	.92	.03	.04	.44	.00	.94	.02	.11
Partner sometimes or often drunk (0,1)	.13	.14	.63	.12	.17	.18	.02	.85	-.01	.74
Household monthly expenditure on alcohol (£)	.56	1.00	.33	.10	1.53	.02	-.93	.15	2.03	.30
Women's agency index (6-30)	14.25	14.32	.87	14.92	14.43	.36	.97	.44	-.24	.56
Women saving any money (0,1)	.08	.09	.41	.02	.08	.00	-.10	.09	-.04	.09
Amount of money saved previous month (£)	3.67	5.15	.33	.84	3.91	.01	-4.17	.41	-2.78	.12
Social support score (0-100)	51.08	53.46	.18	52.47	52.26	.92	-3.18	.60	-3.31	.09
Sought care for illness in past 2 weeks (0,1)	.63	.61	.91	.56	.57	.86	.13	.53	-.17	.04
N	119	1,023		109	1,060					

Note. Shown are p-values and differences from regressions of each characteristic listed on treatment and controlling for proxy means test score. Sample N = 1,200 for those who sought care if ill or injured in previous 2 weeks. Standard errors are clustered at the community level. For full descriptions and details of pathway indicators, see table A1. Pathway indicators of women's locus of control and decision-making were not collected at baseline and thus are not reported here. AE = adult equivalency.

TABLE 3
BASELINE BALANCE AND DIFFERENTIAL ATTRITION BASED ON 12-MONTH IPV INDICATORS, BY TREATMENT STATUS

	Comparison			Treatment			Difference (Attritors)			Balance (Panel)	
	Attritors	Panel	p-Value	Attritors	Panel	p-Value	Col. 1 – Col. 4	p-Value	Col. 2 – Col. 5	p-Value	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Experienced controlling behaviors (0,1)	.82	.81	.94	.83	.82	.89	-.02	.85	.03	.41	
Frequency controlling behaviors (z-scores)	.15	-.03	.07	-.02	-.04	.86	-.39	.13	.05	.60	
Frequency controlling behaviors (sum; 0–7)	2.78	2.45	.07	2.46	2.42	.86	-.72	.13	.09	.60	
Experienced emotional IPV (0,1)	.59	.59	.99	.61	.62	.75	.06	.58	.03	.54	
Frequency emotional IPV (z-scores)	.21	-.03	.05	.26	.10	.23	-.16	.55	.12	.22	
Frequency emotional IPV (sum; 0–8)	1.43	1.08	.05	1.50	1.27	.23	-.23	.55	.17	.22	
Experienced physical IPV (0,1)	.34	.34	.86	.35	.38	.50	-.13	.31	.01	.69	
Frequency physical IPV (z-scores)	.09	-.01	.33	.18	.09	.49	-.22	.47	.07	.48	
Frequency physical IPV (sum; 0–14)	1.06	.88	.33	1.22	1.05	.49	-.38	.47	.11	.48	
Experienced sexual IPV (0,1)	.23	.18	.20	.22	.19	.44	-.07	.49	-.01	.87	
Frequency sexual IPV (z-scores)	.13	-.02	.13	.10	.04	.57	-.48	.04	.01	.88	
Frequency sexual IPV (sum; 0–4)	.28	.19	.13	.26	.22	.57	-.28	.04	.01	.88	
Experienced emotional/physical/sexual IPV (0,1)	.62	.65	.64	.64	.68	.45	.03	.77	.05	.27	
Frequency emotional/physical/sexual IPV (z-scores)	.17	-.02	.08	.23	.10	.33	-.28	.33	.09	.34	
Frequency emotional/physical/sexual IPV (sum; 0–26)	2.76	2.15	.08	2.97	2.54	.33	-.89	.33	.30	.34	
N	119	1,023		109	1,060						

Note. Reported are p-values and differences from regressions on treatment indicator controlling for proxy means test score. Standard errors are clustered at the community level.

