User-Centered Counseling in Contraceptive Decision-Making:
Evidence from a Field Experiment in Urban Malawi[*]

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Abstract

We conduct a randomized controlled trial to test how a woman-centered, preference-based approach to family planning counseling shapes women's preferences and behavior. We explore how a woman's decision-making may be shaped by: 1) the number and types of contraceptive methods presented to her based on her stated preferences for contraception (targeted counseling); and 2) the presence of her husband / male partner at the time of counseling. A total of 782 women were recruited and randomized to one of four treatment arms in which they received either targeted or standard counseling, cross randomized with an invitation to bring their husbands / partners to counseling. Women were subsequently offered free transport and access to family planning methods and services at a clinic for one month. We find that women who received targeted counseling were 15.6 percent less likely to be using their stated ideal contraceptive method at follow-up and were 17.9 percent more likely to exhibit discordance between their stated and ideal method at follow-up. On the other hand, women who were encouraged to invite their husbands to the counseling session were 13.7 percent less likely to change their stated ideal method from counseling to follow-up but 16.6 percent more likely to be using their stated ideal method at follow-up. While both approaches aim to achieve the goal of "helping women make informed choices on family planning", neither seems to yield strictly preferred outcomes for women.

Keywords: family planning; user-centered approaches; counseling; male involvement; decision-making;

contraceptives; Malawi

JEL codes: J13, J16, O15, O33, I15, Z13.

1 Introduction

Unlike many domains in health, the provision of high-quality family planning services is not only measured by the achievement of good reproductive health outcomes but also considers the objective of helping women and couples maximize a complex set of preferences around future fertility and well-being. In family planning, the role of the client as the key actor in her receipt of care (in this case, her choice of contraceptive method) is distinct from most other contexts in health decision-making where providers often play the leading role in determining which type of treatment is best for a patient. To this end, a high-quality family planning program would therefore prioritize women and couples to have a right to "full, free, and informed choice" over contraceptive methods[1]. For this reason, family planning programs dedicate significant resources into providing complete and accurate information so that women are informed of the full range of contraceptive methods that are available to them. As a result, clients typically do not receive modern contraceptive methods without receiving a consultation session with a counselor, during which time they are informed about available methods.

A number of studies have examined how the receipt of counseling shapes contraceptive decision-making (Athey et al., 2021; Dehlendorf et al., 2016; Kim et al., 1998; Lettenmaier and Gallen, 1987). However, little is known about how the choice architecture for family planning, i.e., the structures and processes by which contraceptive methods and information are presented during counseling sessions, shape women's and couple's preferences and characterize how women actually make informed choices about their preferred method (Miller et al., 2020). Because of the high value placed on informed choice, counselors may be prescribed to discuss as many as 15 different methods and to describe as many as 10 method attributes (e.g. effectiveness at preventing pregnancy, convenience to use, risk of side effects, duration of effectiveness, among others) for each method with a client. This information-intensive approach to counseling, which compels a client to interpret a large volume of information across several dimensions (attributes, methods), may reduce the salience of counseling while simultaneously increasing the potential for choice overload. Studies have shown that a woman's fertility intentions, which affect her contraceptive preferences, are likely to be unstable over her reproductive lifetime and are sensitive to relatively small changes in her environment (Johnson-Hanks et al., 2018; Sennott and Yeatman, 2012). A woman might therefore change her mind frequently over a relatively short time such that her initially stated preference for contraception (what she says that she will do) could differ greatly from her actual choice of method (what she actually does). Given that a stated goal of programs is to be able to meet women's reproductive health needs, being able to link a woman's stated preferences for family planning to her eventual contraceptive behavior would

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[1]The prioritization of "informed choice" in family planning was highlighted as a central part of the Programme for Action (PoA) in the 1994 International Conference on Family Planning (ICPD) in Cairo, which provided a global forum for reshaping the population policy discourse away from a "population control" narrative and towards a rights-based approach to family planning and reproductive health. Recently work by Newman and Feldman-Jacobs (2015), Senderowicz (2020), and others have expanded this definition to include "full, free, and informed choice" and have also proposed approaches to integrate this framework into existing and future programs.

likely have significant implications for service provision.

As a means to achieve full, free, and informed choice within the framework of reproductive autonomy and rights, programs have increasingly begun to adopt user-centered approaches to family planning counseling and service delivery. These approaches have stressed the role of the individual client as the focal point of interaction and the key decision-maker. In this approach, service providers would play a supporting role to ensure that 1) a client's preferences and any changes in her preferences are elicited; 2) the flow of information and interactions between a client and her provider is bi-directional and dynamic; and 3) the optimal outcome exclusively reflects the client's underlying reproductive health objectives and is absent of possible provider's biases (e.g. method related biases, the provider's own preferences) and higher-level constraints (e.g. macro-level fertility norms, social perceptions around ideal family size and contraception, etc.) (Costello et al., 2001). However, such counseling approaches have been found to be time-consuming and difficult to scale up to larger client bases.[2] More generally, there is little systematic evidence on the effectiveness of these approaches in meeting women's fertility needs.

We seek to evaluate two channels that have been theorized to play key roles in contraceptive decision-making. We first explore the role of targeted and tailored counseling that seeks to improve salience and, by the same token, reduce cognitive overload for clients over the counseling process. We also investigate the role of male involvement in the family planning counseling process. To date, interventions and programs that have promoted the role of male involvement have done so by requiring women to either invite or be accompanied by their male partners to counseling. In most family planning counseling programs, however, men are often not required to be present for women to be counseled and often do not participate in counseling unless they are actively brought by women themselves. Studies have shown that men's attitudes towards family planning play a key role in shaping women's sexual and reproductive health behaviors (Ashraf et al., 2014; Bawah, 2002; El-Khoury et al., 2016; Jeebhoy et al., 2015; Link, 2011; Sternberg and Hubley, 2004). Moreover, men are also important as family planning clients and have their own sexual and reproductive health needs and concerns, in particular regarding STIs, which deserve the attention of the health care system and providers.

Experimental evidence on the role of male involvement in family planning counseling has been limited. Studies have shown that men are not actively engaged in most issues of maternal and child health, and particularly in issues concerning reproductive health (Sharma et al., 2018). Men's limited involvement in and reluctance to support family planning might be explained by: 1) perceived side effects of female contraceptive methods, which disrupt sexual activity, 2) the limited choice of available male contraceptives, including fears and concerns related to vasectomy, 3) general perceptions that reproductive health is considered to be "a woman's domain", 4) preferences for more children, and 5) concerns that women' contraceptive use may lead to promiscuity and extramarital

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[2]For example, the Balanced Counseling Strategy toolkit, developed by the Population Council, includes: 1) an algorithm that summarizes the 11 steps needed to implement the strategy, 2) counseling cards with basic information about 15 family planning methods, plus a card with the checklist to be reasonably sure a woman is not pregnant, and 3) brochures on each of the methods that are presented to the client.

sexual relations (Adelekan et al., 2014; Kabagenyi et al., 2014). To date, however, the role of men in family planning decision-making remains poorly understood, particularly in low- and middle-income settings. From a programmatic standpoint, existing family planning programs do not require women to invite their husbands / male partners to be counseled, so couples who are enrolled for counseling are, by construction, selected because they are willing to be counseled together. These couples, and particularly the male partners who are selected and who participate in counseling, are not likely to be representative of typical couples and men. In order to more effectively test the impact of male involvement, it would be necessary to examine the extent to which giving women the choice to invite their husbands would impact male involvement and subsequent outcomes. To this end, an evaluation of a user-centered counseling program that gives women the choice whether or not to invite their male partners to counseling would more accurately reflect the need of joint family planning counseling.

2   Objectives

In this study, we identify the causal impact of user-centered approaches to family planning counseling on women's contraceptive preferences and decision-making by means of a randomized controlled trial. In particular, we investigate two channels that have been hypothesized to play a role in contraceptive decision-making, namely, 1) a preference-based, short, targeted, user-centered approach to family planning counseling, and 2) male involvement in family planning counseling. To this end, we test the following two hypotheses:

1. We observe the extent to which short, tailored counseling that prioritizes a woman's stated preferences for methods improves the salience of information that is conveyed and contributes to women's subsequent method use (Athey et al., 2021; Holt et al., 2020).

   We find that that short, tailored counseling has a positive, but limited, impact on changes to a woman's reported choice of her ideal contraceptive method but no impact on her ability to change her contraceptive method use. To this end, we observe a higher level of discordance between women's stated ideal method and actual method use following their receipt of targeted counseling. This finding suggests that targeted counseling may compel a woman to report a new method as ideal, particularly if she is not satisfied with her current method. On the other hand, offering abbreviated counseling may also contribute to decision deferral, particularly if the limited number of methods presented do not provide enough choice for a woman to switch. As a result, even if a woman is not satisfied with her current method, she may not have a sufficient incentive to identify an alternative.

2. We investigate the extent to which the involvement of male partners in family planning counseling allows women to more effectively express their contraceptive preferences and, in turn, translate their preferences into behavior.

   We find that women who invite their partners and have their partners present during counseling are less likely to change their stated ideal method, particularly if their partners are aware of their prior contraceptive use. On the other hand, women who invite their partners to counseling

are more likely to act on their reported stated preferences; the presence of the partner may allow women to follow through and adopt their stated method from counseling. In recognizing that her partner may participate in counseling, should she choose to invite him, the way in which a woman may report and subsequently act on her contraceptive preferences will likely change simply due to her partner's presence. As a result, a woman's decision to invite and involve her partner to counseling will depend on whether 1) she believes that her partner's contraceptive preferences are concordant with her own; and 2) she believes that her partner is supportive in her contraceptive decision-making. To this end, we find that a partner's presence does not improve the level of concordance between a woman's stated preferences and her eventual contraceptive behavior. This may be because the extent to which women who have their partner attend counseling report a higher level of concordance relies on the extent to which the method that is eventually adopted is, in fact, reflective of the woman's true preference for methods and not simply a consequence of her partner's presence during counseling.

Our findings contribute to a nascent evidence base that brings together insights from behavioral and psychological economics to better inform reproductive health decision-making. In addition to facing structural barriers to accessing family planning, women face cognitive biases that hamper care-seeking and uptake of reproductive health services. Key biases include information overload, present bias, and anchoring, which may contribute to decision deferral and inhibit care-seeking (Ashton et al., 2015). Our tailored intervention is informed by evidence that these biases exist at the time of family planning counseling, which is often a woman's point of entry into care, by improving the salience of counseling. Our study also examines problems of intra-household bargaining in the context of contraceptive decision-making. Building on collective models of the household (Chiappori and Mazzocco, 2017), we examine how shifting the choice to women over their partner's involvement in counseling impacts: a) women's decision whether or not to involve their partner, and b) subsequent care-seeking and uptake. Finally, our study speaks to an ever-lively evidence base on the concordance between stated preferences and subsequent revealed behavior. We benefit from a multi-point follow-up strategy to be able to assess the relative stability (or lack thereof) in women's preferences over time following counseling. Moreover, our intervention, which was designed to eliminate key structural barriers to access, allows us to observe the extent to which women are able to follow through on their stated choice.

The rest of the paper is organized as follows. In Section 3, we present an overview of the literature in user-centered counseling and male involvement in family planning, and we describe our contributions to the evidence base within these domains. Section 4 describes our experimental design and data. Section 5 describes the empirical strategy. Section 6 presents and discusses our descriptive and experimental findings, and we conclude in Section 7.

3 Background

3.1 Choice Architecture and User-Centered Approaches in Family Planning

Programs and interventions that have successfully incorporated user-centered approaches are often informed by insights from behavioral economics and cognitive psychology. A number of studies in

economics, marketing, and management have examined the role of user-centered design and choice architecture on decision-making (Hensher, 2006; Hogarth and Einhorn, 1992). Deck and Jahedi (2015) noted that cognitive load (and overload) may lead to more risk-averse behavior, higher levels of impatience, and a higher likelihood among individuals to anchor their beliefs and prioritize information that is offered to them first when making decisions. Bordalo et al. (2012) demonstrated that consumers who are at risk of cognitive overload are more likely to overweigh attributes or features that stand out more (are more salient) to them over the range of choices that they face. Additionally, studies have shown that behavioral interventions that take choice architecture and framing into consideration may serve to "nudge" individuals to make better choices (Thaler et al., 2010). For example, when faced with a smaller number of well-defined alternatives, it is an individual's tendency is to examine all the attributes of all the alternatives and then make trade-offs when necessary.[3] However, when the choice set gets large, alternative strategies, such as structuring complex choices into a certain order or adopting other heuristics, are often employed.[4] Taken together, the effects of framing on choices are likely to be lower with a limited number of choices because individuals are more likely to be able to distinguish and compare across alternatives. As the number of choices increases, framing and choice architecture are more likely to affect decision-making (Thaler et al., 2010). These findings together suggest that the complexity of options may complicate decision-making, and limiting complexity would, in turn, enhance decision-making.

User-centered design (UCD) approaches to product and program development have been adopted in a range of fields and disciplines, including architecture, marketing, organizational behavior, and, more recently, human-robot interaction (HRI) research (Doroftei et al., 2017; Reich-Stiebert et al., 2020). In exploring the role of UCD on teamwork, coordination, and group-level outcomes, a study by Lai et al. (2010) found that simply requiring increased engagement between users did not contribute to improving individual or team outcomes; however, iterative evaluations of interactions and subsequent user-dictated interactions with other team members resulted in more productive and promising interactions. Similarly, Oviatt (2006) found that human-centered design of interfaces minimizes users' cognitive load and effectively frees up users' mental resources for performing better while allowing them to remain more attuned to the world around them.

Recently, UCD approaches have received increased attention in the health sector, particularly in the development and implementation of new health programs and services (Dabbs et al., 2009; Johnson et al., 2005; Ratwani et al., 2015; Rodriguez et al., 2007). In the context of family planning,

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[3]For example, when a customer visits an ice cream shop that offers three flavors, it is likely that her choice will be minimally affected by the order in which the ice cream flavors are presented on the menu. Moreover, any effects of changes to the order in which flavors are presented on her choice of ice cream are likely to be minor because her preferences over the three flavor choices are more likely to be well defined.

[4]Consider another example from Thaler et al. (2010). Paint stores may sell more than two thousand different colors of wall paint, and it is often not feasible for a customer to examine all possible color options before making her final choice. Instead, paint stores typically present color options to the client using visual aids like a paint wheel, with color shades ordered by their relationship to primary color groups. By presenting paint color choices in this manner, the problem of selection is made considerably easier by the fact that a client can observe and compare the actual colors, especially since the branded names of the paint colors may be less informative.

however, the inclusion of user-centered approaches in programs is scarce and evidence on the role of choice architecture on reproductive health outcomes is limited. This is particularly surprising when considering that contraceptive decision-making is preference-sensitive (Dehlendorf et al., 2017). For example, a study by Delavande (2008) found that the three most important method-related characteristics (attributes) that drive a woman's choice of contraception are: 1) the extent to which a contraceptive method is effective; 2) the extent to which such a method protects against sexually transmitted infections (STIs); and 3) the extent to which the method is approved / disapproved by her husband / partner. With the goal of introducing a more patient-centered approach to contraceptive counseling, Dehlendorf et al. (2017) developed a tablet-based contraceptive decision support tool, "*My Birth Control*," to facilitate shared decision-making between providers and patients. An assessment of this decision support tool by Holt et al. (2020) found that the tool encouraged providers to incorporate clients' preferences and values for specific method features into the discussion of birth control options, rather than place a sole emphasis on particular methods (long-acting reversible contraception) without introducing them in the context of a person's own expressed values. These findings suggest that the tool may serve to improve patient-provider relationships in counseling without the need for extensive provider training. Additional research by Dehlendorf et al. (2019) found that *My Birth Control* improved clients' reported experiences with contraceptive counseling and increased contraceptive knowledge, although they did not find any impact of the tool on contraceptive continuation. Most recently, evidence from an ongoing evaluation by Athey et al. (2021) in Cameroon finds that shared decision-making, in which a client first receives counseling on a method that is most aligned with her stated fertility and contraceptive preferences, significantly increases women's uptake of long-acting reversible contraceptives (LARCs), particularly when accompanied by discounts on methods.

In addition to the *My Birth Control* tool, other user-centered approaches to family planning counseling have recently been implemented and tested in other settings. One such approach, the Population Council's Balanced Counseling Strategy (BCS), was developed to be an interactive, client-friendly counseling strategy that uses three key job aids for counseling clients about FP: an algorithm (decision-tree), a set of counseling cards on different contraceptive methods, and corresponding brochures on each of the methods (León et al., 2008; Population Council, 2012). A recent evaluation of the BCS found that the approach was linked to increased postpartum family planning use, especially among women who received support from husbands (Hasyati et al., 2020). While interest in BCS and other user-centered counseling approaches to contraceptive counseling has grown over time, rigorous evidence on the impact of such approaches on user-centered outcomes of choice and decision-making has been limited. With this in mind, we hypothesize that a user-centered counseling approach - which tailors counseling to a woman's most valued contraceptive attributes and preferred methods - may allow her to reinforce and better realize her preferences around family planning.

3.2   The Role of Male Involvement in Family Planning

While it is possible that a deviation of a woman's eventual (realized) contraceptive behavior from her initially stated family planning preferences may, in fact, be reflective of an actual change in her preferences, such an observation could also likely be explained by other constraints and barriers that

women may face to accessing family planning and reproductive health services. In particular, spousal and familial preferences for family planning have been identified as a key determinant of women's own access to and use of family planning. A number of studies (El-Khoury et al., 2016; Sternberg and Hubley, 2004) have shown that including men in family planning counseling may increase women's use of family planning services through two potential channels. First, counseling provides men with information on methods or services, including services that women may demand (Lundgren et al., 2005; Shattuck et al., 2011). In addition, counseling husbands and wives together provides a platform for increased spousal communication and offers couples the opportunity to discuss their fertility and method preferences (Hartmann et al., 2012; Lasee and Becker, 1997; Sharan and Valente, 2002). These findings are also confirmed in a series of cross sectional studies that find a positive link between spousal communication and contraceptive use (Bawah, 2002; Jejeebhoy et al., 2015; Link, 2011; Oni and McCarthy, 1991).

To date, however, experimental evidence on spousal concordance and the role of men in family planning decision-making remains mixed, particularly in low- and middle-income settings. A study in Jordan in which women were randomly assigned to receive individual counseling or joint counseling with their husbands / partners found that receipt of couples counseling led to a higher uptake of modern methods compared to the no-counseling group, but this increase in uptake was not significantly different from the uptake that was observed in the individual counseling group (El-Khoury et al., 2016). A study in Ethiopia found that a greater proportion of couples who were jointly visited by a counselor at home were using modern contraceptives following the home visit (Terefe and Larson, 1993). In Malawi, a peer-delivered educational intervention that exclusively targeted men found that male involvement led to increased contraceptive use (Shattuck et al., 2011). More recently, a field experiment in rural Tanzania found that women who consulted with a family planning counselor together with their husbands experienced a larger reduction in pregnancies and a larger increase in reported contraceptive use (McCarthy, 2019). On the other hand, recent evidence from a field experiment in Zambia found that women who were given a voucher for family planning services together with their husbands were less likely to seek family planning services and use contraception and were more likely to have a pregnancy compared to women who were given the voucher alone (Ashraf et al., 2014).