TABLE 4
BACKGROUND CHARACTERISTICS, PATHWAY VARIABLES, AND IPV OUTCOMES
BY MONOGAMOUS AND POLYGAMOUS HOUSEHOLD STRUCTURE

	Full Sample (1)	Monogamous Sample (2)	Polygamous Sample (3)	p-Value of Difference (Col. 2 = Col. 3) (4)
A. Background Characteristics				
Woman's age (years)	29.74	28.66	32.08	.00
Woman any formal education (0,1)	.19	.24	.09	.00
Partner's age (years)	37.34	35.08	42.22	.00
Partner any formal education (0,1)	.20	.23	.13	.00
Age difference (partner – woman)	7.60	6.43	10.14	.00
Difference (partner – woman) any education	.01	–.00	.04	.05
Household size	6.71	5.93	8.41	.00
Proxy means test score (z-score)	–.00	.01	–.02	.50
District East Mamprusi	.34	.30	.40	.00
District Karaga	.20	.17	.25	.02
District Yendi	.17	.18	.14	.05
District Bongo	.15	.20	.04	.00
District Garu-Tempene	.15	.14	.17	.16
B. Pathway Indicators				
Poverty status (0,1)	.87	.87	.88	.58
Extreme poverty status (0,1)	.62	.61	.63	.49
Household monthly AE expenditure (€)	120.41	122.31	116.31	.18
Household monthly AE food expenditure (€)	88.95	90.45	85.71	.14
Cohen perceived stress scale (10–50)	31.72	31.66	31.86	.45
Satisfied with life (some of the time or more; 0,1)	.58	.60	.55	.05
Partner often drunk (0,1)	.03	.03	.04	.49
Partner sometimes or often drunk (0,1)	.15	.15	.17	.38
Household monthly expenditure on alcohol (€)	1.27	1.51	.74	.15
Women's agency index (6–30)	14.38	14.45	14.23	.32
Woman saving any money (0,1)	.08	.08	.10	.08
Amount of money saved previous month (€)	4.52	3.83	6.00	.15
Social support score (0–100)	52.85	52.51	53.58	.28
Valid National Health Insurance Scheme card (0,1)	.52	.51	.53	.25
Sought care for illness in past 2 weeks (0,1)	.59	.60	.58	.55
C. IPV in the Past 12 Months				
Experienced controlling behaviors (0,1)	.82	.79	.88	.00
Frequency controlling behaviors (sum; 0–7)	2.44	2.29	2.75	.00
Experienced emotional IPV (0,1)	.60	.57	.67	.00
Frequency emotional IPV (sum; 0–8)	1.18	1.07	1.41	.00
Experienced physical IPV (0,1)	.36	.32	.44	.00
Frequency physical IPV (sum; 0–14)	.97	.82	1.28	.00
Experienced sexual IPV (0,1)	.19	.17	.23	.00
Frequency sexual IPV (sum; 0–4)	.20	.18	.26	.00
Experienced emotional/physical/sexual IPV (0,1)	.66	.63	.73	.00
Frequency emotional/physical/sexual IPV (sum; 0–26)	2.35	2.07	2.95	.00
N	2,083	1,423	660	

Note. Reported are p-values from Wald tests on the equality of means of polygamous and monogamous samples for each variable. IPV z-scores are not reported; however, significant differences are in line with raw frequencies. For full description and details of outcome indicators, see table A1. Pathway indicators of women's locus of control and decision-making were not collected at baseline and thus are not reported. Standard errors are clustered at the community level. AE = adult equivalency.

in polygamous partnerships (levels ranging from 6 to 12 percentage points higher for the experience measures, depending on the indicator). On average, there are few systematic differences across pathway indicators, suggesting that in terms of household economic standing, intrahousehold conflict, and women's empowerment, the samples are similar.

B. Program Impacts on IPV

Table 5 summarizes the ITT estimates from the DID model of the impact of LEAP 1000 on IPV measures. Panel A shows impacts for binary experience measures, while panel B shows impacts for frequency *z*-scores. For each outcome, a regression estimating average program effects (eq. [1], odd columns) and an interacted model by family structure is shown (eq. [2], even columns). Net impacts by family structure and endline comparison means are included below each estimate (note that by definition, the *z*-score means will be close to or equivalent to zero). Estimates in panel A show consistently negative coefficients for the experience of IPV but fail to achieve statistical significance at conventional levels. For example, the impact coefficient for emotional IPV is -2.9 percentage points (95% confidence interval [CI]: -7.8 to 1.9 percentage points), the impact coefficient for physical IPV is -3.6 (95% CI: -8.6 to 1.4 percentage points), and the impact coefficient on aggregate IPV is similar (-3.0 percentage points with 95% CI: -8.1 to 2.0 percentage points). However, impact estimates are larger and significant in even-numbered columns for these three indicators where interactions with family structure are taken into account. In these models, there is a 6.2 percentage point reduction in experiencing emotional IPV, a 4.9 percentage point reduction in any physical IPV, and a 7.9 percentage point reduction in any emotional, physical, or sexual IPV among women in monogamous relationships. In contrast, there is no significant net impact on women in polygamous households, and coefficients are mostly close to zero or positive. Estimates in panel B show that LEAP decreases 12-month frequency of emotional IPV (by 0.11 standard deviations), physical IPV (by 0.09 standard deviations), and aggregate measures of combined emotional, physical, or sexual IPV (by 0.11 standard deviations). These impacts appear to be similar between the average effect model and the model accounting for family structure, where coefficients are similar in magnitude and significance level. Net treatment effects for polygamous households in panel B are not significant, but they are negative and of similar or lower magnitude as the average coefficients. There are no impacts across any models for controlling behaviors or sexual IPV alone. As predicted by descriptive statistics, in all cases, being in a polygamous partnership is associated with higher levels of both experience and frequency of IPV, while controlling for background characteristics such as

TABLE 5
OLS IMPACT ESTIMATES OF GHANA LEAP 1000 ON 12-MONTH IPV, INCLUDING INTERACTION BY FAMILY STRUCTURE (N = 4,166)

	Controlling Behavior		Emotional IPV		Physical IPV		Sexual IPV		Emotional, Physical, or Sexual IPV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	A. Experienced IPV									
Impact	-.022 (.022)	-.034 (.028)	-.029 (.025)	-.062 (.029)**	-.036 (.025)	-.049 (.028)*	-.009 (.021)	-.027 (.028)	-.030 (.026)	-.079 (.032)**
Polygamous marriage	.052 (.013)**	.074 (.024)**	.091 (.020)**	.148 (.040)**	.071 (.020)**	.146 (.031)**	.057 (.014)**	.123 (.028)**	.082 (.018)**	.189 (.039)**
Impact × polygamous marriage		.039 (.040)		.104 (.058)*		.046 (.047)		.059 (.047)		.155 (.059)**
R ²	.100	.100	.054	.055	.076	.077	.039	.042	.053	.057
Endline comparison means	.834	.834	.566	.566	.278	.278	.211	.211	.624	.624
Net treatment polygamous sample		.004 (.032)		.042 (.050)		-.003 (.042)		.033 (.034)		.076 (.048)
	B. Frequency of IPV									
Impact	-.041 (.058)	-.072 (.069)	-.107 (.055)*	-.114 (.069)*	-.090 (.052)*	-.110 (.060)*	-.046 (.054)	-.063 (.063)	-.105 (.052)**	-.122 (.062)*
Polygamous marriage	.156 (.039)**	.227 (.067)**	.219 (.046)**	.233 (.080)**	.143 (.049)**	.256 (.079)**	.150 (.039)**	.184 (.062)**	.201 (.047)**	.275 (.078)**
Impact × polygamous marriage		.102 (.118)		.025 (.130)		.069 (.120)		.055 (.115)		.059 (.115)
R ²	.141	.141	.102	.103	.057	.059	.042	.042	.081	.082
Endline comparison means	-.000	-.000	.000	.000	-.000	-.000	-.000	-.000	-.000	-.000
Net treatment polygamous sample		.030 (.099)		-.089 (.105)		-.041 (.103)		-.008 (.097)		-.063 (.097)

Note. All regressions include the following covariates at baseline: women's age, dummy for having any formal education (0,1), dummy for polygamous marriage (0,1), partner's age and dummy for having any formal education (0,1), proxy means test score, household size, and community fixed effects. Net treatment polygamous sample is the linear combination of the coefficient of the interaction term (impact × polygamous marriage) and the impact coefficient. Standard errors (in parentheses) are clustered at the community level.

* $p < .10$.
 ** $p < .05$.
 *** $p < .01$.

household size and demographics. For example, in the average effect model, being in a polygamous partnership is associated with a 5.2 (controlling behaviors) to 9.3 percentage point (emotional IPV) increase in 12-month IPV. Tables A2 (experience) and A3 (frequency) show full regressions producing these impacts, including coefficients for control variables.