Our study design is distinct in that women who are assigned to the partner involvement treatment arms are given the choice to invite (or not invite) their partners to counseling. This approach differs from prior male involvement studies, in which couples that were willing to be counseled together and to jointly participate in the study were selected. These couples, and particularly the male partners who were selected, are not representative of all couples and men. In contrast, we identify whether giving women the choice to invite their husbands to counseling, and the subsequent involvement of men who received invitations, would impact family planning use and reproductive health outcomes. This approach more effectively reflects outreach and counseling protocols in existing family planning programs in which health workers do not compel women to invite their husbands / male partners to be counseled.

3.3 Study Setting

We conduct our field experiment in urban Lilongwe, the capital of Malawi. In spite of improved access to family planning and reproductive health services, the total fertility rate - the average number of births per woman - has remained relatively high at 4.2 births per woman in Malawi. Estimates from the 2015-16 Malawi Demographic and Health Survey (MDHS) show that the contraceptive prevalence rate in Malawi was 59.2 percent among married women of reproductive age (ages 15-49). The distribution of contraceptive methods, referred to as the method mix, among married women in Malawi has not changed significantly over time: injectable contraceptives, intra-uterine devices (IUDs), and female sterilization have remained the most popular methods among married women and were used by 30 percent, 11.5 percent, and 10.9 percent, respectively. In Malawi, nearly 8 in 10 (79 percent) modern contraceptive users aged 19-45 obtain their method from public sector providers (government hospitals or clinics), and 14 percent of users obtain their method from non-governmental providers such as Banja la Mtsogolo (BLM) or from the private medical sector (National Statistical Office (NSO) and ICF Macro, 2017).

While the contraceptive prevalence rate in Malawi has continued to rise over the past decade, unmet need for family planning[5] has remained high in Malawi. More than 37 percent of women in 2016 reported that they discontinued their family planning method within the last 12 months, among which half of them reported discontinuing their method for non-fertility related reasons (e.g. method-related reasons, like side effects, or lack of husband's support). This high rate of discontinuation suggests that there exist barriers to a woman's decision-making process for choosing the "right" method that caters to her preferences. Even as an increasing number of family planning programs have been successful in increasing contraceptive uptake, it is important to note that a woman's family planning preferences are not realized simply from an increased use of contraceptive methods - this has been reiterated by reproductive rights researchers, policymakers, and advocates alike (Senderowicz, 2020). While family planning programs have mainly focused on increasing contraceptive uptake (the extensive margin), few studies have actually focused on whether the increase in utilization implies that women's preferences are, in fact, being met (the intensive margin).

3.4 Family Planning Counseling in Malawi

Contraceptive counseling with a service provider is often the first step for women to learn about, choose, and receive family planning services. As per the reproductive health service delivery guidelines in Malawi, counseling is an interactive process in which the provider listens to the client's needs, tries to elicit the client's concerns, and offers relevant information to enable the client to make informed decisions (Malawi Ministry of Health and Malawi Reproductive Health Directorate, 2014). In public health facilities in Malawi, women typically receive an initial group counseling session with a nurse or counselor followed by a short (an estimated 3 to 5-minute) individual counseling session at which time they may receive a contraceptive method.

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[5]Women with an unmet need for family planning are those who are either want to limit or delay childbearing for at least two years but who are not using any method of contraception (Potts, 2000; Westoff and Ochoa, 1991).

As per the guidelines that are set by the Ministry of Health (MOH) and the Malawi Reproductive Health Directorate (RHD), a family planning counseling session is typically administered to women with a family planning flipchart (Figure A.3), which describes 13 contraceptive methods that are organized in order of method effectiveness to preventing pregnancies, starting with female and male sterilization, and concluding with traditional methods of contraception (Malawi Ministry of Health, 2009). While the flipchart is comprehensive in the information provided to each woman about each method, this counseling approach does not prioritize women's preferences for either method attributes or methods themselves. Moreover, counseling in this manner may likely anchor women's preferences based on a default top attribute (method effectiveness) or even top method (female sterilization) that may not be preferred. Given the limited time for individual counseling, there is little opportunity for women to receive clarification or follow-up that they may seek; meanwhile, service providers, who are time constrained, may not be able to fully elicit a woman's family planning and fertility preferences before providing her with the services that best meet her needs. Finally, most counseling sessions in Malawi, particularly those involving group counseling, are exclusively targeted to women clients, with few opportunities for men to participate in the service provision and decision-making processes for family planning.

4 Experimental Design and Data

4.1 Experimental Design

Our study is a four-arm randomized controlled trial that was conducted with a sample of 782 women from Lilongwe, Malawi. A baseline survey was implemented from July to September 2019, which was followed by a three-month family planning counseling intervention that was rolled out from September to December 2019. Following the counseling session, women were offered a free package of family planning services for a month, which included free transportation to a local private clinic accompanied by a project field manager and reimbursement for all family planning services. Following this one-month service period, a follow-up survey was administered with women either at the clinic, by phone, or through a home visit. Figure 1 outlines the general framework of the entire field experiment, and additional details of the experiment can be found elsewhere (Karra and Zhang, 2020).

4.2 Sample

We screened 1,122 households in order to obtain an initial sample of 782 women who, at the time of the baseline survey: 1) were married; 2) were between the ages of 18 and 35; 3) lived in the city of Lilongwe (permanent residents); 4) were currently non-pregnant and did not give birth in the 6 months prior to the initial screening; 5) had neither been sterilized nor have had a hysterectomy; 6) had given birth to at least one child (one live birth) in their lifetime and 7) lived with their husbands at the time of the screening.

These criteria were designed to identify women who were most likely to have a demand for contraception. Women who successfully met these criteria and who consented to participate were recruited. Given that randomization was administered at the individual woman level, it was necessary to select only one eligible woman from a household in order to minimize any possible contamination

Figure 1: Experimental Design

Household Screening, Recruitment
Use DHS enumeration area maps, census listings, and community directories

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1112 Households Selected

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Baseline Survey

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782 Women Selected

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T1: First Arm
Detailed FP information package, private counseling, transportation, side effects counseling, reimbursement, **13 choices in counseling, husband invitations**

223 Participants ← *Randomization* → *108 Participants*

T0: Control
Detailed FP information package, private counseling, transportation, side effects counseling, reimbursement, 13 **choices in counseling, no husband invitations**

224 Participants   *227 Participants*

T2: Second Arm
Detailed FP information package, private counseling, transportation, side effects counseling, reimbursement, **5 choices in counseling, no husband invitations**

T3: Third Arm
Detailed FP information package, private counseling, transportation, side effects counseling, reimbursement, **5 choices in counseling, husband invitations**

Follow-Up

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Data Collection; Data Analysis

Follow-Up

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Data Collection; Data Analysis

Follow-Up

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Data Collection; Data Analysis

Follow-Up

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Data Collection; Data Analysis

across intervention and control arms. For this reason, no two eligible women were enrolled from the same household. If multiple women from the same household were potentially eligible to be recruited, we chose the youngest eligible woman from the household to participate. We also ensured that eligible women who were selected for the study were sufficiently distant (at least five households apart) from each other, which also served to minimize spillover effects between treated and control women who lived in the same neighborhood.

4.3 Randomization

Following the baseline survey, women who participated in the study were randomized into one of four experimental arms:

1. a control group (T0), where women receive a private counseling session on the full range of 13 contraceptive methods following a standard counseling process (N = 108);

2. an intervention group (T1), in which a woman was encouraged (but not compelled) to invite her husband to a joint counseling session. A woman (and her husband if she chose to invite him) then received a counseling session on a full range of 13 contraceptive methods (N = 223);

3. an intervention group (T2), in which a woman received a private counseling session on a targeted set of 5 contraceptive methods based on her baseline preferences for family planning (N = 225);

4. an intervention group (T3), in which a woman was encouraged to invite her husband to a joint counseling session. A woman (and her husband if she chose to invite him) was (were) then counseled on a targeted set of 5 contraceptive methods based on her baseline preferences for family planning (N = 228).

4.4 The Intervention

4.4.1 *Counseling Session - Introduction*

All women who completed the baseline survey and were randomized into the four treatment arms (T0-T3) were offered one free, private family planning counseling session in their homes. Women were also informed of the benefits of contraception and birth spacing during the counseling session. We enlisted the support of the Malawi Reproductive Health Directorate (RHD) and several international nongovernmental organizations who work on family planning, including Population Services International (PSI), Banja La Mtsogolo (BLM), the Family Planning Association of Malawi (FPAM), and FHI360, to help us develop training materials and counseling resources.

4.4.2 *Pre-Counseling Survey*

Before each counseling session, counselors conducted a short survey to confirm women's pregnancy status, contraceptive use, fertility preferences, and contraceptive preferences. The purpose of this survey was to elicit women's contraceptive preferences before the interventions were administered, which allowS for the tracking of changes in women's stated and revealed preferences over the study period.

4.4.3 *Counseling for Control Group T0*

Following the pre-counseling survey and an introductory discussion on the benefits of contraception and birth spacing, women who were assigned to the control arm (*T0*) were counseled on the full range of **13 available family planning methods**. Counselors employed the standard-of-care contraceptive method flipchart that is provided by the MOH and RHD to counsel women on each method, following the order of methods in the flipchart.

4.4.4 *Counseling for Intervention Group T1*

Prior to receiving the counseling session, women who were assigned to intervention arm T1 were encouraged by the counselor to invite their husbands / male partners to participate in a joint family planning counseling session. Following the invitation, women and their husbands (if they chose to invite them) jointly received counseling on the benefits of contraception and birth spacing. Women and their husbands were then jointly counselled on the full range of 13 available family planning methods with the same standard counseling flipchart used by counselors in intervention arm T0.

4.4.5 *Counseling for Intervention Group T2*

Following the introductory risk assessment and discussion on the benefits of contraception and birth spacing, women who were assigned to intervention arm T2 were counseled on a targeted number of methods that were chosen based on the respondent's reported preferences at baseline. The objective of this intervention arm was to minimize choice overload and increase the salience of a woman's most preferred method attribute (e.g. method effectiveness in preventing pregnancy, duration of use, likelihood of method-related side effects, etc.).

At baseline, each woman was asked to assign a relative rank to her top three most valued attributes in choosing a contraceptive method (e.g. does she prefer that a method has a lower incidence of side effects, a method that is more effective at preventing pregnancy, etc.). Based on her ranking of method attributes, the counselor confirmed the attribute that the woman revealed to be most important (e.g. methods with low incidence of side effects) and used a pre-designed tailored flipchart (an abbreviated version of the full flipchart) to present a subset of up to 5 methods that ranked highest along that revealed attribute. Particular emphasis was placed on making the order of presentation salient, whereby women were reminded and primed to consider the relative ranking of methods along their stated attribute. Counselors then counseled women on each of the subsetted methods.

4.4.6 *Counseling for Intervention Group T3*

Prior to receiving the counseling session, women who were assigned to intervention arm T3 were encouraged by the counselor to invite their husbands / male partners to participate in a joint family planning counseling session. Following the invitation, women and their husbands (if they chose to invite them) received an introductory session on the benefits of contraception and birth spacing. In following the counseling protocols of the T2 intervention arm above, a woman and her husband were then jointly counseled on up to 5 methods based on the woman's highest ranked stated preferred method attribute that was elicited at baseline. Prior to counseling, counselors confirmed the woman's highest ranked attribute. Then the counselor jointly counseled the woman and her husband (if she chose to invite him) on the targeted subset of up to 5 contraceptive methods that most closely aligned with her most preferred attribute using a tailored, condensed flipchart.

4.4.7 *Post-Counseling Survey*

Following the counseling session, counselors conducted a brief survey with all women to assess their experiences with the counseling service. A key aim of this survey was to document changes in women's

preferred choice of contraceptive method immediately following counseling.

4.4.8 *Post-Counseling Package of Services*

Following the post-counseling survey, all women (and husbands who participated in the counseling session) were offered the following package of services for a one-month period:

1. **Transportation Service**: Women (and invited husbands) were offered a free transportation service from their homes to the Good Health Kauma Clinic for a period of one month. The transportation service was provided by a hired taxi driver who was dedicated to transporting clients for the study. Respondents received the phone number of a project field manager and were instructed to let the field manager contact the driver to transport them to the Good Health Kauma Clinic during the clinic's normal working hours, from 8 AM to 5 PM from Monday to Saturday. The field manager maintained a daily schedule of respondents who requested the driver's services, and respondents were instructed to notify the field manager at least one day before to arrange an appointment with the driver.

2. **Financial Reimbursement for Family Planning Services**: Women and participating husbands were financially reimbursed for any out-of-pocket expenditures that they incurred for receiving family planning care at the Good Health Kauma Clinic for the one-month service period. Costs that were eligible for reimbursement included the procurement costs of family planning medications and contraceptive methods, family planning consultation fees, lab test fees, treatment costs for any contraceptive-related side effects and contraindications, expenses associated with switching and discontinuation of methods, and exam fees. Each couple was allowed a maximum reimbursement amount of 17,500 MWK ($25.00 USD) over the one month intervention period, which could be redeemed by the couple over multiple visits at the Good Health Kauma Clinic. The extent to which a given expenditure at the clinic met the criteria for being reimbursed was determined by the clinician. For every family planning service that was eligible for reimbursement, the cost of the service was deducted from her reimbursement allowance.

3. **Mobile credit to make appointments with field manager / taxi driver:** Finally, all participants were provided 100 MWK in mobile credit, which covered any communication costs between the participant, field team, and driver. The mobile credit was provided to participants to facilitate the set up of appointments with the Kauma Clinic for services.

4.5 Follow-Up

Following the one-month service period, women were resurveyed with an abbreviated version of the survey questionnaire that was initially administered at baseline. Follow-up surveys were administered in three phases: 1) a clinic-based survey that was administered to all women (and participating husbands) who visited the Good Health Kauma Clinic; 2) a phone follow-up survey that was administered to women who did not visit the Good Health Kauma Clinic; and 3) an in-person home-based follow-up survey that was administered to women who neither visited the Good Health

Kauma Clinic nor were available for a phone follow-up survey. Our final analytic sample is comprised of 639 women (81.7 percent of the initial baseline sample) who were offered the intervention and who participated in at least one of the follow-up surveys (phone surveys, home-based surveys, or clinic-based surveys). Figure 2 presents a participant recruitment and retention flowchart that indicates how our final analytic sample was derived, and Table 20 in the Appendix presents a table that compares the characteristics of women in our final analytic sample to those women who attrited over the study period. We do not find any evidence of differential loss to follow-up between our main sample and our attrited sample of women across a number of observable characteristics.

4.6   Key Outcomes

For our main analysis, we investigate the effect of our two interventions on four primary outcomes:

1. An indicator of whether a woman's stated ideal method changed between counseling and follow-up.

2. An indicator of whether a woman's contraceptive method use changed between counseling and follow-up.

3. An indicator of whether a woman's stated ideal method at the end of counseling is discordant with her actual method use at follow-up.

4. An indicator of whether a woman's stated ideal method at follow-up is discordant with her actual method use at follow-up.

Table A.9 in the Appendix provides additional variable descriptions and coding definitions for each of these outcomes. Each outcome aims to capture the extent to which our user-centered approaches to counseling impact both women's stated preferences and subsequent contraceptive behavior. By measuring discordance, we also infer the extent to which women were in fact able to translate their preferences into behavior.

In section 6.5 where we examine the mechanisms of the observed treatment effect of the husband invitation intervention, we explore the following additional outcomes in detail:

1. **Post-Counseling Ideal Method.** At the end of each counseling session, women were asked the question below, "if you could go to the clinic today, which contraceptive method would you use?" We use women's answers to this question to understand if the partner invitation intervention affects women's stated preferred method that they reported immediately following the counseling session.

2. **Follow-up Method Use.** At the follow-up, women were asked, "are you currently doing something or using any method to delay or avoid getting pregnant?" If they were currently on a method, counselors further probed which method they were currently using from a list of sixteen options was provided to them: Female Sterilization, Male Sterilization, IUD, Injectables, Implants, Pill, Condom, Female Condom, Diaphragm / Foam / Jelly, Two Day Method, Standard Days Method, Lactational Amenorrhea Method, Rhythm Method, Withdrawal, Other

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Figure 2: Participant Flowchart - Analytic Sample
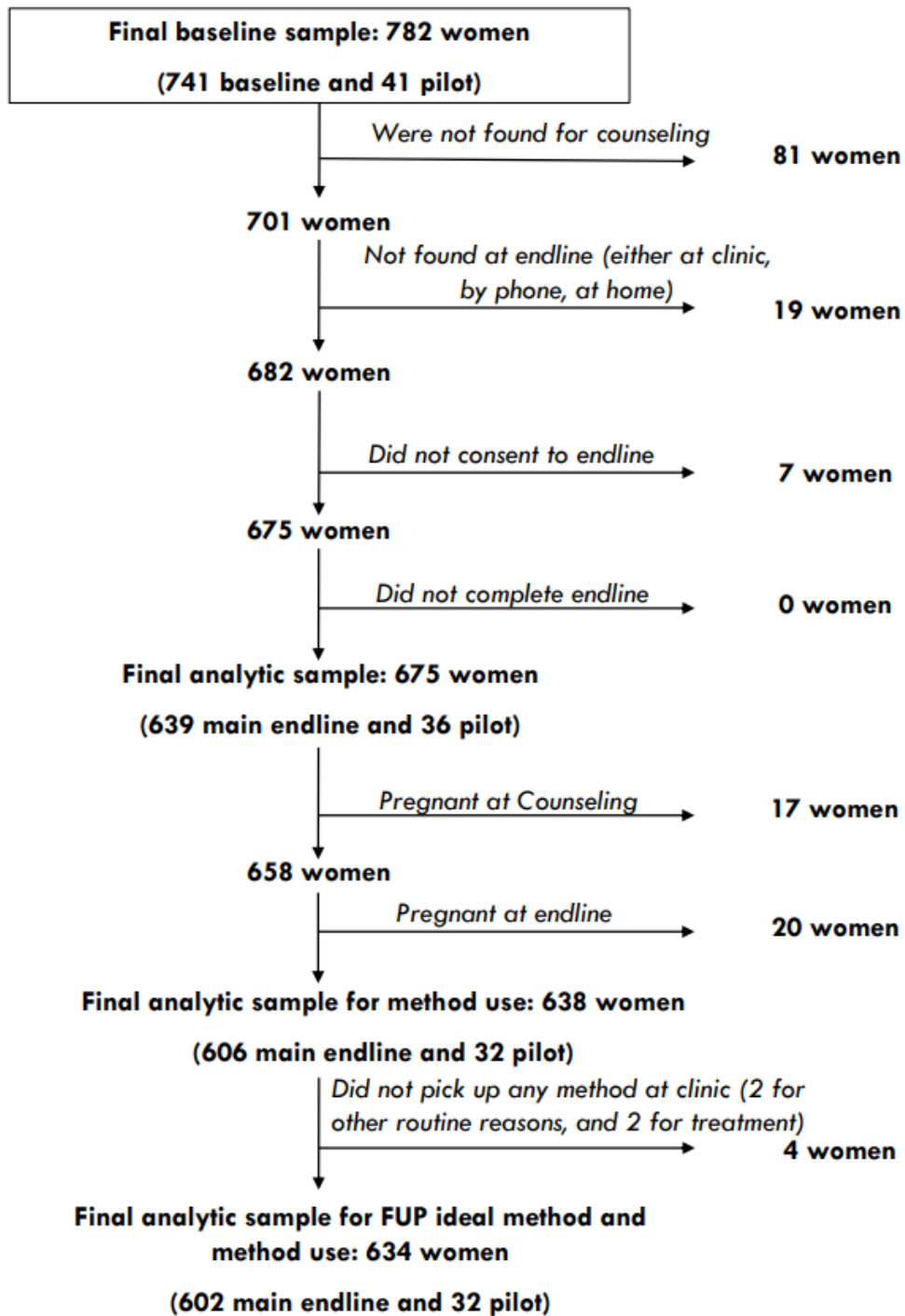
Modern Method, and Other Traditional Method. Responses to this question were used to identify women's contraceptive method use at follow-up.