We conduct a number of robustness checks to these main results. First, we replicate frequency models using polychoric PCA data reduction techniques in table A4 and show results are consistent with those reported in table 5 (with coefficients of slightly higher significance levels, indicating our main impacts are conservative). In addition to aggregate impacts, in tables A5–A8, we explore impacts on disaggregated indicators of 12-month controlling behaviors and emotional, physical, and sexual IPV. Results are largely as expected, with most impact coefficients negative (ranging from -2 to -8 percentage points for experience and -0.03 to -0.09 standard deviations for frequency measures when significant). In table A9, we conduct a parallel analysis estimating the effect of the treatment-on-the-treated instrumenting treatment status with actual receipt of the transfer (assigned treatment and its interaction with time indicator) in the first stage, showing results are largely consistent. This is expected as the compliance rate in the sample is high, with only 7.2% of noncompliant observations, primarily treatment households who did not receive the program (6%), and only 1.3% of the sample composed of households in the comparison groups who did receive the program.

C. Exploration of Pathways

We next explore three hypothesized pathways among the full sample and by family structure to understand preconditions and potential dynamics underlying impacts. Since pathways represent a large number of outcomes beyond our primary indicators of interest, we present adjusted p -values for multiple hypothesis testing via familywise error rates (FWER) using Sidak-Bonferroni corrections at the bottom of tables (Anderson 2008). Table 6 shows results for the economic pathway through analysis of impacts on household poverty status, household expenditure, and women's stress and emotional well-being. Findings indicate a significant program impact on household poverty (3.0 percentage point reduction) and extreme poverty (5.1 percentage point reduction), as well as an increase in adult equivalent monthly household expenditure and food expenditure within the basic model of $\mathcal{C}7.44$ and $\mathcal{C}5.63$, respectively (however, these impacts are no longer significant at conventional levels when adjusting for FWER). There is no measured impact on perceived stress or life satisfaction, and these null impacts are robust to variations in indicator

TABLE 6
OLS IMPACT ESTIMATES OF GHANA LEAP 1000 ON MECHANISMS: ECONOMIC SECURITY, AND EMOTIONAL WELL-BEING, INCLUDING INTERACTION BY FAMILY STRUCTURE (N = 4,166)

	Household Is Poor (0,1)	Household Is Extremely Poor (0,1)	AE Household Monthly Expenditures (€)	AE Household Monthly Food Expenditures (€)	Cohen Perceived Stress Scale (Standardized)	Satisfied with Life (Some/Most/ All of Time; 0,1)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Impact	-.030 (.014)**	-.035 (.019)*	-.051 (.022)**	-.043 (.026)*	7.443 (4.065)*	6.723 (4.980)	5.626 (3.080)*	5.352 (3.621)	-.076 (.062)	-.062 (.071)	.004 (.035)	-.022 (.039)
Polygamous marriage	-.016 (.009)*	-.018 (.022)	-.039 (.016)**	-.058 (.035)*	5.579 (2.655)**	7.801 (4.677)*	5.093 (1.968)**	6.593 (3.786)*	.048 (.035)	.061 (.064)	-.036 (.018)**	-.013 (.033)
Impact × polygamous marriage	.016 (.036)	.016 (.036)	-.024 (.051)	-.024 (.051)	2.313 (8.168)	2.313 (8.168)	.905 (5.936)	.905 (5.936)	-.045 (.102)	-.045 (.102)	.081 (.056)	.081 (.056)
R ²	.094	.093	.175	.175	.182	.182	.190	.189	.185	.185	.060	.060
Endline comparison means	.982	.982	.887	.887	82.015	82.015	59.619	59.619	.000	.000	.691	.691
Net treatment polygamous sample		-.019 (.026)	.887	-.067 (.044)	9.036 (6.663)	9.036 (6.663)	6.257 (5.074)	6.257 (5.074)	-.107 (.092)	-.107 (.092)	.059 (.052)	.059 (.052)
Bonferroni-Sidak p-value:												
Impact	.19	.347	.14	.461	.35	.694	.35	.599	.77	.948	1.00	.994
Impact × polygamous		.998		.998		1.000		1.000		.998		.621

Note. All regressions include the following covariates at baseline: women's age, dummy for having any formal education (0,1), dummy for polygamous marriage (0,1), partner's age and dummy for having any formal education (0,1), proxy means test score, household size, and community fixed effects. Net treatment polygamous sample is the linear combination of the coefficient of the interaction term (impact × polygamous marriage) and the impact coefficient. Standard errors (in parentheses) are clustered at the community level. AE = adult equivalency.