3. **Concordance: Post-Counseling Ideal Method and Follow-up Use.** We define our dependent variable of concordance as a binary variable that takes on a value of 1 if a woman's post-counseling ideal method matches her reported method use at follow-up.

4. **Follow-up Ideal Method.** In the phone-based survey and the home-based survey, counselors asked women a question, "if you could freely choose a family planning / contraceptive method to use, which method(s) would you like to choose?" We use women's answer to this question as their stated ideal method at the follow-up stage. For women who visited the clinic, women were asked their purpose of their clinic visits: starting a method, refilling / renewing a method, switching methods, or treatment of side effects of contraceptive methods. We consider the contraceptive method women started, renewed, or switched to as their stated ideal method at the follow-up session. For the two women who came to the clinic only for counseling, we do not assign an stated ideal method for them.

5. **Concordance b/w Stated Ideal Method and Method Use at Follow-up.** Finally, for all method types, we examine the concordance between women's stated ideal method and method use at the follow-up session. This dependent variable takes 1 if their stated ideal method concords with their method use at the follow-up session; and 0 otherwise.

5 Empirical Specifications

Our main empirical specification is comprised of an intent-to-treat (ITT) analysis using our endline analytic sample as follows:

$$Y_{1,i} = \alpha_1 + \beta_S \cdot Short_i + \mathbf{X_i}\mathbf{\Gamma_1} + \varepsilon_{1,i} \tag{1}$$

$$Y_{2,i} = \alpha_2 + \beta_H \cdot Husb_i + \mathbf{X_i}\mathbf{\Gamma_2} + \varepsilon_{2,i} \tag{2}$$

where Y_i is the outcome variables of interest; $Short_i$ is an indicator of assignment to the short, tailored counseling intervention arm; $Husb_i$ is an indicator of assignment to the partner invitation intervention arm; and $\mathbf{X_i}$ is a vector of individual-level control variables that are measured at baseline, including age, baseline contraceptive use, a woman's most preferred method attribute at baseline, total number of children, educational attainment, work status, and ethnicity. Table A.9 in the Appendix describes these variables in more detail. Our adjusted analyses also include area fixed effects, and we present heteroskedastic-robust standard errors in all specifications.

To adjust for the potential selection of husbands who participated in the counseling session in response to the partner invitation intervention, in the appendix, we conduct an instrumental variables (two-stage least squares) analysis to estimate the compliance-adjusted treatment effect on the treated (TOT) of the partner invitation intervention as follows:

First Stage:

$$HP_i = \zeta_1 + \zeta_{FS} \cdot Husb_i + \mathbf{X_i}\mathbf{\Gamma_F} + \varepsilon_{3,i} \tag{3}$$

Second Stage:

$$Y_{3,i} = \alpha_3 + \beta_{IV,H} \cdot \widehat{HP_i} + \mathbf{X_i}\mathbf{\Gamma_3} + \varepsilon_{3,i} \tag{4}$$

where Y_i, $Husb_i$, and $\mathbf{X_i}$ are defined above. In this specification, HP_i is a binary variable that indicates whether the husband / partner of woman i was invited and did participate in the counseling session. We instrument participation in counseling by the randomized assignment to the partner invitation intervention, as is indicated by the first stage specification, Equation 3.

The exclusion restriction for the IV strategy requires that husband's presence in the counseling session affects women's stated preferences and contraceptive behaviors only through the random assignment of these women to the partner invitation group. However, this restriction may be violated in our setting, if husband's participation in the counseling session affects women's contraceptive decision-making outcomes through other channels than the invitation option provided to them per se, such as the statement of the counselors when encouraging them to invite their husband, which may vary between the two groups. Hence, while we display our IV results for the partner invitation in the appendix, we only show the ITT results in the main texts.

6 Results

6.1 Descriptive Statistics

6.1.1 *Sample Balance*

Table 1 presents a balance table across the four intervention arms by baseline covariates. The first panel in the table compares the sample of women who were randomized to either the partner invitation (T1 or T3) or no partner invitation (T0 or T2) treatment arms, and the second panel compares the sample of women who were randomized to either the short counseling (T2 or T3) or standard counseling (T0 or T1) treatment arms. We find evidence of balance across a number of baseline covariates across each of the respective treatment arms.

6.1.2 *Sample Description*

Out of 782 women who were interviewed at baseline, a total of 679 respondents (87 percent) reported that they were using a contraceptive method. The distribution of contraceptive methods among current users (the contraceptive method mix) is presented in the first column of Table 2. Around 45 percent of women (or 51.4 percent of current users) reported using injectables, which is consistent with national estimates showing injectables as the most popular contraceptive method in Malawi (National Statistical Office (NSO) and ICF Macro, 2017). Implants are the second most commonly used contraceptive method among current users (31 percent of all women, or 34.6 percent of current users), followed by oral contraceptive pills (5 percent of all women, or 8.2 percent of current users).

To better understand women's preferences for contraception and decision-making around methods, respondents were asked to identify the attribute(s) that were the most important to them when considering a contraceptive method. Women could report up to three attributes that they preferred in an ideal contraceptive method. A total of 413 women (53 percent) cited method effectiveness as the most important attribute to consider when choosing a contraceptive method, while 13 percent of women reported the prevalence of side effects in a method to be their most important attribute, and 11 percent of women identified method duration to be their most important attribute. Table 3 presents the distribution of women's most valued attributes for contraceptive methods.

Following the elicitation of preferred attributes, each woman was given twenty counters and was asked to place the counters on a placemat that listed each of their top three attributes. Women were asked to distribute counters across each attribute based on the level of significance with which they put on that particular attribute in choosing a method. If a woman mentioned fewer than three

Table 1: Summary Statistics

	All Women	Husband	No Husband	Difference
A. Partner Invitation Group				
Age(years)	26.10	26.22	25.93	-0.30
Total no. of children at baseline(BL)	2.00	2.06	1.93	-0.13
Desired no. of children	3.50	3.47	3.54	0.07
Education: None	0.01	0.01	0.01	-0.00
Education: Primary	0.65	0.64	0.65	0.01
Education: Secondary	0.32	0.32	0.32	-0.00
Education: Higher	0.02	0.02	0.02	-0.00
Currently working(1=yes)	0.56	0.56	0.57	0.02
Age at first cohabitation(years)	18.04	18.06	18.02	-0.04
Current use of FP(1=yes)	0.85	0.85	0.86	0.01
Current FP method: Injectables	0.51	0.49	0.54	0.05
Current FP method: Implants	0.35	0.37	0.31	-0.05
Top attribute: Effectiveness	0.53	0.53	0.53	0.00
Weight given to top attribute	16.54	16.61	16.44	-0.17
Wants to switch methods(1 = yes)	0.37	0.35	0.39	0.05
Husband supports FP(1 = yes)	0.91	0.90	0.91	0.00
Observations	782	450	332	782

	All Women	Short	Long	Difference
B. Short, Tailored Counseling Group				
Age(years)	26.10	26.11	26.08	-0.03
Total no. of children at baseline(BL)	2.00	1.97	2.05	0.07
Desired no. of children	3.50	3.49	3.50	0.01
Education: None	0.01	0.01	0.01	-0.00
Education: Primary	0.65	0.67	0.62	-0.04
Education: Secondary	0.32	0.30	0.35	0.05
Education: Higher	0.02	0.02	0.01	-0.01
Currently working(1=yes)	0.56	0.57	0.56	-0.02
Age at first cohabitation(years)	18.04	18.05	18.03	-0.02
Current use of FP(1=yes)	0.85	0.85	0.85	-0.00
Current FP method: Injectables	0.51	0.52	0.51	-0.02
Current FP method: Implants	0.35	0.34	0.35	0.01
Top attribute: Effectiveness	0.53	0.53	0.54	0.00
Weight given to top attribute	16.54	16.59	16.46	-0.13
Wants to switch methods(1 = yes)	0.37	0.38	0.34	-0.04
Husband supports FP(1 = yes)	0.91	0.90	0.91	0.02
Observations	782	451	331	782

Note: Currently working refers to women's work status at the baseline. First cohabitation age is the age at which women started to live with her (first) husband. Weight to top attribute refers to the number of beans (out of 20 beans) the woman assigned to their top method attribute. Intention to switch methods is woman's answer to the question, "if you had the choice to switch to another method, would you like to switch?" Husband support FP is defined from the question, "on a scale of 1 to 5, with 1 being strongly supportive and 5 being strongly opposed, how do you believe your husband feels towards using family planning methods?" This variable takes 1 if her husband was strongly supportive or supportive of contraceptive use, and 0 otherwise. Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

Table 2: Distribution of Contraceptive Methods

	(1) Curr. Method	(2) Ideal Method	(3) Husb. Ideal Method
None	0.13		
IUD	0.01		
Injectables	0.45		
Implants	0.30		
Pill	0.07		
Condom	0.02		
Standard Days Method	0.01		
Withdrawal	0.02		
Other Traditional Method	0.00		
None		0.01	
Female Sterilization		0.13	
IUD		0.03	
Injectables		0.31	
Implants		0.43	
Pill		0.05	
Condom		0.01	
Standard Days Method		0.02	
Withdrawal		0.00	
Other Modern Method		0.00	
Other Traditional Method		0.01	
None			0.03
Female Sterilization			0.02
Male Sterilzation			0.01
IUD			0.02
Injectables			0.35
Implants			0.46
Pill			0.03
Condom			0.04
Rhythm Method			0.01
Withdrawal			0.04
Other Modern Method			0.01
Other Traditional Method			0.04
Observations	777	767	112

Note: Column (1) shows the current method use at baseline among 777 women (679 current users + 98 non-users). Column (2) displays women's ideal method at baseline among 767 women (679 current users + 88 non-users who will pick up a method in the future). Column (3) displays husbands' ideal contraceptive method during the counseling session among 112 husbands.

Table 3: Top Attribute in Choosing Contraceptive Methods

	(1)
Effective at preventing pregnancy	0.53
No unpleasant side effects	0.13
Duration of effect / lasts long	0.11
No risk of harming health	0.09
No effect on regular monthly bleeding	0.06
No need to remember using the method	0.03
Will be able to get pregnant when I want	0.01
Can be used for a long time without need to visit clinic or re-supply	0.01
No need to go to a clinic to obtain the method	0.01
Protects against STI/HIV	0.01
No risk of infertility	0.01
Friends have used this method	0.00
Easily available at the clnic	0.00
Low cost	0.00
My doctor recommended it to me	0.00
Should not be hormonal	0.00
Does not interrupt sex	0.00
Other women in my family have used this method	0.00
Can be used without anyone else knowing	0.00
Other	0.01
Observations	775

Note: This table displays women's responses to the question at baseline: in choosing a contraceptive method, what feature(s) would be most important to you? It shows the distribution of top attributes for choosing contraceptive methods among 775 women who answered this question.

attributes, she was asked to assign counters only to those attributes that she chose. Among the 777 women who responded, around 60 percent of women placed all twenty counters on their top attribute (Figure 3), suggesting that the first attribute that they mentioned was the primary (if not only) determining factor when choosing a contraceptive method.

Figure 3: Number of Beans Assigned to the Top Method Attribute
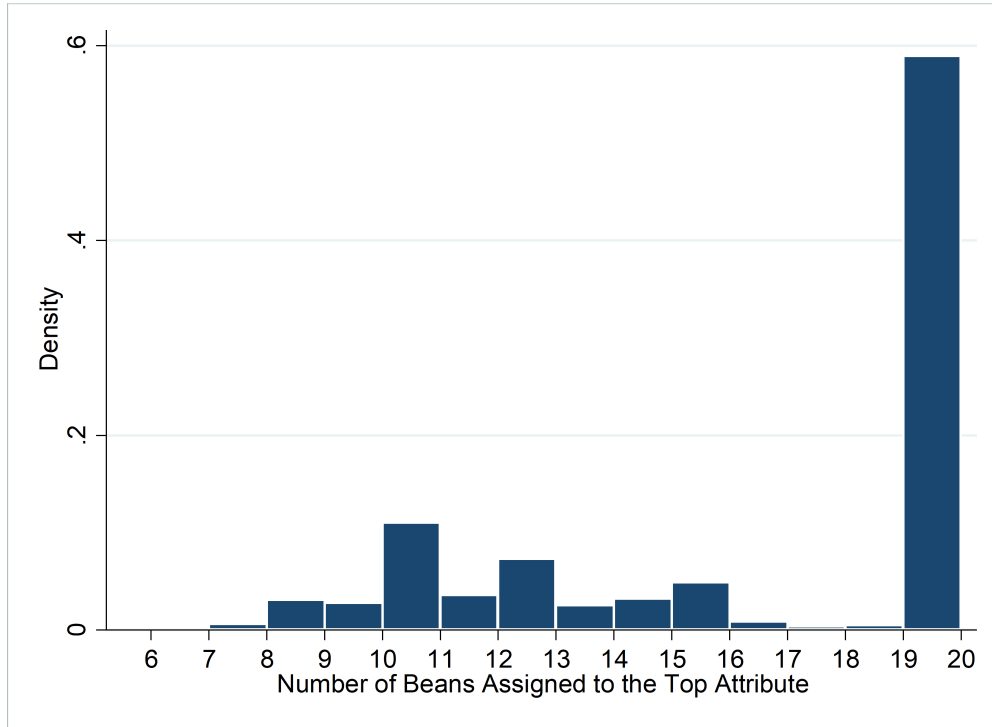
We document women's fertility experiences and preferences to better identify factors that contribute to their contraceptive use. We find that 83.1 percent of women in our sample have not yet realized their ideal fertility. This is likely given that women in our sample are relatively young (between 18 and 35 years old) and may still have the opportunity to bear children in the future.A graph that depicts women's actual births and desired births can be seen in Figure A.1. When asked how long a woman who has just given birth should wait before trying to get pregnant again, 85.8 percent of respondents answered three years or more, and around 98 percent believed that waiting for at least two years before the next birth could help to minimize any health risks (Figure A.2). These results suggest that even though a significant proportion of women in our sample had not reached their desired fertility and were likely to try to conceive in the future, their need for family planning may still be high, particularly for spacing and timing future births.

6.1.3 *Women's Counseling Experience*

We find that the average counseling time for all women who received the counseling alone is 15.9 minutes. The counseling time for women who were assigned to short, targeted counseling (T2 and T3) is 1.3 minutes shorter compared to women who were assigned to standard counseling (T0 and T1) (15.3 minutes versus 16.6 minutes, respectively)(Figure A.6). The difference in counseling times

Table 4: Distribution of Flipcharts

	(1) Flipchart Color
Blue	0.70
Purple	0.25
Gray	0.02
Orange	0.01
White	0.01
Pink	0.01
Yellow	0.00
Observations	400

Note: 407 women in the short counseling group were administered a counseling session, out of which 400 were administered a short counseling based on their top attribute. This table displays the share of women that were administered flipcharts of each color.

between the long and short counseling groups is not large, which is likely because women in the short counseling groups were more likely to ask questions during counseling.

A list of the tailored flipcharts that were used in the short counseling process, along with their corresponding attributes, is presented in Figure A.4 and A.5. The blue flipchart, which presents the subset of methods that are considered to be the most effective in preventing pregnancy, was the most commonly used flipchart to counsel women assigned to the short, tailored counseling sessions (Table 4).

We compare counseling times between the individual counseling (T0 and T2) and husband / partner invitation (T1 and T3) counseling groups. The average counseling time for women who were assigned to the husband invitation arms is 1.8 minutes longer than the average counseling time for women who were not assigned to the husband / partner invitation arms. The average counseling time for the entire sample is 16.6 minutes[6] for all respondents (Figure A.7).

Among the 634 women who received both a counseling session and a follow-up session, all women except for one received either a phone-based or a home-based survey at least 31 days after the counseling session. To this end, we are able to guarantee that each woman was given at least a month to visit our partner clinic and use any family planning services at the clinic before they were reached for follow-ups.

6.1.4 *Partner Engagement*

Among 701 women who were reached for counseling and who consented to continue with the study, 401 women were encouraged to invite their partner to counseling, and 112 women had their part-

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[6]The average counseling time for the entire sample differs from that in the previous short counseling analysis, because here we include all women who were counseled. In the comparison between long and short counseling groups, we exclude women whose husband attended the counseling session.

ner attend counseling. Prior to starting the counseling session, the counselor conducted a private interview with the husband to elicit his fertility preferences and contraceptive use. During this pre-counseling survey, the counselor elicited his most valued attribute when choosing a contraceptive method as well as his most preferred contraceptive method (for himself or for his wife). Column (3) of Table 2 presents the distribution of these husbands' ideal contraceptive method, and Figure 4 presents the distribution of their most preferred attribute. When asked about their ideal contraceptive method, 45.5 percent of husbands chose implants, followed by injectables (34.8 percent). In a similar fashion to their wives, 45.5 percent of interviewed husbands chose effectiveness at preventing pregnancy as their most important method attribute, followed by "no risk of harming health" (28.6 percent) and "method duration" (16.1 percent).

Figure 4: Husband's most Valued Attribute for Choosing a Method

Note: 112 husbands answered this question.
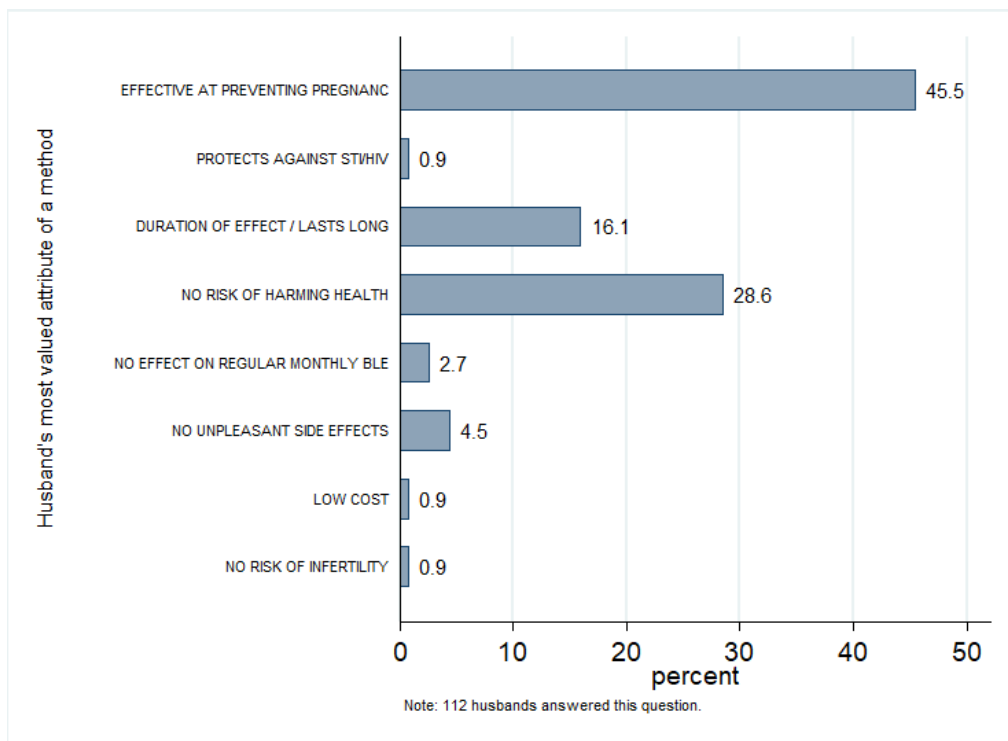
6.1.5 *Switching Preferences to the Ideal Method*

At follow-up, women were asked to state their ideal contraceptive method and clarify their choice if they were found to have switched. Table 5 presents the proportion of women who reported changes to their ideal contraceptive method over the various phases of the study. The results that are presented in the cells of the table represent the proportions of respondents whose stated ideal method differed between two given phases of the study. More than half of surveyed respondents (55.6 percent) changed their ideal contraceptive method between baseline and follow-up, a duration of 4.6 months. An estimated 45.7 percent of women reportedly changed their stated ideal contraceptive method between the baseline and post-counseling stages (an average of 73 days), while 41.5 percent of women changed their stated ideal method in the period following counseling and prior to the follow-

up session (an average of 65 days). Over the course of the counseling session (between pre- and post-counseling surveys), we find that 17.1 percent of women changed their reported stated ideal method.

Table 5: Respondents' Ideal Contraceptive Methods over Time

	Baseline	Pre-Counseling	Post-Counseling
Baseline	X	X	X
Pre-Counseling	44.41% (306/689)	X	X
Post-Counseling	45.72% (315/689)	17.12% (120/701)	X
Follow-up Sessions	55.57% (394/709)	44.79% (301/672)	41.52% (279/672)

Similarly, when asked about intentions to switch methods, a consistently large proportion of women expressed an interest in switching from their current contraceptive method if given the choice and means. At baseline, 36.7 percent of users said that they would like to switch to another method if given the chance; this proportion rose to 42.2 percent at the time of counseling, and fell slightly to 34.2 percent at follow-up (Table 6).

Table 6: Respondents' Intent to Switch from the Current Method

Baseline	Counseling	Follow-up
36.67% (249/679)	42.15% (255/605)	34.22% (194/567)

While women's stated ideal method has been changing over time, our findings suggest that these changes in their stated preferences may not, in fact, result in subsequent changes to their contraceptive behavior. Around 19.0 percent of women switched to a different contraceptive method between baseline and counseling, prior to the rollout of the intervention and approximately 17.6 percent of women were found to have switched methods between counseling and follow-up (Table 7).

Table 7: Respondents' Currently Used Methods over Time

	Baseline	Counseling	Follow-up Sessions
Baseline	X	X	X
Counseling	18.97% (129/680)	X	X
Follow-up Sessions	23.86% (162/679)	17.58% (112/637)	X

From these findings, we find women's preferences for contraceptive methods to be relatively unstable over time. Moreover, changes in women's stated preferences do not necessarily concord with their actual switching behavior over time. This discordance suggests that barriers to women's realization of their method preferences continue to exist.

6.2 Main Results

In the experimental results that follow, we present four main types of findings. First, we explore the extent to which a short, tailored counseling compels women to: a) switch their stated ideal method, and b) follow through on their choice of ideal method. Second, we investigate the extent to which partner invitations induce women to: a) actually invite their partners, b) switch their stated ideal method (possibly in response to their partner's presence), and c) follow through on their choice of ideal method. Third, we explore changes to women's choice of ideal method and method use as a result of 1) short, tailored counseling and 2) partner invitations by method type. Lastly, we shed light on the interaction effects of the two interventions.

6.2.1 *Short Counseling*

Table 8 presents intent-to-treat (ITT) results of the impact of short, tailored counseling relative to the standard counseling practice on outcomes. Panel A shows that women who were assigned to short counseling were 2.8 p.p. (control mean: 0.43) more likely to change their ideal method between pre-counseling and follow-up compared to women assigned to standard counseling. While these estimates are not significant at conventional levels, the signs of the effects are consistent throughout the analysis. We also find that women who received short counseling, compared to those who received long counseling, are no more likely to change their method from counseling to follow-up (Table 8, panel B).

When examining discordance, we observe that women who received short counseling were 6.7 p.p. (control mean 0.43) more likely to be discordant between their reported ideal method following counseling and their observed method use at follow-up (Table 8, panel C). Similarly, women who received short counseling were 9.3 p.p. (control mean: 0.52) more likely not to report their method use at follow-up as ideal (Table 8). Taken together, these findings suggest that women who received short counseling were more likely to express dissatisfaction with their contraceptive use at follow-up. Moreover, we find that since women were not significantly altering their method use over time, it is likely that the short counseling may have acted as a salient reminder of women's inability to act on their method preferences and, as a result, may have exacerbated their level of discordance and dissatisfaction with their current method use.

6.2.2 *Partner Invitations*

We next explore how the partner invitation intervention affects women's stated preferences for contraceptive methods and their realization of these preferences over time. In addition to examining the ITT effect, in the appendix, we also explore the compliance-adjusted treatment effect using a two-stage least squares (2SLS) approach, exploiting the fact that 112 of the 401 women who were assigned to the husband invitation group jointly received counseling with their husbands / male partners.

Panel A of Table 9 shows that women who were assigned to the husband invitation group were 6.7 p.p. (control mean: 0.49) less likely to change their ideal contraceptive method over time. These effects are even stronger in our compliance-adjusted analysis, which suggests that inviting a partner to counseling would reduce a woman's likelihood of changing her stated ideal method by 23.1 p.p

Table 8: Treatment Effect of Short Tailored Counseling

	(1)	(2)	(3)	(4)
A: Change in Stated Ideal Method from Counseling to Follow-up				
Short, Tailored Counseling	0.028	0.028	0.024	0.028
	[0.039]	[0.039]	[0.039]	[0.039]
N	672	672	672	671
Control mean	0.43	0.43	0.43	0.43
B: Change in Method Use from Counseling to Follow-up				
Short, Tailored Counseling	-0.003	-0.004	-0.003	-0.004
	[0.031]	[0.030]	[0.030]	[0.031]
N	638	638	638	637
Control mean	0.18	0.18	0.18	0.18
C: Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Short, Tailored Counseling	0.086**	0.083**	0.075**	0.067**
	[0.040]	[0.039]	[0.039]	[0.039]
N	640	640	640	639
Control mean	0.43	0.43	0.43	0.43
D: Discordance: Stated Ideal Method and Method Use at Follow-up				
Short, Tailored Counseling	0.100***	0.098***	0.090**	0.093***
	[0.040]	[0.039]	[0.039]	[0.039]
N	637	637	637	636
Control mean	0.52	0.52	0.52	0.52
Balancing controls		x	x	x
Area FE			x	x
Other BL covariates				x

In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Heteroskedastic-robust standard errors are presented in parentheses. *** 1%, ** 5%, * 10%.

(control mean: 0.44)(Table A.1, panel A). These findings contrast with the results that we observe from our short counseling intervention, where women who received short counseling were marginally more likely to change their choice of ideal method over time.

Next, we find that women who were assigned to the partner invitation arm were 3.5 p.p. (control mean: 0.16) more likely to switch their method use between counseling and follow-up (Table 9). The stronger and positive estimates from the 2SLS results suggest that partner invitations may have compelled women to switch to another method over time (Table A.1, panel B).

In contrast to the short counseling results, Panel C of Table 9 shows that women who were assigned to the husband invitation group were 8.8 p.p. (control mean: 0.53) less likely to be discordant between their stated ideal method immediately following counseling and their actual method use at follow-up. These findings strongly suggest that inviting partners to counseling may have served as a very effective incentive for women to materialize their preferences reported at the post-counseling session. While there is more likely to be a drop in discordance between the post-counseling ideal method and follow-up method use among women who were assigned to the husband invitation group, we find these women's level of discordance at follow up was no different than that experienced by women who did not receive an invitation (Panel D of Table 9). This implies that although women were more likely to change their minds and choice of method in the presence of their partner, their change in stated preferences for methods may have also been induced by their partner's presence, and not necessarily because they had actually changed their underlying individual preferences for contraception at follow-up.

Taken together, our findings highlight a key trade-off that women may face when seeking family planning. Women who have a preference for using contraception may consider inviting their partners to counseling if they believe that their partners are supportive in their contraceptive use and may provide them with the means to seeking services. However, in recognizing that their partners may also have their own contraceptive preferences, women may be compelled to adjust their stated and realized preferences for contraception to be more concordant with their partner. As a result, women face a direct trade-off between being less able to act on their own individual contraceptive preferences without their partner's knowledge or support, and being more able to act, through their partner's involvement and support, on a joint preference that may not be reflective of their individual preference. Section 6.5 directly tests this mechanism by examining the impact of the partner invitation by method type. With partner invitations, women were more likely to realize methods that were preferred by their husbands (implants, injectables), and were less likely to realize methods that were opposed to by their husbands (pills). Partner invitations also make women more likely to be concordant between the stated ideal method and method use at the follow-up, and this impact is mainly driven by implants.

6.3   Adoption, Switching, and Discontinuation

6.3.1   *Short, Tailored Counseling*

We disentangle the impact of our interventions by women's contraceptive adoption, switching, and discontinuation behavior over the study period. Table 10 presents the effect of short, tailored counseling on adoption, switching, and discontinuation. In Panel A, we find that short, tailored counseling

Table 9: Treatment Effect of Partner Invitation

	(1)	(2)	(3)	(4)
A: Change in Stated Ideal Method from Counseling to Follow-up				
Partner Invitation	-0.072**	-0.072**	-0.070**	-0.067**
	[0.039]	[0.039]	[0.039]	[0.040]
N	672	672	672	671
Control mean	0.49	0.49	0.49	0.49
B: Change in Method Use from Counseling to Follow-up				
Partner Invitation	0.040*	0.037	0.035	0.035
	[0.030]	[0.030]	[0.030]	[0.030]
N	638	638	638	637
Control mean	0.16	0.16	0.16	0.16
C: Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Partner Invitation	-0.086**	-0.094***	-0.085**	-0.088**
	[0.040]	[0.039]	[0.039]	[0.039]
N	640	640	640	639
Control mean	0.53	0.53	0.53	0.53
D: Discordance: Stated Ideal Method and Method Use at Follow-up				
Partner Invitation	-0.041	-0.047	-0.042	-0.043
	[0.040]	[0.039]	[0.039]	[0.039]
N	637	637	637	636
Control mean	0.60	0.60	0.60	0.60
Balancing controls		x	x	x
Area FE			x	x
Other BL covariates				x

Notes: In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Heteroskedastic-robust standard errors are presented in parentheses. *** 1%, ** 5%, * 10%.

Table 10: Treatment effect of Short Tailored Counseling

	Non-Users	Users	
	(1)	(2)	(3)
	Adoption	Switching	Discontinuation
A: Change in Stated Ideal Method from Counseling to Follow-Up			
Short, Tailored Counseling	0.019	0.036	
	[0.145]	[0.042]	
N	71	583	
Control mean	0.54	0.42	
B: Change in Method Use from Counseling to Follow-Up			
Short, Tailored Counseling	-0.245**	-0.007	0.006
	[0.105]	[0.026]	[0.018]
N	62	575	575
Control mean	0.48	0.11	0.04
Balancing controls	x	x	x
Area FE	x	x	x
Other BL covariates	x	x	x

In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. Column (1) display the estimates for the sample of non-users (of contraceptive) at the counseling stage. Columns (2) and (3) display the estimates for the sample of contraceptive users at the counseling stage. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Heteroskedastic-robust standard errors are presented in parentheses. *** 1%, ** 5%, * 10%.

may likely have an impact on women's preferences for adopting a contraceptive method: women who were not using any method at baseline and who received short, tailored counseling were significantly less likely to adopt a contraceptive method from counseling to follow-up by 24.5 p.p. (control mean: 0.48).

6.3.2 *Partner Invitations*

Table 9 presents the effect of being assigned to the partner invitation intervention arm on switching and discontinuation outcomes. We find that women who were assigned to the partner invitation arm were significantly less likely to switch their stated ideal method between counseling and follow-up. When it comes to method use, we do not observe any significant impact of the intervention on the adoption, switching, and discontinuation of contraceptive methods from counseling to the follow-up.

Table 11: Treatment Effect of Partner Invitation, Users and Non-users

	Non-Users	Users	
	Adoption	Switching	Discontinuation
A: Change in Stated Ideal Method from Counseling to Follow-Up			
Partner Invitation	-0.069	-0.088**	
	[0.150]	[0.043]	
N	71	583	
Control mean	0.47	0.50	
B: Change in Method Use from Counseling to Follow-Up			
Partner Invitation	-0.147	0.031	0.013
	[0.127]	[0.025]	[0.019]
N	62	575	575
Control mean	0.44	0.08	0.05
Balancing controls	x	x	x
Area FE	x	x	x
Other BL covariates	x	x	x

In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Heteroskedastic-robust standard errors are presented in parentheses. *** 1%, ** 5%, * 10%.

6.4 Sub-Group Findings

We present a number of sub-group analyses that estimate the differential impacts of our two interventions, suggesting possible pathways through which each intervention may have impacted outcomes.

6.4.1 *Short, Tailored Counseling*

Table 12 presents stratified treatment effects of our short, tailored counseling intervention by women's educational attainment and women's work status at baseline.

We find that short, tailored counseling slightly increases the likelihood of changing one's stated ideal method among the subsample of women who are less educated and who did not work at baseline. Short counseling also makes these two groups of women significantly more likely to be discordant between their stated ideal method at counseling and their actual method use at follow-up. We also observe strong and significant impacts of the intervention on discordance between stated preferences and actual contraceptive behavior for these subgroups at the follow-up.

6.4.2 *Partner Invitations*

Table 13 presents the stratified average treatment effects of the partner invitation arm by women's educational attainment and baseline work status.

We find that the impact of the partner invitation is primarily observed in less educated women. Specifically, we observe that the partner invitation intervention lowered women's likelihood of changing their stated ideal method by 9.2 p.p. (control mean: 0.48) and increased their likelihood of changing their method by 5.1 p.p. (control mean: 0.13) between counseling and follow-up. Interestingly, less educated women who were assigned to the partner invitation arm were 14.1 p.p. less likely to be discordant between their post-counseling ideal method and method use at follow-up (control mean: 0.57). For these women, the partner invitations, in turn, make them slightly less likely to be discordant between their method use and stated ideal method at follow-up.

For the women who were working at baseline, the partner invitation intervention does not induce any significant change to their ideal stated method or actual method use between counseling and follow-up. However, working women assigned to the husband invitation group were significantly less likely to be discordant between their reported ideal method during counseling and observed method use at the follow-up. However, as can be seen in columns (4) of panel D, these women were not significantly more likely to be concordant in their method preference and method use at follow-up.

For the subgroup of non-working women, on the other hand, the partner invitation intervention make them significantly more likely to change their method use between counseling and follow-up by 9.5 p.p. (control mean: 0.12); however, this change in method use does not translate to a higher concordance at follow-up.

As can be seen from Table 14, for women whose most valued attribute in choosing a contraceptive method was method effectiveness, partner invitations make them less likely to change their stated ideal method, and less likely to be discordant between their counseling ideal method and follow-up method use. However, these women were not more likely to be concordant at the follow-up.

For women who valued other attributes the most at the baseline, partner invitations make them slightly more likely to change their stated ideal method over time. However, these women were not

Table 12: Treatment Effect of Short Tailored Counseling by Subgroups

	More educated	Less educated	Working	Not working
Change in Stated Ideal Method from Counseling to Follow-up				
Short, Tailored Counseling	-0.056	0.070*	-0.006	0.072
	[0.069]	[0.048]	[0.053]	[0.060]
N	230	441	384	287
Control mean	0.53	0.38	0.47	0.38
Change in Method Use from Counseling to Follow-up				
Short, Tailored Counseling	-0.031	0.002	-0.011	0.012
	[0.056]	[0.037]	[0.042]	[0.048]
N	224	413	368	269
Control mean	0.21	0.16	0.19	0.17
Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Short, Tailored Counseling	0.041	0.073*	0.012	0.140**
	[0.067]	[0.049]	[0.052]	[0.061]
N	224	415	368	271
Control mean	0.43	0.43	0.46	0.38
Discordance: Stated Ideal Method and Method Use at Follow-up				
Short, Tailored Counseling	0.008	0.134***	0.056	0.132**
	[0.067]	[0.049]	[0.052]	[0.060]
N	223	413	367	269
Control mean	0.62	0.46	0.52	0.51
Balancing controls	x	x	x	x
Area FE	x	x	x	x
Other BL covariates	x	x	x	x

NOTES: In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Column (1) restricts the analysis to women who attained at least secondary school education. Column (2) restricts the analysis to women who received no education or who received primary education only. Column (3) conducts the same analysis among working women. Column (4) conducts the same analysis among non-working women (who did not work in the last 12 months). Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

more likely to be concordant between their stated ideal method at the counseling stage and the

follow-up method use, and they were no more likely to be concordant at the follow-up.

For women who chose only one attribute in choosing contraceptive methods at baseline, partner invitations make them less likely to change stated ideal method over time, less likely to be discordant between the counseling stated ideal method and follow-up method use; however, these women were not more likely to be concordant at the follow-up.

On the other hand, for women who chose more than one attribute, partner invitations did not exert a significant effect on any of the four outcomes.

6.5   Results by Method Type

This section further decomposes the underlying impact of the partner invitation intervention on a range of outcomes related to contraceptive method preferences and subsequent behavior. We begin with a disaggregated analysis of the average impact of the partner invitation intervention on preferences and method use by method types. For each method type, we examine five outcomes described in section 4.6: 1) post-counseling ideal method, 2) follow-up method use, 3) concordance between post-counseling ideal method and follow-up method use, 4) follow-up ideal method, and 5) concordance between stated ideal method and follow-up method use.

6.5.1   *Implants*

Results in panel A of Table 15 suggests no evidence of a significant impact of husband invitations on women's reported post-counseling ideal method being implants. Moreover, we do not find any significant impact of partner invitations on women's follow-up method use being implants (Table 15, panel B), even though we find that husbands and partners are most likely to cite implants as their most preferred contraceptive method (Table 2).