* $p < .10$.

** $p < .05$.

construction.¹² The magnitude of impacts on both poverty and expenditure measures appears consistent across models by household structure, but significance levels decrease. While this suggests impacts could be larger in households with polygamous partnerships, net treatment effects and interaction effects are not significant. Therefore, we can conclude the pathways examined here provide no clear explanation for why IPV impacts are concentrated among women in monogamous partnerships.

Table 7 replicates pathway analysis for indicators of intrahousehold conflict, namely, consumption of temptation goods, proxied by measures of partner alcohol use and household expenditure on alcohol. Across all outcomes and models, there are no impacts on these indicators—corroborating other evidence showing no indication of expenditure increases on alcohol among beneficiary households as a result of government cash transfer programming in Africa (Handa et al. 2018a).

Table 8 shows impacts on women's empowerment, including direct measures of women's agency, locus of control, and decision-making ability, as well as proxies for financial standing (cash savings), social capital (social support), and access to health care (valid insurance, care seeking in the past 2 weeks). There is little evidence of impact on women's agency, control, and decision-making, with only one weakly significant impact on locus of control among women in monogamous partnerships (no longer significant at conventional levels when adjusting for FWER). The lack of impacts on direct measures of agency, control, and decision-making are consistent with a recent review that shows mixed and weak results across 17 studies measuring impacts of social safety nets on these outcomes in Africa (Peterman et al. 2019). The reviewed studies primarily measure intrahousehold decision-making (making up approximately 95% of the 162 indicators reviewed); thus, it is possible that measurement challenges obscure impacts in the general literature, as well as in our study. However, there are significant increases in women's financial standing (12.4 percentage point increase in any

¹² The lack of impacts is robust to changes in definitions of life satisfaction (i.e., defined as a woman reporting being satisfied with her life most or all the time) and ways of measuring perceived stress (i.e., through the UNICEF Office of Research–Innocenti's newly designed scale, the Enhanced Life Distress Scale, informed by existing scale; Thompson, Yoshioka, and Ager 1994). Lack of impacts on perceived stress may be attributed to two factors: (1) lack of actual impacts due to chronically stressful environments and (2) measurement issues. In this highly stressful, food-insecure environment, cash transfers may alleviate some budget constraints but may not be sufficient to reduce all poverty-related stressors. Furthermore, the stress used in this evaluation was measured via the Cohen perceived stress scale (Cohen, Kamarck, and Mermelstein 1983), which was developed in the United States for populations with at least a junior high level of education, and other impact evaluations of cash transfers in sub-Saharan Africa also found no impacts on this measure and highlighted some potential issues with its use, calling for more context-relevant measures (Hjelm et al. 2017).

TABLE 7
OLS IMPACT ESTIMATES OF GHANA LEAP 1000 ON MECHANISMS: INTRAHOUSEHOLD CONFLICT,
INCLUDING INTERACTION BY FAMILY STRUCTURE (N = 4,166)

	Partner Often Drunk (0,1)		Partner Sometimes/Often Drunk (0,1)		Expenditure on Alcohol (€)	
	(1)	(2)	(3)	(4)	(5)	(6)
Impact	-.01 (.01)	-.003 (.011)	-.02 (.02)	-.021 (.023)	.04 (.74)	-.708 (.897)
Polygamous marriage	.01 (.01)	.004 (.012)	.01 (.01)	.027 (.021)	-.82 (.62)	-.476 (.592)
Impact × polygamous marriage		-.019 (.027)		-.008 (.045)		2.326 (1.203)*
R ²	.039	.038	.159	.159	.019	.019
Endline comparison means	.040	.040	.197	.197	1.417	1.417
Net treatment polygamous sample		-.022 (.024)		-.029 (.039)		1.619 (1.019)
Bonferroni-Sidak <i>p</i> -value:						
Impact	.767	.990	.575	.750	1.000	.816
Impact × polygamous		.868		.997		.156

Note. All regressions include the following covariates at baseline: women's age, dummy for having any formal education (0,1), dummy for polygamous marriage (0,1), partner's age and dummy for having any formal education (0,1), proxy means test score, household size, and community fixed effects. Net treatment polygamous sample is the linear combination of the coefficient of the interaction term (impact × polygamous marriage) and the impact coefficient. Standard errors (in parentheses) are clustered at the community level.