Interestingly, however, the partner invitation intervention lead to a significantly higher level of concordance among women for implants. The first column of Panel C indicates that while husband invitations do not make women more likely to report implants as their ideal method after counseling, women who reported implants as ideal at the post-counseling stage were more likely to be using implants at follow-up. Specifically, among women who reported implants as ideal after the counseling session, women who received a partner invitation were 8.9 p.p. (control mean: 0.17) more likely to be using implants at the follow-up. This finding suggests that women who were encouraged to invite their partner to counseling were more likely to act on their stated preferences if their post-counseling ideal method was implants, which were also the most preferred method by male partners generally. To this end, it is likely that a woman's partner's preferences may be playing a crucial role in shaping her eventually revealed preferences and behavior.

Does a partner's method preferences affect a woman's ideal method at follow-up? Findings from Panel D of Table 15 suggest that women who receive a partner invitation are 7.5 p.p. (control mean: 0.32) more likely to report implants as their ideal method. A further examination of concordance at follow-up finds that for women who were using implants at the follow-up, partner invitations make them 6.6 p.p. (control mean: 0.12) more likely to report implants as their ideal method at follow-up.

Table 13: Treatment Effect of Partner Invitation by Subgroups

	More educated	Less educated	Working	Non-working
A: Change in Stated Ideal Method from Counseling to Follow-up				
Partner Invitation	-0.003	-0.092**	-0.056	-0.061
	[0.070]	[0.049]	[0.053]	[0.062]
N	230	441	384	287
Control mean	0.51	0.48	0.52	0.46
B: Change in Method Use from Counseling to Follow-up				
Partner Invitation	0.010	0.051*	-0.003	0.095**
	[0.056]	[0.037]	[0.041]	[0.047]
N	224	413	368	269
Control mean	0.19	0.13	0.18	0.12
C: Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Partner Invitation	0.010	-0.141***	-0.102**	-0.065
	[0.069]	[0.048]	[0.051]	[0.062]
N	224	415	368	271
Control mean	0.46	0.57	0.55	0.50
D: Discordance: Stated Ideal Method and Method Use at Follow-up				
Partner Invitation	-0.006	-0.062	-0.053	-0.024
	[0.068]	[0.048]	[0.052]	[0.060]
N	223	413	367	269
Control mean	0.61	0.60	0.61	0.60
Balancing controls	x	x	x	x
Area FE	x	x	x	x
Other BL covariates	x	x	x	x

Notes: In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Column (1) restricts the analysis to women who attained at least secondary school education. Column (2) restricts the analysis to women who received no education or who received primary education only. Column (3) conducts the same analysis among working women. Column (4) conducts the same analysis among non-working women (who did not work in the last 12 months). Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

6.5.2 *Injectables*

We find similar, but smaller, results for injectables as we do for implants, which are the second most frequently preferred contraceptive method by male partners in our sample (Table 2). We present our results in column (2) of Table 15. Our results in panel A show that women assigned to the partner

Table 14: Treatment Effect of Partner Invitation by Subgroups

	Top Attribute: Effectiveness	Top Attribute: Others	One Attribute	More Attributes
A: Change in Stated Ideal Method from Counseling to Follow-up				
Partner Invitation	-0.203***	0.078*	-0.109**	-0.029
	[0.053]	[0.059]	[0.052]	[0.062]
N	355	316	390	280
Control mean	0.55	0.41	0.49	0.49
B: Change in Method Use from Counseling to Follow-up				
Partner Invitation	0.014	0.049	0.009	0.045
	[0.040]	[0.047]	[0.040]	[0.048]
N	339	298	368	268
Control mean	0.15	0.17	0.15	0.15
C: Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Partner Invitation	-0.142***	-0.039	-0.096**	-0.060
	[0.054]	[0.058]	[0.052]	[0.061]
N	339	300	368	270
Control mean	0.51	0.55	0.53	0.53
D: Discordance: Stated Ideal Method and Method Use at Follow-up				
Partner Invitation	-0.052	-0.035	-0.024	-0.069
	[0.056]	[0.057]	[0.053]	[0.058]
N	336	300	367	268
Control mean	0.57	0.64	0.53	0.70
Balancing controls	x	x	x	x
Area FE	x	x	x	x
Other BL covariates	x	x	x	x

Notes: In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Column (1) restricts the analysis to women who attained at least secondary school education. Column (2) restricts the analysis to women who received no education or who received primary education only. Column (3) conducts the same analysis among working women. Column (4) conducts the same analysis among non-working women (who did not work in the last 12 months). Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

invitation arm were slightly more likely (by 4.5 p.p., control mean: 0.34) to report injectables as their ideal contraceptive method. However, panel B shows no significant impact of the partner invitation invitation on actual injectable use at follow-up. Among women who were using injectables at follow-up, those assigned to the partner invitation arm were slightly, but not significantly, more likely to have reported injectables as their ideal method (3.7 p.p., control mean: 0.22). Panel D of Table 15 further shows that women assigned to the partner invitation arm were also slightly more likely to report injectables as ideal at follow-up (2.7 p.p., control mean: 0.32). Finally, panel E finds that

among women who were using injectables at the follow-up session, those who were invited to bring their partners to counseling were 3.5 p.p. more likely to report injectables as ideal at the same stage (control mean: 0.19).

Taken together, our findings on injectables serves as additional evidence that the invitations of male partners to counseling may play a key role in shaping women's perceptions about contraceptive methods that they were already using. With this said, we do note that the impact of partner invitations on womens' injectable preferences and use are not as significant nor as salient as what we find for implants, which are the most preferred contraceptive method by male partners.

6.5.3 *Pills*

We find opposite results of the partner invitation on pill use and preferences than those obtained for implants. We present our results in column (3) of Table 15. In panel A and B of Table 15, we find no indication of any significant impact of partner invitations on women's stated ideal method being pills following counseling, and we find a marginally significant and negative impact of partner invitations on women's method use being pills at follow-up (2.6 p.p., control mean: 0.09). However, panel C indicates that among women who reported pills as ideal at counseling, those who were assigned to the partner invitation arm were 3.1 p.p. less likely to be using pills at the follow-up (control mean: 0.05).

In panel D, we find that women assigned to the partner invitation arm were 3.7 p.p less likely to report pills as their ideal method at follow-up (control mean: 0.09). Furthermore, Panel E shows that among women who were using pills at follow-up, those who were encouraged to invite their partner were 3.7 p.p. less likely to report pills as their ideal method at follow-up (control mean: 0.06). These findings, if combined with our previous findings on partner preferences in Table 2, suggests that women's preferences and subsequent behavior are also shaped by their partners' reported aversion to pills relative to implants and injectables. To this end, we observe evidence of substitution away from pills, both in terms of women's stated preferences and actual use, and towards implants and injectables, both of which are more aligned towards women's partners' preferences for methods.

6.5.4 *Rhythm Methods / Withdrawal / Other Traditional Methods*

Among our sample of 112 husbands, 6 percent of husbands reported their stated ideal method to be a traditional method, including the rhythm method (1 percent), withdrawal (4 percent), or other traditional methods (1 percent). Given the rather low levels of support among husbands for these three traditional methods, we expect to observe a smaller, dampening effect of the partner invitation arm on women's preferences for and use of these methods. Results in columns (4) of Table 15 resonate with our predictions. Panel A reveals no indication of any significant impact of the partner invitation intervention women's preferences for these methods following counseling, and Panel B finds a slightly negative impact of the partner invitation on women's use of these methods at follow-up. To this end, We find a significantly higher discordance between women's preferences and method use at follow-up for women who were invited to bring their partners with them to counseling and who continued to use traditional methods of contraception.

Our disaggregated results by method type reveal that encouraging women to invite their partners

Table 15: The Treatment Effect of Partner Invitations by Methods

	Implants	Injectables	Pills	Rhythm/Withdrawal/Traditional
Post-Counseling Ideal Method: method above				
Partner Invitation	0.027	0.045*	-0.017	0.006
	[0.032]	[0.029]	[0.017]	[0.010]
N	674	674	674	674
Control mean	0.41	0.34	0.06	0.01
Follow-up Method: method above				
Partner Invitation	0.036	0.002	-0.026	-0.015
	[0.034]	[0.038]	[0.022]	[0.012]
N	639	639	639	639
Control mean	0.30	0.43	0.09	0.03
FUP method = Post-counseling ideal method: method above				
Partner Invitation	0.089***	0.037	-0.031**	-0.001
	[0.029]	[0.030]	[0.015]	[0.006]
N	639	639	639	639
Control mean	0.17	0.22	0.05	0.01
Follow-up Ideal Method: method above				
Partner Invitation	0.075**	0.027	-0.037**	-0.008
	[0.036]	[0.035]	[0.020]	[0.006]
N	671	671	671	671
Control mean	0.32	0.32	0.09	0.01
FUP method = FUP ideal method: method above				
Partner Invitation	0.066***	0.035	-0.037***	-0.010**
	[0.027]	[0.031]	[0.015]	[0.006]
N	636	636	636	636
Control mean	0.12	0.19	0.06	0.01
Balancing controls	x	x	x	x
Area FE	x	x	x	x
Other BL covariates	x	x	x	x

NOTES: The dependent variable in the first panel is the most preferred contraceptive method at the post-counseling stage being the method specified above. The dependent variale in the second panel is method use at the follow-up being the method specified above. The dependent variable in the third panel takes 1 if both the post-counseling ideal method and the follow-up method use are the method specified above. The dependent variable in the fourth panel takes 1 if the follow-up most preferred method is the method specified above. The dependent variable in the fifth panel takes 1 if both the most preferred method and the method use at follow-up are the method specified above. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), ethnicity (1 = Chewa), and pre-couseling method being injectables, pills, or condoms (1=yes). Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

to counseling session compels women to report and potentially even use methods that their partners prefer (in our case, partner preferences for implants and, to a lesser degree, injectables). To this end, women who were encouraged to invite their partner were more likely to be concordant between their stated ideal method and actual method use. In contrast, partner invitations to counseling are likely to inhibit women's reported preferences and use of methods that are not aligned with their partner's stated preferences (in our case, preferences for pills). For women who may continue to report pills as being their ideal contraceptive method, being encouraged to invite their partners to counseling may make them less likely to be concordant between their ideal method following counseling and their

realized method use at follow-up.

Consistent with our findings for husbands' preferences for contraceptive methods in Table 2, men prefer implants and injectables to other methods, so their presence during counseling, or even perhaps their potential involvement in contraceptive decision-making outside of counseling, may compel women to change their own stated and revealed preferences to more closely resemble their partners' own preferences, potentially at the risk of crowding out women's own individual preferences for methods.

6.6 Interaction Effects of the Two Interventions

How does the short, tailored counseling procedure interact with the partner invitations intervention in affecting women's contraceptive choices? In this section, we probe the impact of partner invitations on the same outcomes as in the previous section, but for the short, tailored counseling group, and the standard, long counseling group, respectively. Figure 5 - Figure 9 show these impacts in detail.

Interestingly, the positive impacts of partner invitations for implants are exclusively driven by the subgroup of women who were assigned to the short, tailored counseling group. In particular, for women who were administered a short counseling session and who chose implants as their ideal method at the end of the counseling session, partner invitations make them significantly more likely to be using implants at the follow-up. Furthermore, partner invitations make women more likely to name implants as their ideal contraceptive method at the follow-up, and more likely to be concordant between their stated ideal method and method use at the follow-up session. These effects were driven by the short, tailored counseling group.

By the same token, the negative impacts of partner invitations for pills are also driven by the short, tailored counseling group of women. For women who were administered a short counseling session and who chose pills as their ideal contraceptive method at the end of the counseling session, partner invitations make them less likely to be using pills at the follow-up. Also, partner invitations make women less likely to name pills as their ideal method at the follow-up, and less likely to be concordant at the follow-up session. These effects are exclusively driven by the women who were assigned to the short, tailored counseling group.

From these findings, a short, tailored counseling procedure enhances the influence of partners' presence on women's contraceptive decision-making process, which may be due to the fact that a more focused counseling procedure leaves more time for spousal communication, and may have simultaneously facilitated a more effective discussion around the couple's joint preferences for contraception.

Figure 5: The Impact of Partner Invitations on Post-Counseling Ideal Method
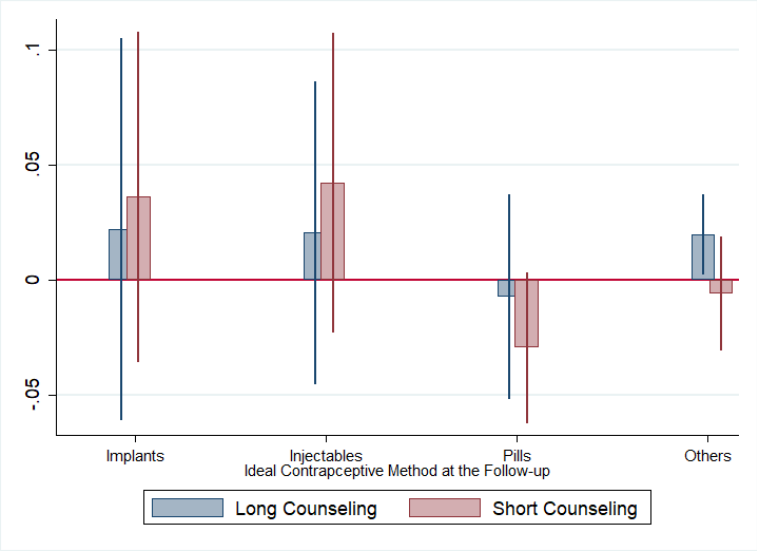

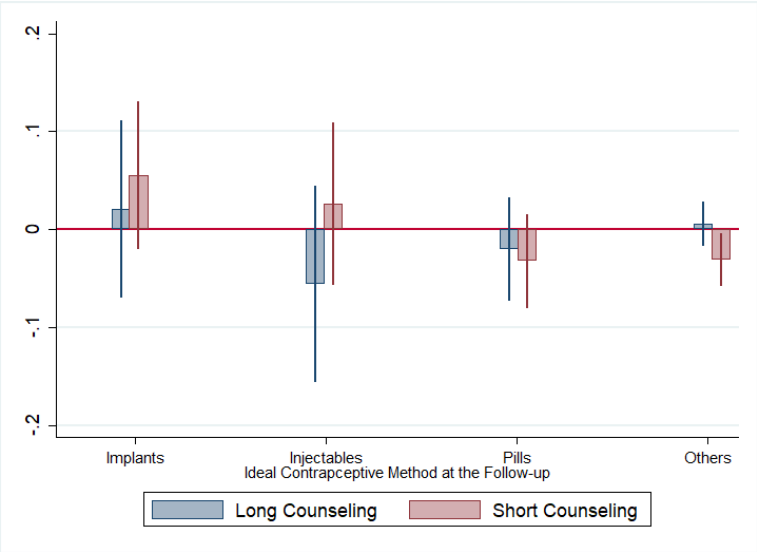Figure 6: The Impact of Partner Invitations on Follow-up Method Use

Figure 7: The Impact of Partner Invitations on Concordance b/w Counseling Ideal Method and FUP Method Use
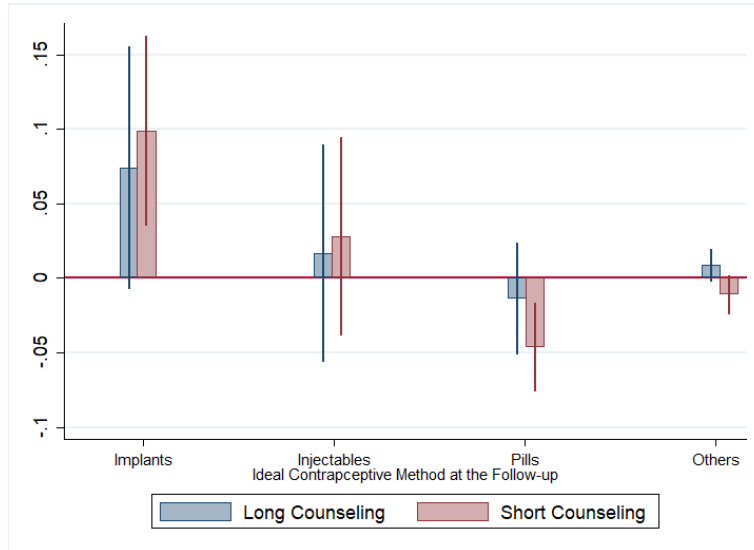

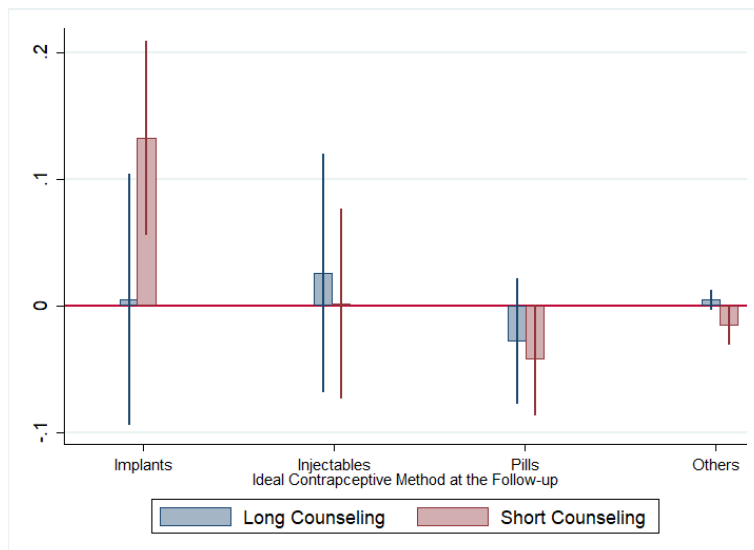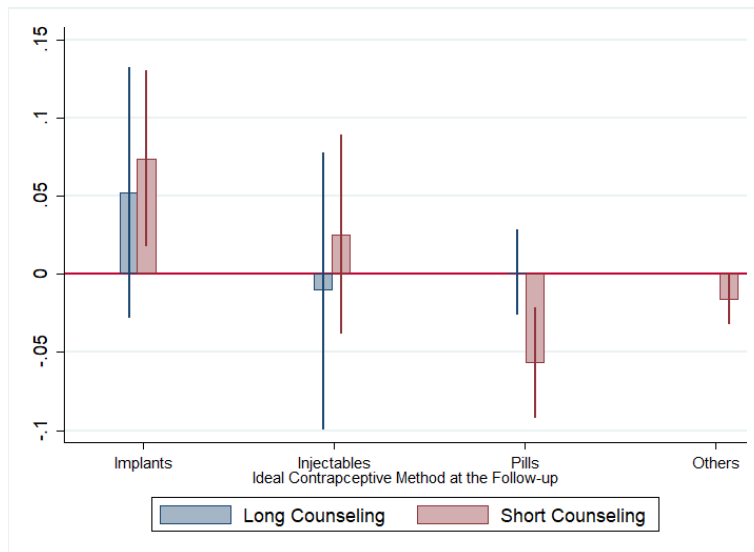Figure 8: The Impact of Partner Invitations on Follow-up Ideal Method

Figure 9: The Impact of Partner Invitations on Follow-up Concordance

6.7 Robustness Checks

6.7.1 Definition of the Follow-Up Stated Ideal Method

In Table 8 and Table 9, which store our main results for the two interventions, the dependent variables in panel A and panel D include the outcome "the follow-up stated ideal method". For women who were followed up through phone surveys or home visits, their follow-up stated ideal method is defined to be their responses to the question, "if you could freely choose a contraceptive / family planning method, which method(s) would you like to use?" For the 67 women who visited the clinic during the one-month service period though, we did not ask them the same question. For these women, in contrast, we define their follow-up stated ideal method to be the contraceptive method they started, refilled, or switched to during their clinic visit. This is based on the consideration that 65 women started, renewed, or switched to a method during their clinic visit, and that all of them reported that they obtained the services they wanted at the end of the visit; hence, we consider the contraceptive method they started, renewed, or switched to at the follow-up as their stated ideal contraceptive method at this stage. For the remaining two women who went to the clinic only for treatment services of their currently used method, we do not assign a value to their follow-up stated ideal method.