* $p < .10$.

savings and €6.45 increase in amount saved, on average), as well as social support, having a valid NHIS card (16.9 percentage points), and seeking care for illness or injury in the past 2 weeks (10.9 percentage points, weakly significant and no longer significant when correcting for FWER). This indicates that women are reporting increased financial, social, and health status due to participation in the program components. In several cases, these impacts appear to be slightly greater in magnitude among women in monogamous partnerships (amount saved, valid NHIS card). However, this is not always the case, and net impacts among the polygamous sample are also significant for financial standing and valid NHIS card. Therefore, similar to economic pathways, there are no clear trends explaining the concentration of IPV experience impacts among women in monogamous partnerships.

D. Exploration of Operational Differences by Family Structure

We conduct additional analysis aimed at understanding why there are differences in impacts by family structure. We provide descriptive information from a module on operational characteristics to understand whether women across family structures differ in terms of their control over transfer funds or spending choices. Table A10 shows that women themselves report both primary

TABLE 8
OLS IMPACT ESTIMATES OF GHANA LEAP 1000 ON MECHANISMS: WOMEN'S EMPOWERMENT, INCLUDING INTERACTION BY FAMILY STRUCTURE (N = 4,166)

	Agency Index (Standardized)	Locus of Control (Standardized)	Decision- Making (Standardized)	Saving Money (0,1)	Amount Saved Previous Month (C)	Social Support (Standardized)	Valid National Health Insurance Scheme Card (0,1)	Sought Care Past 2 Weeks (0,1)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Impact	.055 (.063)	-.017 (.074)	.142 (.091)	.184 (.098)*	.080 (.094)	.107 (.101)	.124 (.025)***	.109 (.030)***	6.445 (1.636)***	6.716 (1.913)***	.134 (.063)**	.122 (.077)	.169 (.032)***	.181 (.036)***	.106 (.059)*	.086 (.062)
Polygamous marriage	-.133 (.040)***	-.086 (.081)	-.055 (.068)	.016 (.078)	-.013 (.066)	.032 (.076)	-.029 (.016)*	-.011 (.026)	.011 (1.068)	1.476 (2.179)	.020 (.041)	.012 (.059)	.000 (.021)	.040 (.030)	-.020 (.031)	.016 (.062)
Impact x polygamous marriage	.120 (.116)	-.139 (.082)*	-.139 (.085)	-.139 (.085)	-.088 (.085)	-.088 (.085)		.047 (.053)	-.789 (4.152)	-.789 (4.152)	.035 (.122)	.035 (.122)	-.034 (.055)	-.034 (.055)	.035 (.119)	.035 (.119)
R ²	.037	.037	.162	.163	.195	.195	.190	.189	.028	.028	.086	.086	.081	.082	.077	.077
Endline comparison means	-.000	-.000	.000	.000	-.000	-.000	.276	.276	6.163	6.163	-.000	-.000	.368	.368	.662	.662
Net treatment polyga- mous sample	.137 (.100)	.045 (.099)	.019 (.102)	.019 (.102)	.019 (.102)	.019 (.102)		.156 (.044)***	5.927 (3.503)*	5.927 (3.503)*	.158 (.099)	.158 (.099)	.147 (.050)***	.147 (.050)***	.121 (.113)	.121 (.113)
Bonferroni-Sidak p-value:																
Impact	.981	1.000	.639	.394	.981	.935	.000	.002	.001	.005	.244	.614	.000	.000	.461	.772
Impact x polygamous	.942		.536	.536	.941	.941	.978	.978	1.000	1.000	1.000	1.000	.998	.998	1.000	1.000

Note. All regressions include the following covariates at baseline: women's age, dummy for having any formal education (0,1), dummy for polygamous marriage (0,1), partner's age and dummy for having any formal education (0,1), proxy means test score, household size, and community fixed effects. Sample size for locus of control and decision-making is 2,083 (measured only at endline); thus, the reported coefficients refer to single difference models) and for sought care 1,163 (only among those who experienced injury or illness). Net treatment polygamous sample is the linear combination of the coefficient of the interaction term (impact x polygamous marriage) and the impact coefficient. Standard errors in parentheses are clustered at the community level.