To check whether our results are driven by the women who visited the clinic, in our robustness check section, we restrict our analysis to women who were reached by phone or through home visit, and exclude women who visited the clinic during their service period. As can be seen from Table A.7 and Table A.8, we obtain the same results as in Table 8 and Table 9.

6.8 Selection

6.8.1 *Who was available for counseling?*

Out of the 782 women who participated in the study, 701 women were reached for the counseling intervention, while 81 women were not available to participate in counseling[7]. To understand if women who attrited from the sample were intrinsically different from those who remained within the sample at the counseling stage, we compare these two groups of women in Table 16.

We find that women who were reached for counseling were less interested in changing methods at baseline if given the choice compared to women who were not reached for counseling by 17 p.p. (mean: 0.37). These differences suggest that the impacts of our two user-centered interventions on preferences and change in method use are likely to be larger if the interventions were to be rolled out to a more generalizable population of women and couples.

6.8.2 *Which type of woman invited her husband?*

Among women who were randomly assigned to the partner invitation group, we find that those who were willing and encouraged their partners to participate in the counseling session tended to

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[7]Of the 81 uncounseled women, 61 women had moved, 2 women had died due to reasons that were unrelated to our study, 6 women refused to participate, and the remaining 12 women were contacted but were unavailable to participate.

Table 16: Who were Available for the Counseling Session?

	All	Counselled	Not Counselled	Difference
Age(years)	26.12	26.21	25.20	-1.01
Total no. of children at baseline(BL)	2.01	2.02	1.90	-0.12
Desired no. of children	3.50	3.50	3.50	0.00
Education: None	0.01	0.01	0.01	0.00
Education: Primary	0.65	0.65	0.67	0.02
Education: Secondary	0.32	0.32	0.30	-0.02
Education: Higher	0.02	0.02	0.01	-0.00
Currently working(1=yes)	0.57	0.57	0.49	-0.08
Age at first cohabitation(years)	18.05	18.06	18.05	-0.01
Current use of FP(1=yes)	0.85	0.85	0.85	0.00
Current FP method: Injectables	0.51	0.51	0.57	0.07
Current FP method: Implants	0.35	0.35	0.30	-0.06
Top attribute: Effectiveness	0.53	0.53	0.57	0.04
Weight given to top attribute	16.54	16.46	17.40	0.94
Wants to switch methods(1 = yes)	0.37	0.35	0.52	0.17**
Husband supports FP(1 = yes)	0.90	0.91	0.82	-0.09*
Using a Long-Acting Method at BL(1=yes)	0.75	0.75	0.77	0.01
Observations	770	701	69	770

Note: Currently working refers to women's work status at the baseline. First cohabitation age is the age at which women started to live with her (first) husband. Weight to top attribute refers to the number of beans (out of 20 beans) the woman assigned to their top method attribute. Intention to switch methods is woman's answer to the question, "if you had the choice to switch to another method, would you like to switch?" Husband support FP is defined from the question, "on a scale of 1 to 5, with 1 being strongly supportive and 5 being strongly opposed, how do you believe your husband feels towards using family planning methods?" This variable takes 1 if her husband was strongly supportive or supportive of contraceptive use, and 0 otherwise. Using a Long-Acting Methods takes 1 if the woman was using IUD's/implants/injectables at the baseline. Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

Table 17: Husband Group Compliers

	All	Compliers	Non-Compliers	Difference
Age(years)	26.29	25.68	26.53	0.85
Total no. of children at baseline(BL)	2.08	1.99	2.12	0.13
Desired no. of children	3.47	3.47	3.47	-0.00
Education: None	0.01	0.01	0.01	0.01
Education: Primary	0.65	0.69	0.64	-0.05
Education: Secondary	0.32	0.29	0.33	0.04
Education: Higher	0.02	0.01	0.02	0.01
Currently working(1=yes)	0.57	0.57	0.57	-0.00
Age at first cohabitation(years)	18.03	17.57	18.21	0.64*
Current use of FP(1=yes)	0.85	0.88	0.84	-0.04
Current FP method: Injectables	0.49	0.40	0.52	0.12*
Current FP method: Implants	0.38	0.44	0.35	-0.09
Top attribute: Effectiveness	0.52	0.48	0.53	0.06
Weight given to top attribute	16.52	16.12	16.68	0.56
Wants to switch methods(1 = yes)	0.32	0.33	0.32	-0.01
Husband supports FP(1 = yes)	0.91	0.88	0.92	0.03
Using a Long-Acting Method at BL(1=yes)	0.76	0.76	0.75	-0.01
Observations	401	113	288	401

Note: Currently working refers to women's work status at the baseline. First cohabitation age is the age at which women started to live with her (first) husband. Weight to top attribute refers to the number of beans (out of 20 beans) the woman assigned to their top method attribute. Intention to switch methods is woman's answer to the question, "if you had the choice to switch to another method, would you like to switch?" Husband support FP is defined from the question, "on a scale of 1 to 5, with 1 being strongly supportive and 5 being strongly opposed, how do you believe your husband feels towards using family planning methods?" This variable takes 1 if her husband was strongly supportive or supportive of contraceptive use, and 0 otherwise. The variable Using a Long-Acting method at BL takes 1 if the woman was on injectables/implants/IUD's at the baseline. Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

be similar across a number of characteristics relative to those women who were also offered the invitation but who did not invite their husbands to counseling. Table 17 presents comparisons of characteristics between women who invited their partners (compliers) and women who were offered the invitation but who did not invite their partners (non-compliers). Our results show that while most of the differences between these groups are not significant at conventional levels, compliers were slightly younger than non-compliers when they first cohabitated with their husband / partner, and non-compliers were marginally more likely to be users of injectables at the baseline.

6.8.3 *Who visited the Good Health Kauma Clinic?*

Of the 701 women who were available for the counseling session and received the counseling intervention, a total of 67 women visited the Good Health Kauma Clinic and received at least one family planning service (e.g. started a method, refilled a method, switched to another method, received

treatment for side effects, among others) by endline. In comparing women who visited the Kauma Clinic and those women who were offered the opportunity to visit the Kauma Clinic but did not go, we find that women who visited the clinic were 13 p.p. (mean: 0.85) more likely to be using a contraceptive method at baseline, 16 p.p. more likely to be on injectables at baseline, and 23 p.p. less likely to be using implants than women who did not go to the Kauma Clinic (Table 18, panel 1). For women who did not visit the Good Health Kauma Clinic over the service period, some visited other clinics and health providers to receive family planning. We compare women who reported having visited any clinic (including Kauma) in the past month with those who did not visit any clinic (Table 18, panel 2) and find similar results to those found in Panel 1.

6.8.4 *Differential Attrition by Intervention Arm*

Figure 2 presents the final analytical sample for analyses. Out of the initial sample of 782 women, 107 women attrited from the sample. Among them, 81 women were not reached for counseling, and 26 women did not consent to participate in the follow-up survey.

Among the 107 women who attrited from the initial sample, we compare their baseline covariates to determine whether these variables differ across the intervention arms. From Table 19, we find that women who attrited from the partner invitation sample were marginally less likely to be using injectables at baseline compared to those women who were not assigned to the partner invitation group and who were also lost to follow-up. However, we do not find any other significant differences between attritors across the partner and non-partner invitation arms along any other observable covariates.

When comparing attritors across short, tailored counseling intervention arms, we find that attritors from the short, tailored counseling were marginally more likely to attain primary school, marginally less likely to attain secondary school, and were marginally less likely to have a supportive husband / partner. In general, and in a similar fashion to the partner invitation attrition analysis, we do not observe strong evidence of differential attrition across intervention arms.

Finally, we conduct a comparison of attritors to the analytic sample of non-attritors who were followed up at baseline to infer any potential observable characteristics that might be correlated with attrition (Table 20). In general, we find that attritors and non-attritors are similar across a number of characteristics, with attritors being slightly younger than non-attritors.

Table 18: Who Visited the Clinic?

	All	Yes	No	Difference
Visited the Good Health Kauma Clinic?				
Age(years)	26.21	25.69	26.27	0.58
Total no. of children at baseline(BL)	2.02	2.10	2.01	-0.09
Desired no. of children	3.50	3.49	3.50	0.01
Education: None	0.01	0.03	0.01	-0.02
Education: Primary	0.65	0.61	0.65	0.04
Education: Secondary	0.32	0.34	0.32	-0.02
Education: Higher	0.02	0.01	0.02	0.00
Currently working(1=yes)	0.57	0.61	0.57	-0.04
Age at first cohabitation(years)	18.06	17.44	18.12	0.68*
Current use of FP(1=yes)	0.85	0.97	0.84	-0.13**
Current FP method: Injectables	0.51	0.65	0.49	-0.16*
Current FP method: Implants	0.35	0.15	0.38	0.23***
Top attribute: Effectiveness	0.53	0.58	0.52	-0.06
Weight given to top attribute	16.46	16.18	16.49	0.31
Wants to switch methods(1 = yes)	0.35	0.39	0.34	-0.05
Husband supports FP(1 = yes)	0.91	0.91	0.91	0.00
Using a Long-Acting Method at BL(1=yes)	0.75	0.79	0.75	-0.04
Observations	701	67	634	701
Visited Any Clinic?				
Age(years)	26.25	26.03	26.33	0.30
Total no. of children at baseline(BL)	2.03	2.10	2.00	-0.10
Desired no. of children	3.49	3.49	3.49	-0.00
Education: None	0.01	0.01	0.01	0.00
Education: Primary	0.64	0.63	0.65	0.02
Education: Secondary	0.33	0.34	0.32	-0.01
Education: Higher	0.02	0.03	0.01	-0.01
Currently working(1=yes)	0.57	0.54	0.59	0.04
Age at first cohabitation(years)	18.06	17.86	18.14	0.28
Current use of FP(1=yes)	0.86	0.91	0.83	-0.08**
Current FP method: Injectables	0.50	0.72	0.41	-0.31***
Current FP method: Implants	0.35	0.11	0.46	0.35***
Top attribute: Effectiveness	0.53	0.59	0.51	-0.08
Weight given to top attribute	16.45	17.00	16.24	-0.76*
Wants to switch methods(1 = yes)	0.35	0.44	0.31	-0.13**
Husband supports FP(1 = yes)	0.92	0.91	0.92	0.00
Using a Long-Acting Method at BL(1=yes)	0.76	0.78	0.75	-0.03
Observations	682	187	495	682

Note: Currently working refers to women's work status at the baseline. First cohabitation age is the age at which women started to live with her (first) husband. Weight to top attribute refers to the number of beans (out of 20 beans) the woman assigned to their top method attribute. Intention to switch methods is woman's answer to the question, "if you had the choice to switch to another method, would you like to switch?" Husband support FP is defined from the question, "on a scale of 1 to 5, with 1 being strongly supportive and 5 being strongly opposed, how do you believe your husband feels towards using family planning methods?" This variable takes 1 if her husband was strongly supportive or supportive of contraceptive use, and 0 otherwise. Using a Long-Acting Methods takes 1 if the woman was using IUD's/implants/injectables at the baseline. Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

Table 19: Summary Statistics of Attritors, by Treatment Status

	All Women	Husband	No Husband	Difference
A. Partner Invitation Group				
Age(years)	25.05	25.53	24.43	-1.11
Total no. of children at baseline(BL)	1.83	1.88	1.77	-0.12
Desired no. of children	3.52	3.48	3.58	0.10
Education: None	0.01	0.02	0.00	-0.02
Education: Primary	0.67	0.60	0.77	0.17
Education: Secondary	0.30	0.37	0.21	-0.15
Education: Higher	0.02	0.02	0.02	0.00
Currently working(1=yes)	0.52	0.50	0.55	0.05
Age at first cohabitation(years)	18.07	18.42	17.61	-0.81
Current use of FP(1=yes)	0.83	0.83	0.83	-0.00
Current FP method: Injectables	0.58	0.47	0.72	0.25*
Current FP method: Implants	0.29	0.33	0.23	-0.10
Top attribute: Effectiveness	0.53	0.60	0.43	-0.17
Weight given to top attribute	17.04	17.14	16.91	-0.22
Wants to switch methods(1 = yes)	0.46	0.47	0.44	-0.03
Husband supports FP(1 = yes)	0.84	0.86	0.82	-0.04
Observations	107	60	47	107

	All Women	Short	Long	Difference
B. Short, Tailored Counseling Group				
Age(years)	25.05	24.75	25.49	0.74
Total no. of children at baseline(BL)	1.83	1.75	1.95	0.20
Desired no. of children	3.52	3.60	3.41	-0.18
Education: None	0.01	0.02	0.00	-0.02
Education: Primary	0.67	0.75	0.56	-0.19*
Education: Secondary	0.30	0.22	0.42	0.20*
Education: Higher	0.02	0.02	0.02	0.01
Currently working(1=yes)	0.52	0.55	0.49	-0.06
Age at first cohabitation(years)	18.07	18.02	18.15	0.13
Current use of FP(1=yes)	0.83	0.83	0.83	0.00
Current FP method: Injectables	0.58	0.62	0.51	-0.10
Current FP method: Implants	0.29	0.27	0.31	0.04
Top attribute: Effectiveness	0.53	0.56	0.49	-0.07
Weight given to top attribute	17.04	17.25	16.71	-0.55
Wants to switch methods(1 = yes)	0.46	0.44	0.49	0.05
Husband supports FP(1 = yes)	0.84	0.77	0.95	0.18*

Note: Currently working refers to women's work status at the baseline. First cohabitation age is the age at which women started to live with her (first) husband. Weight to top attribute refers to the number of beans (out of 20 beans) the woman assigned to their top method attribute. Intention to switch methods is woman's answer to the question, "if you had the choice to switch to another method, would you like to switch?" Husband support FP is defined from the question, "on a scale of 1 to 5, with 1 being strongly supportive and 5 being strongly opposed, how do you believe your husband feels towards using family planning methods?" This variable takes 1 if her husband was strongly supportive or supportive of contraceptive use, and 0 otherwise. Standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

Table 20: Summary Statistics between Attritors and Non-Attritors

	(1) All Women	(2) Non-Attritors	(3) Attritors	(4) Difference
Age(years)	26.10	26.27	25.05	1.22**
Total no. of children at baseline(BL)	2.00	2.03	1.83	0.20
Desired no. of children	3.50	3.49	3.52	-0.03
Education: None	0.01	0.01	0.01	0.00
Education: Primary	0.65	0.64	0.67	-0.03
Education: Secondary	0.32	0.33	0.30	0.03
Education: Higher	0.02	0.02	0.02	-0.00
Currently working(1=yes)	0.56	0.57	0.52	0.05
Age at first cohabitation(years)	18.04	18.04	18.07	-0.03
Current use of FP(1=yes)	0.85	0.86	0.83	0.03
Current FP method: Injectables	0.51	0.50	0.58	-0.07
Current FP method: Implants	0.35	0.35	0.29	0.07
Top attribute: Effectiveness	0.53	0.53	0.53	0.00
Weight given to top attribute	16.54	16.46	17.04	-0.58
Wants to switch methods(1 = yes)	0.37	0.35	0.46	-0.10
Husband supports FP(1 = yes)	0.91	0.92	0.84	0.07*
Observations	782	675	107	782

Note: Currently working refers to women's work status at the baseline. First cohabitation age is the age at which women started to live with her (first) husband. Weight to top attribute refers to the number of beans (out of 20 beans) the woman assigned to their top method attribute. Intention to switch methods is woman's answer to the question, "if you had the choice to switch to another method, would you like to switch?" Husband support FP is defined from the question, "on a scale of 1 to 5, with 1 being strongly supportive and 5 being strongly opposed, how do you believe your husband feels towards using family planning methods?" This variable takes 1 if her husband was strongly supportive or supportive of contraceptive use, and 0 otherwise. Column (1) shows the summary statistics for all 782 women, column (2) for the 675 non-attritors in the final sample, column (3) for the 107 attritors from baseline during subsequent stages, and column (4) displays the difference between column (2) and column (3). Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

7 Conclusions

By means of a randomized controlled trial, we explore how user-centered approaches to contraceptive counseling shape women's preferences and affect subsequent decision-making around family planning. We implement two interventions, a short, tailored counseling procedure and a partner invitation intervention, to women in urban Malawi. We find that women assigned to short, tailored counseling are less likely to be using their stated ideal method following counseling and are significantly more likely to be discordant between their stated method preferences and actual contraceptive behavior. These results are particularly pronounced for less-educated and non-working women, who are likely to be less empowered to act on their preferences. In contrast, women who are encouraged to invite their partners to counseling are less likely to change their ideal contraceptive method over time, are more likely to change their contraceptive method use following counseling, and are more likely to use their ideal method reported at the end of the counseling session. These women, however, are no more likely to report their method use at follow-up as their ideal contraceptive method of choice.

While both user-centered approaches center around women's preferences, and hence seek to enable women to more effectively make informed choices in family planning, neither approach necessarily gives strictly preferred outcomes for women. While short counseling marginally encourages women to change their contraceptive preferences over time, these preferences are less likely to be realized. In contrast, joint counseling with partners provides women with the means to change their contraceptive behavior but may also crowd out women's true preferences for contraception. By encouraging her partner to participate in counseling, a woman's stated preferences are likely to internalize her partner's preferences, even if she may not have truly changed her own mind. This might lead to either an increase in discordance between her stated ideal method at counseling and her true latent personal preferences for a method (if her contraceptive preferences are indeed discordant from her husband's) or it may even improve concordance and well-being if women choose to align their preferences with their partner's. As a result, we observe a significantly higher level of satisfaction for women who choose methods that receive higher support from their male partners (e.g. injectables and implants), but we observe a dampening effect of partner involvement on women's preferences for and use of methods that partners are less supportive of during counseling. Interestingly, the impact of partner invitations on women's contraceptive decisions on each method was mainly driven by the short, tailored counseling group.

Admittedly, limitations exist with our current study. While we have independently tested the effects of two user-centered counseling approaches on women's decision-making process and realization of preferences, the current sample size may likely to be too small to allow for the direct examination of interaction effects (we examine these effects and present them in the Appendix). The limitations to our inference are exacerbated by our resource constraints, which allowed us to provide women and couples with only one month's worth of transport and FP services at the clinic. Based on our prior work in Malawi, it is likely that one month is too short of a service period to allow women and couples to seek the care that was offered, particularly for women who recently received an injectable and might need to wait longer until they could switch methods. Future iterations of this program would be well served by expanding the service period to at least a year, which in turn would al-

low for the examination of longer-term outcomes related to contraceptive discontinuation, fertility, and reproductive well-being. Finally, while the way in which women realize their preferences in response to receiving a certain type of services is observable, it is not as straightforward to understand women's true preferences, particularly in the presence of their husbands or other members who can influence both their reported and realized choices. To this end, additional research is warranted to better understand women's true preferences that are expressed without their partner's participation. On the other hand, the role of male partners in contraceptive counseling may empower women to seek services, provided that her contraceptive preferences are aligned with her partner's. Additional investigation is warranted to more deeply explore the trade-off that women face between 1) making independent decisions to reflect their individual preferences and 2) incorporating their partner's preferences to make "jointly / socially better-off," but perhaps not necessarily "individually better off", decisions.