* p < .10.
 ** p < .05.
 *** p < .01.

control over transfers (85%) and being responsible for picking up transfers (93%), which does not differ by family structure. Further, out of eight categories of typical expenditure for transfers, only one (health care) shows any difference by family structure (with a larger share of women in polygamous partnerships reporting spending on health care vs. those in monogamous relationships: 58% vs. 49%). There are likely to be other operational pathways that could differ across household structure—for example, the likelihood of sharing or distributing the transfer outside households or conflict/cooperation in decisions over transfers—and that we are unable to analyze with the data available. Therefore, we conclude that, while we control for observable differences between households, there are likely other both observable and unobserved factors driving the complex relationship between poverty, IPV, and household structure in our setting that we are not able to assess. For example, power dynamics and gender norms may differ by family structure, which we are unable to analyze.

VI. Discussion and Conclusion

We examine a cash transfer paired with a health insurance enrolment fee waiver given to pregnant women and recent mothers implemented by the government of Ghana to assess impacts on IPV and potential pathways. This sample of poor, rural, and recently pregnant mothers are at high risk for IPV, reporting nearly twice the rate of IPV compared with national 12-month prevalence estimates. Results indicate no impacts on experience of 12-month IPV on average using conventional thresholds for statistical significance, but all coefficients are consistently negative. In addition, there are significant decreases in 12-month frequency of emotional, physical, and combined IPV (ranging from 0.09 to 0.12 standard deviations), indicating favorable impacts on the intensive margin. Further, among women in monogamous partnerships, there are decreases in 12-month experience of emotional IPV (6.2 percentage points), physical IPV (4.9 percentage points), and combined IPV (7.9 percentage points), translating to decreases of 11%, 15%, and 13% over baseline means (monogamous sample). No evidence is found supporting reductions on measures of sexual IPV or controlling behaviors. Compared with other impacts found in national programs, these are lower in magnitude than those found in Mali among polygamous households (which made up 40% of the sample, where impacts range from 23% to 38%) and those found in Mexico on average (which ranged from 37% to 66%; Bobonis González-Brenes, and Castro 2013; Heath, Hidrobo, and Roy 2020). In both these cases, as in the Ghana LEAP 1000 program, transfers were modest, making up 9%–10% of average household expenditures. As few other studies have investigated impacts on frequency of IPV, one implication of results is the importance of understanding the potential of transfers in reducing violence on the intensive margin.

Examination of pathways indicates substantial support for economic security and women's empowerment as important mechanisms. While pathway indicators analyzed are not exhaustive, these impacts are consistent with impacts across domains reported in the larger LEAP 1000 impact evaluation (LEAP 1000 Evaluation Team 2018). For example, LEAP was found to increase other metrics of economic security, including household dietary diversity, share of households eating at least three meals per day, households' likelihood of raising livestock, and household expenditure on agricultural inputs. Further, both quantitative and qualitative information show an increase in women's participation in groups, including savings and self-help groups, facilitated by cash transfers. These pathways are well reflected and consistent with the existing evidence reviewed by Buller and colleagues (2018); yet in contrast to the majority of studies included, we go beyond hypotheses to provide evidence of these pathways. We also demonstrate that impacts on pathways such as women's social support and capital are possible even in models without explicit conditions involving group-based approaches (often implemented in conditional models in Latin America). Although we cannot fully disentangle the added effects of the health insurance waiver, it is likely that this program addition accounted for at least some of the increase in health-seeking behaviors, which may be linked to IPV impacts via exposure to the health-care sector.