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8 Additional Acknowledgments

8.0.1 Funding and Role of the Funding Source

A Figures

Figure A.1: Women's Actual Births and Desired Births
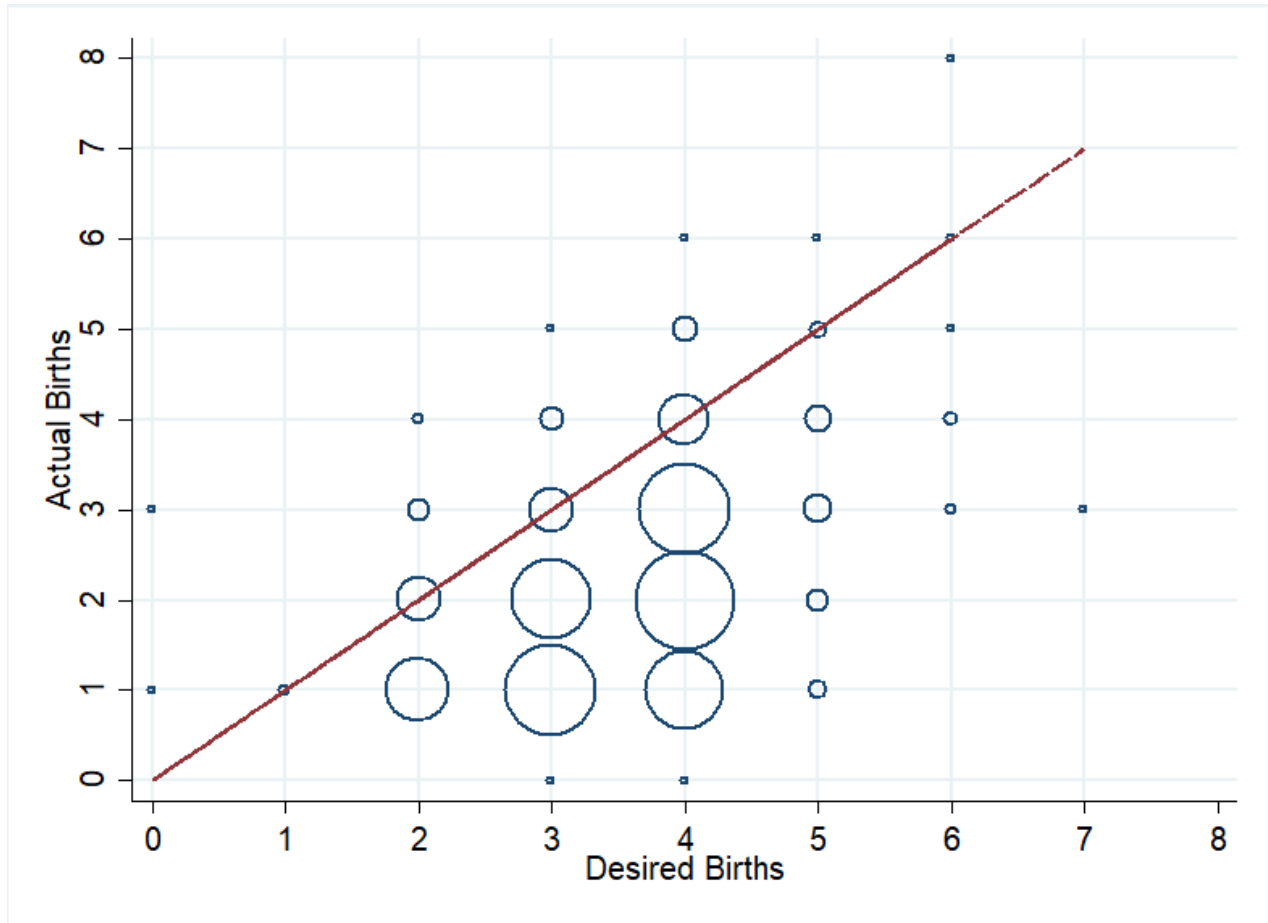
Figure A.2: Women's Opinion toward Birth Spacing
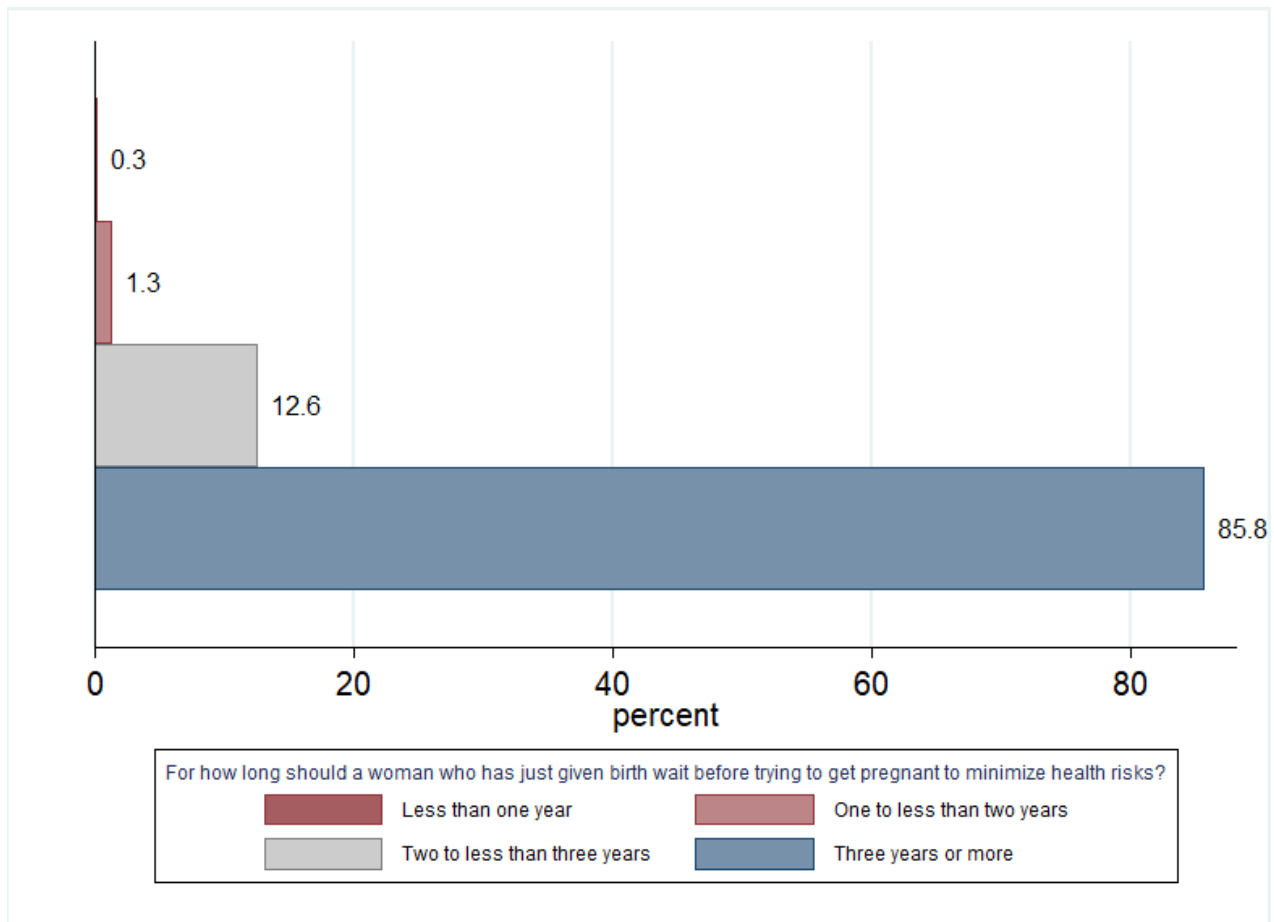
Figure A.3: Family Planning Flipchart
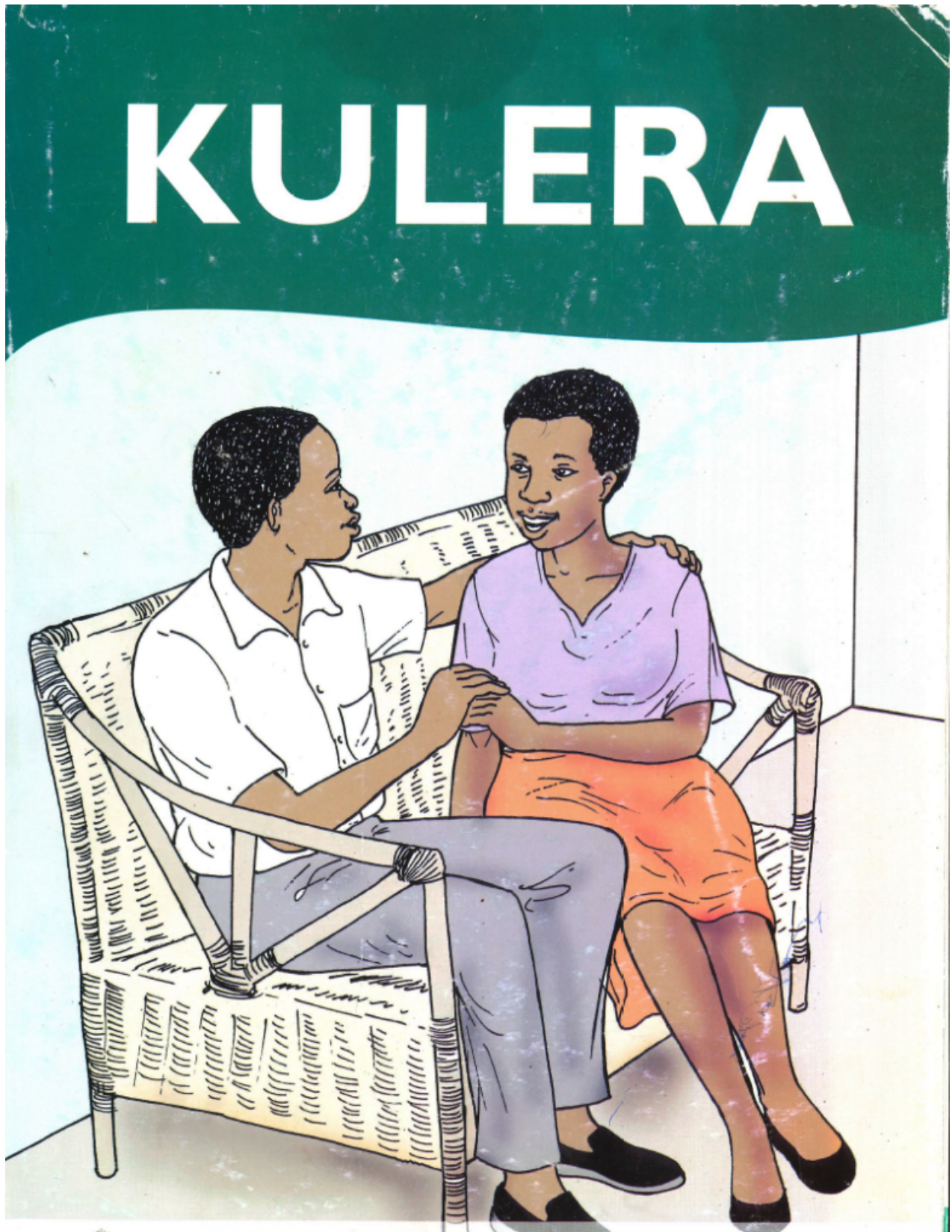
Figure A.4: Attribute-Method-Flipchart Mapping - 1

FLIP CHARTS - ATTRIBUTES AND METHODS

FLIP CHART COLOR	METHODS	ATTRIBUTES
BLUE	1. Sterilization 2. IUD 3. Implants 4. Injectables 5. Pill	Effective at preventing pregnancy Duration of effect/lasts long
PURPLE	1. LAM 2. Two-day method 3. Rhythm Method 4. Standard Days Method 5. Condoms	No risk of harming health No effect on monthly bleeding No unpleasant side effects Low-cost No risk of infertility Non-hormonal No need to go to the clinic to obtain
PINK	1. Condoms 2. Two-day method 3. Rhythm Method 4. Standard Days Method 5. IUD	Immediate return to fertility
YELLOW	condoms	Protects against HIV/STI
GRAY	1. IUD 2. Implants 3. Sterilization 4. Pills 5. Injectables	Want to try something new / tired of old method My doctor recommended it to me My husband wanted me to use this method Other women in my family have used this method Friends have used this method Easily available at clinic
ORANGE	1. Sterilization 2. IUD 3. Implants 4. Injectables	No need to remember to use

Figure A.5: Attribute-Method-Flipchart Mapping - 2

WHITE	1. Two-day method 2. Rhythm Method 3. Standard Days Method 4. Sterilization 5. IUD 6. Implants	No need to go to the clinic to resupply
RED	1. LAM 2. Two-day method 3. Rhythm Method 4. Standard Days Method 5. Injectables	Concealable
BLACK	1. Sterilization 2. IUD 3. LAM 4. Implants 5. Injectables 6. Pills	Doesn't interfere with sex
GREEN	1. IUD 2. Implants 3. Sterilization 4. Pills 5. Injectables 7. Condoms 8. LAM 9. Two-day method 10. Rhythm 11. Standard Days Method	**CONTROL GROUP ONLY**

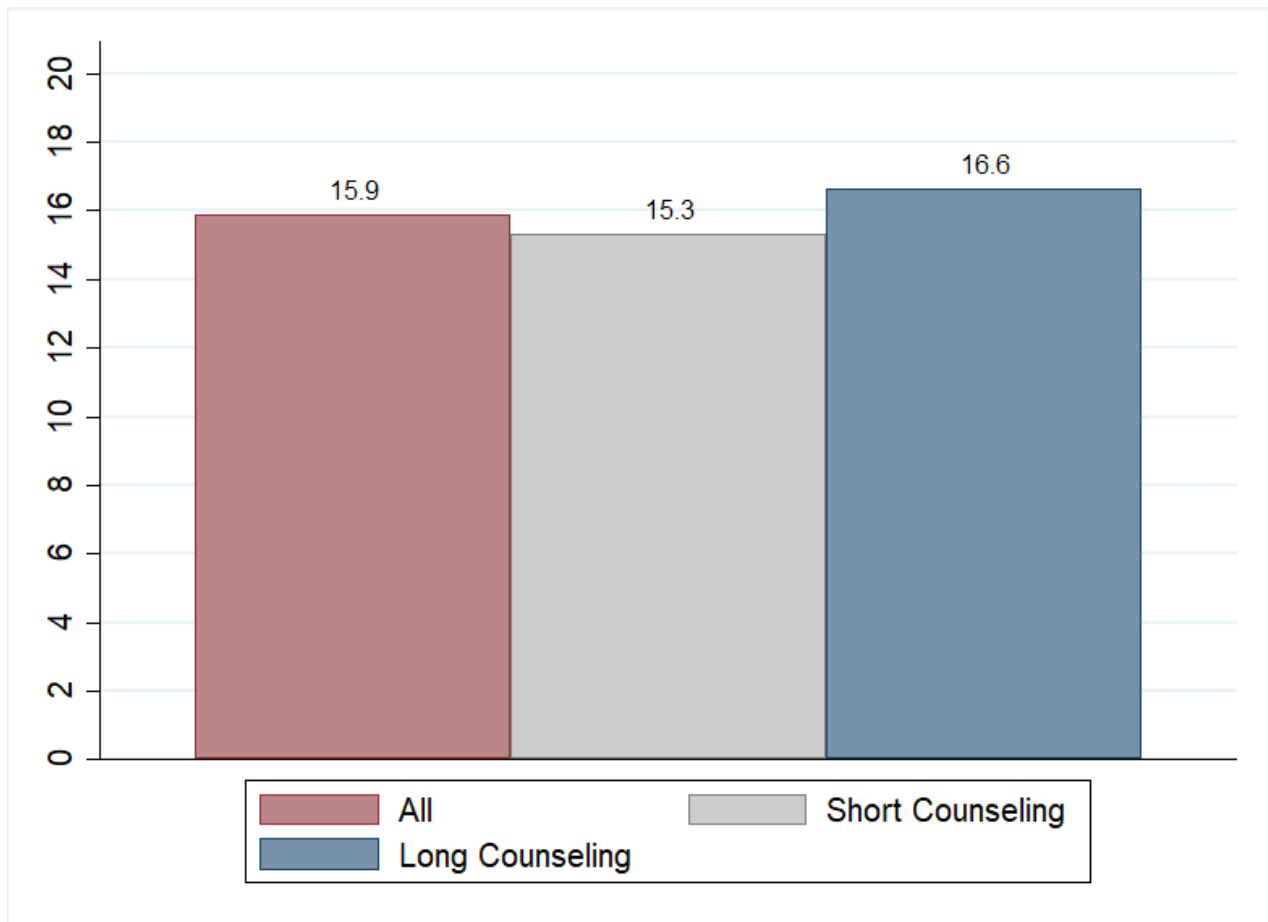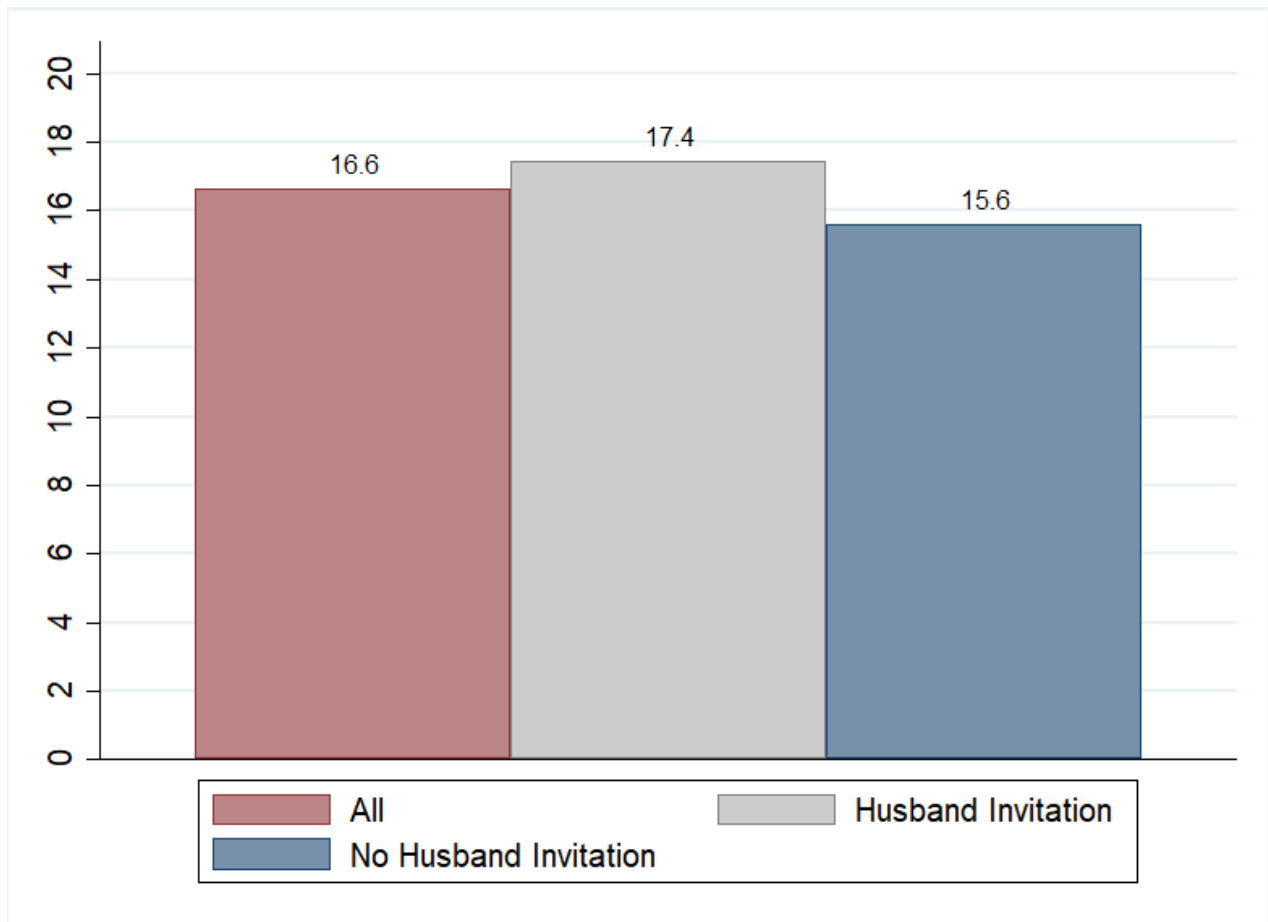Figure A.6: Counseling Time, by Short Counseling Intervention