Our study adds to a relatively thin literature on the effect of cash transfers and social protection on IPV (Buller et al. 2018) and is generally consistent with these findings. To our knowledge, there exist three existing quantitative studies of the effect of cash transfer programs in sub-Saharan Africa on IPV among samples of adult women, namely, in Kenya, South Africa, and Mali.¹³ Studies in Kenya and South Africa examine the effects of unconditional and conditional cash transfers implemented by NGO programs, both evaluated via randomized controlled trials. In Eastern Kenya, households that receive approximately 1 year's worth of monthly transfers—equal to approximately twice the annual household per capita expenditure, on average—decreased physical and sexual IPV in the previous 6 months by 0.26 and 0.22 standard deviations, respectively (Haushofer et al. 2019). In South Africa, females in secondary school (aged 13–20 years at baseline) who received a cash transfer conditional on attendance in the HIV Prevention Trials Network (HPTN) 068 study were

¹³ We exclude studies based on programs with one-time cash grants intended for business capital expenses. In addition, a study over 4 years of the government of Zambia's unconditional child grant program measures IPV via an experimental list randomization technique (Peterman et al. 2018). This study focuses on the methodological potential of collecting a light-touch IPV indicator, and thus we do not include it as a primary study. However, the authors find no impact of the program on IPV using the list randomization method.

found to have reduced past-year physical IPV (relative risk: 0.66; 0.56–0.74) after 3 years (Pettifor et al. 2016). Investigation of mechanisms suggests that young women were able to engage in fewer partnerships, as indicated by decreased age of sexual debut and number of past-year partners (Kilburn et al. 2018). Finally, the aforementioned randomized controlled trial by Heath, Hidrobo, and Roy (2020) showed the national Jigisémèjiri program in Mali reduced IPV primarily in polygamous households over a 24-month period. While it is unclear why results differ between Mali and the current study, one obvious design feature is the target recipient. In Mali, quarterly cash transfers were given primarily to male heads of households, and little evidence of the female empowerment pathway were identified. In fact, authors note that, in some cases, transfers appeared to reinforce male authority and power dynamics in households rather than challenge them. In contrast, in the current study, despite the lack of differential impacts on pathway indicators by household structure, we see clear evidence that women are able to both retain control over transfers as well as improve economic and social capital indicators over the program period. While we are not able to fully understand how observed or unobserved factors influence differential effects by household structure, a clear implication is the need for implementers to take into consideration how operational features may accommodate complex household structures.

There are several key limitations worth mentioning. First, the sampling methodology used in this evaluation means that we estimate treatment effects for the sample of women with household vulnerability scores around the PMT cutoff. This means that women in the poorest households are not included in the sample, and to the extent that we believe impacts may be larger across IPV outcomes and pathways among poorer households, the impact we have identified is a lower bound. Second, as all LEAP 1000 participants are provided with a premium waiver for enrolment in NHIS, we are not able to disentangle the potential differential impact of cash transfer versus health insurance versus the combined package. Further, given that IPV is a sensitive topic, it may be subject to underreporting. Nevertheless, there do not appear to be systematic differences in reporting between treatment and comparison groups (as indicated by baseline balance), and thus our ability to detect program impacts is not threatened. Finally, we are limited in the range of pathway indicators collected—in particular, measures of intrahousehold conflict are limited to alcohol use rather than broader indicators of disputes, disagreements, family cohesion, or relationship trust and respect. In addition, due to data limitations, we analyze pathways from the perspective of women's outcomes rather than a comparative view.

This study adds to a growing body of literature suggesting the potential gender-beneficial effects of social protection in Africa. This potential is particularly

important in light of increasing calls to make social protection programs and systems gender sensitive and gender transformative. This call is motivated not only by the rapid scale-up of social protection programs but also due to evidence suggesting beneficial impacts across diverse outcomes. In the case of programs targeted at mothers, an added justification is research consensus that mother's well-being has spillover effects for children. For example, experience of a mother's or caregiver's IPV has detrimental effects on children's health and well-being, including risk of poor nutrition and mortality (Åsling-Monemi et al. 2003; Yount, DiGirolamo, and Ramakrishnan 2011; Chai et al. 2016) and perpetuation of a cycle of violence (Abramsky et al. 2011). Our results underscore that cash transfers can have far-reaching effects on well-being beyond primary program objectives related to poverty and food security. In addition, careful consideration must be given across settings and target groups to design gender-sensitive programs plus components that synergistically add value in relation to program objectives. Additional testing of these relationships within diverse settings and target populations, with measurement of complementary violence outcomes, including violence against children and other forms of intrahousehold violence, are welcome (Peterman et al. 2017; Özler et al. 2020). Future research should focus on unpacking pathways of IPV impact and testing particular design components, including linkages between households receiving cash transfers and other existing services, which may leverage larger and more broad-based gender-transformative effects.

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