Figure A.7: Counseling Time, by Husband Invitation Intervention

B Tables

Table A.1: The 2SLS Treatment Effects of Partner Invitation

	(1)	(2)	(3)	(4)
A: Change in Stated Ideal Method from Counseling to Follow-up				
Partner Invitation	-0.251**	-0.252**	-0.244**	-0.231**
	[0.138]	[0.138]	[0.138]	[0.136]
N	672	672	672	671
Control mean	0.44	0.44	0.44	0.44
First Stage F	.	154.08	153.15	152.67
B: Change in Method Use from Counseling to Follow-up				
Partner Invitation	0.138*	0.128	0.120	0.120
	[0.104]	[0.102]	[0.102]	[0.101]
N	638	638	638	637
Control mean	0.17	0.17	0.17	0.17
First Stage F	150.39	149.22	148.64	147.12
C: Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Partner Invitation	-0.296**	-0.324***	-0.292**	-0.298**
	[0.139]	[0.136]	[0.135]	[0.133]
N	640	640	640	639
Control mean	0.50	0.50	0.50	0.50
First Stage F	150.23	149.12	148.39	146.94
D: Discordance: Stated Ideal Method and Method Use at Follow-up				
Partner Invitation	-0.143	-0.164	-0.144	-0.146
	[0.137]	[0.135]	[0.134]	[0.133]
N	637	637	637	636
Control mean	0.58	0.58	0.58	0.58
First Stage F	148.58	147.45	146.49	145.14
Balancing controls		x	x	x
Area FE			x	x
Other BL covariates				x

Notes: In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Heteroskedastic-robust standard errors are presented in parentheses. *** 1%, ** 5%, * 10%.

Table A.2: The 2SLS Treatment Effects of Partner Invitation

	Non-Users	Users	
	Adoption	Switching	Discontinuation
A: Change in Stated Ideal Method from Counseling to Follow-Up			
Partner Invitation	-0.249	-0.303**	
	[0.472]	[0.147]	
N	71	583	
Control mean	0.48	0.44	
First Stage F	10.49	130.00	
B: Change in Method Use from Counseling to Follow-Up			
Partner Invitation	-0.518*	0.105*	0.042
	[0.379]	[0.081]	[0.064]
N	62	575	575
Control mean	0.43	0.08	0.05
First Stage F	9.32	131.78	131.78
Balancing controls	x	x	x
Area FE	x	x	x
Other BL covariates	x	x	x

In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Heteroskedastic-robust standard errors are presented in parentheses. *** 1%, ** 5%, * 10%.

Table A.3: The 2SLS Treatment Effects of Partner Invitation by Subgroups

	More educated	Less educated	Working	Non-working
A: Change in Stated Ideal Method from Counseling to Follow-up				
Partner Invitation	-0.012	-0.297**	-0.199	-0.197
	[0.253]	[0.159]	[0.184]	[0.198]
N	230	441	384	287
Control mean	0.50	0.42	0.48	0.39
First Stage F	42.71	109.88	84.28	66.86
B: Change in Method Use from Counseling to Follow-up				
Partner Invitation	0.039	0.157*	-0.011	0.295**
	[0.209]	[0.111]	[0.141]	[0.141]
N	224	413	368	269
Control mean	0.20	0.15	0.17	0.16
First Stage F	39.73	108.08	80.08	65.90
C: Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Partner Invitation	0.040	-0.438***	-0.360**	-0.204
	[0.259]	[0.149]	[0.180]	[0.189]
N	224	415	368	271
Control mean	0.46	0.52	0.51	0.48
First Stage F	39.73	107.85	80.08	65.85
D: Discordance: Stated Ideal Method and Method Use at Follow-up				
Partner Invitation	-0.025	-0.191*	-0.189	-0.076
	[0.264]	[0.148]	[0.180]	[0.185]
N	223	413	367	269
Control mean	0.63	0.56	0.58	0.59
First Stage F	37.68	107.95	80.02	64.14
Balancing controls	x	x	x	x
Area FE	x	x	x	x
Other BL covariates	x	x	x	x

Notes: In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Column (1) restricts the analysis to women who attained at least secondary school education. Column (2) restricts the analysis to women who received no education or who received primary education only. Column (3) conducts the same analysis among working women. Column (4) conducts the same analysis among non-working women (who did not work in the last 12 months). Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

Table A.4: The 2SLS Treatment Effects of Partner Invitation by Subgroups

	Top Attribute: Effectiveness	Top Attribute: Others	One Attribute	More Attributes
A: Change in Stated Ideal Method from Counseling to Follow-up				
Partner Invitation	-0.756***	0.247*	-0.375**	-0.094
	[0.213]	[0.182]	[0.182]	[0.198]
N	355	316	390	280
Control mean	0.45	0.44	0.42	0.48
First Stage F	67.44	82.35	84.68	63.81
B: Change in Method Use from Counseling to Follow-up				
Partner Invitation	0.050	0.157	0.031	0.146
	[0.141]	[0.146]	[0.131]	[0.153]
N	339	298	368	268
Control mean	0.15	0.18	0.16	0.17
First Stage F	66.71	78.30	81.25	62.20
C: Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Partner Invitation	-0.509***	-0.124	-0.321**	-0.196
	[0.195]	[0.180]	[0.175]	[0.194]
N	339	300	368	270
Control mean	0.46	0.54	0.49	0.51
First Stage F	66.71	78.04	81.25	61.95
D: Discordance: Stated Ideal Method and Method Use at Follow-up				
Partner Invitation	-0.188	-0.110	-0.080	-0.232
	[0.200]	[0.177]	[0.172]	[0.190]
N	336	300	367	268
Control mean	0.54	0.63	0.51	0.68
First Stage F	65.03	78.04	81.34	60.14
Balancing controls	x	x	x	x
Area FE	x	x	x	x
Other BL covariates	x	x	x	x

Notes: In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Column (1) restricts the analysis to women who attained at least secondary school education. Column (2) restricts the analysis to women who received no education or who received primary education only. Column (3) conducts the same analysis among working women. Column (4) conducts the same analysis among non-working women (who did not work in the last 12 months). Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

Table A.5: The 2SLS Treatment Effect of Partner Invitations by Methods

	Implants	Injectables	Pills	Rhythm/Withdrawal/Traditional
Post-Counseling Ideal Method: method above				
Partner Invitation	0.091	0.152*	-0.059	0.022
	[0.108]	[0.097]	[0.056]	[0.033]
N	674	674	674	674
Control mean	0.40	0.39	0.05	0.01
First Stage F	156.76	156.76	156.76	156.76
Follow-up Method: method above				
Partner Invitation	0.122	0.006	-0.089	-0.051
	[0.113]	[0.127]	[0.072]	[0.040]
N	639	639	639	639
Control mean	0.30	0.45	0.08	0.02
First Stage F	149.01	149.01	149.01	149.01
FUP method = Post-counseling ideal method: method above				
Partner Invitation	0.302***	0.126	-0.104**	-0.003
	[0.100]	[0.099]	[0.049]	[0.019]
N	639	639	639	639
Control mean	0.19	0.26	0.03	0.01
First Stage F	149.01	149.01	149.01	149.01
Follow-up Ideal Method: method above				
Partner Invitation	0.256**	0.094	-0.126**	-0.026*
	[0.123]	[0.118]	[0.068]	[0.021]
N	671	671	671	671
Control mean	0.35	0.35	0.07	0.01
First Stage F	154.87	154.87	154.87	154.87
FUP method = FUP ideal method: method above				
Partner Invitation	0.223***	0.120	-0.125***	-0.035**
	[0.093]	[0.104]	[0.053]	[0.020]
N	636	636	636	636
Control mean	0.14	0.22	0.04	0.01
First Stage F	147.18	147.18	147.18	147.18
Balancing controls	x	x	x	x
Area FE	x	x	x	x
Other BL covariates	x	x	x	x

NOTES: The dependent variable in the first panel is the most preferred contraceptive method at the post-counseling stage being the method specified above. The dependent variale in the second panel is method use at the follow-up being the method specified above. The dependent variable in the third panel takes 1 if both the post-counseling ideal method and the follow-up method use are the method specified above. The dependent variable in the fourth panel takes 1 if the follow-up most preferred method is the method specified above. The dependent variable in the fifth panel takes 1 if both the most preferred method and the method use at follow-up are the method specified above. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), ethnicity (1 = Chewa), and pre-couseling method being injectables, pills, or condoms (1=yes). Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

Table A.6: Treatment Effect of Partner Invitations by Methods

	Implants	Injectables	Pills	Rhythm/Withdrawal/Traditional
Post-Counseling Ideal Method: method above				
Partner Invitation	0.010	0.031	0.001	0.025***
	[0.049]	[0.039]	[0.027]	[0.011]
Short, Targeted Counseling	-0.040	-0.018	0.004	0.023**
	[0.052]	[0.042]	[0.028]	[0.013]
Partner Invitation × Short, Targeted Counseling	0.023	0.022	-0.035	-0.030**
	[0.065]	[0.055]	[0.033]	[0.018]
N	674	674	674	674
Control mean	0.41	0.34	0.06	0.01
Follow-up Method: method above				
Partner Invitation	0.015	-0.057	-0.011	0.009
	[0.054]	[0.060]	[0.032]	[0.015]
Short, Targeted Counseling	-0.010	-0.097*	0.016	0.023
	[0.055]	[0.062]	[0.035]	[0.018]
Partner Invitation × Short, Targeted Counseling	0.037	0.087	-0.026	-0.041**
	[0.070]	[0.078]	[0.042]	[0.022]
N	639	639	639	639
Control mean	0.30	0.43	0.09	0.03
FUP method = Post-counseling ideal method: method above				
Partner Invitation	0.073*	0.022	-0.007	0.013**
	[0.048]	[0.043]	[0.022]	[0.008]
Short, Targeted Counseling	-0.023	-0.064*	0.020	0.012*
	[0.047]	[0.045]	[0.025]	[0.009]
Partner Invitation × Short, Targeted Counseling	0.026	0.011	-0.041*	-0.024**
	[0.061]	[0.060]	[0.028]	[0.012]
N	639	639	639	639
Control mean	0.17	0.22	0.05	0.01
Follow-up Ideal Method: method above				
Partner Invitation	0.005	0.029	-0.031	0.006
	[0.059]	[0.056]	[0.031]	[0.005]
Short, Targeted Counseling	-0.071	-0.034	-0.000	0.016**
	[0.058]	[0.056]	[0.035]	[0.010]
Partner Invitation × Short, Targeted Counseling	0.117*	-0.013	-0.011	-0.022**
	[0.075]	[0.073]	[0.041]	[0.012]
N	671	671	671	671
Control mean	0.32	0.32	0.09	0.01
FUP method = FUP ideal method: method above				
Partner Invitation	0.044	-0.006	-0.002	0.002
	[0.047]	[0.052]	[0.018]	[0.002]
Short, Targeted Counseling	-0.040	-0.124***	0.045**	0.017**
	[0.044]	[0.050]	[0.024]	[0.010]
Partner Invitation × Short, Targeted Counseling	0.030	0.044	-0.055**	-0.018**
	[0.058]	[0.066]	[0.027]	[0.011]
N	636	636	636	636
Control mean	0.12	0.19	0.06	0.01
Balancing controls	x	x	x	x
Area FE	x	x	x	x
Other BL covariates	x	x	x	x

NOTES: The dependent variable in the first panel is the most preferred contraceptive method at the post-counseling stage being the method specified above. The dependent variale in the second panel is method use at the follow-up being the method specified above. The dependent variable in the third panel takes 1 if both the post-counseling ideal method and the follow-up method use are the method specified above. The dependent variable in the fourth panel takes 1 if the follow-up most preferred method is the method specified above. The dependent variable in the fifth panel takes 1 if both the most preferred method and the method use at follow-up are the method specified above. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), ethnicity (1 = Chewa), and pre-couseling method being injectables, pills, or condoms (1=yes). Heteroskedasticity-robust standard deviations are in parentheses. *** 1%, ** 5%, * 10%.

Table A.7: Treatment effect of Short Tailored Counseling

	(1)	(2)	(3)	(4)
A: Change in Stated Ideal Method from Counseling to Follow-up				
Short, Tailored Counseling	0.028	0.029	0.024	0.026
	[0.040]	[0.040]	[0.041]	[0.041]
N	629	629	629	628
Control mean	0.44	0.44	0.44	0.44
B: Change in Method Use from Counseling to Follow-up				
Short, Tailored Counseling	-0.003	-0.004	-0.003	-0.004
	[0.031]	[0.030]	[0.030]	[0.031]
N	638	638	638	637
Control mean	0.18	0.18	0.18	0.18
C: Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Short, Tailored Counseling	0.086**	0.083**	0.075**	0.067**
	[0.040]	[0.039]	[0.039]	[0.039]
N	640	640	640	639
Control mean	0.43	0.43	0.43	0.43
D: Discordance: Stated Ideal Method and Method Use at Follow-up				
Short, Tailored Counseling	0.081**	0.080**	0.070**	0.074**
	[0.041]	[0.040]	[0.040]	[0.040]
N	594	594	594	593
Control mean	0.56	0.56	0.56	0.56
Balancing controls		x	x	x
Area FE			x	x
Other BL covariates				x

The analysis is restricted to women who were reached by phone or through home visits at the follow-up. In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Heteroskedastic-robust standard errors are presented in parentheses. *** 1%, ** 5%, * 10%.

Table A.8: Treatment effect of Partner Invitation

	(1)	(2)	(3)	(4)
A: Change in Stated Ideal Method from Counseling to Follow-up				
Partner Invitation	-0.074**	-0.075**	-0.077**	-0.077**
	[0.040]	[0.040]	[0.040]	[0.041]
N	629	629	629	628
Control mean	0.50	0.50	0.50	0.50
B: Change in Method Use from Counseling to Follow-up				
Partner Invitation	0.040*	0.037	0.035	0.035
	[0.030]	[0.030]	[0.030]	[0.030]
N	638	638	638	637
Control mean	0.16	0.16	0.16	0.16
C: Discordance: Post-Counseling Ideal Method and Follow-up Method Use				
Partner Invitation	-0.086**	-0.094***	-0.085**	-0.088**
	[0.040]	[0.039]	[0.039]	[0.039]
N	640	640	640	639
Control mean	0.53	0.53	0.53	0.53
D: Discordance: Stated Ideal Method and Method Use at Follow-up				
Partner Invitation	-0.023	-0.030	-0.026	-0.026
	[0.040]	[0.040]	[0.040]	[0.040]
N	594	594	594	593
Control mean	0.62	0.62	0.62	0.62
Balancing controls		x	x	x
Area FE			x	x
Other BL covariates				x

Notes: The analysis is restricted to women who were reached by phone or through home visits at the follow-up. In Panel A, the dependent variable is a binary variable that indicates whether a woman's stated ideal method at counseling differs from her ideal method at follow-up. In Panel B, the dependent variables is a binary variable that indicates if the woman's method at counseling differs from her method at follow-up. In Panel C, the dependent variable is a binary variable that indicates if the woman's ideal method at counseling differs from her method at follow-up. In Panel D, the dependent variable is a binary variable that indicates if a woman's method differs from her stated ideal method at follow-up. We include balancing control variables such as a woman's age, her contraceptive use at baseline, and whether her most valued attribute was contraceptive effectiveness. Other baseline covariates include: her total number of children, educational attainment (primary, secondary, higher), work status (1 = yes), and ethnicity (1 = Chewa). Heteroskedastic-robust standard errors are presented in parentheses. *** 1%, ** 5%, * 10%.

Table A.9: Descriptions of Variables

Variables	Variable Descriptions
Outcomes	
Change in Stated Ideal Method from Counseling to Follow-up	Binary: woman's ideal method differs from counseling to follow-up
Change in Method Use from Counseling to Follow-up	Binary: woman's method use at counseling differs from method use at follow-up
Discordance: Post-Counseling Ideal Method and Follow-up Method Use	Binary: woman's ideal method at counseling differs from method use at follow-up
Discordance: Stated Ideal Method and Method Use at Follow-up	Binary: woman's method use differs from ideal method at follow-up
Covariates	
Age	Age of woman, in years
Total no. of children at baseline (BL)	The woman's total number of children
Desired no. of children	The woman's desired number of children
Education: None	Binary: the highest educational attainment is none (1 = yes)
Education: Primary	Binary: the highest educational attainment is primary (1 = yes)
Education: Secondary	Binary: the highest education attainment is secondary (1 = yes)
Education: Higher	Binary: the highest educational attainment is higher (1 = yes)
Currently working	Binary: currently working, worked in last 7 days, or worked in the 12 months (1 = yes)
Age at first cohabitation	Age of woman when she first cohabited with her (first) husband, in years
Current use of FP	Binary: the woman was on a contraceptive method at BL (1=yes)
Current FP method: Injectables	Binary: the woman was using injectables at BL (1=yes)
Current FP method: Implants	Binary: the woman was using implants at BL (1=yes)
Top attribute: Effectiveness	Binary: woman's most valued method attribute is effectiveness at BL (1 = yes)
Weight given to top attribute:	Number of beans (out of 20) given to top attribute mentioned
Wants to switch methods	Binary: whether the woman intends to switch to another method at BL (1 = yes)
Husband supports FP	Binary: partner is strongly supportive or supportive of FP use at BL (1 = yes)