

Reducing family planning provider bias towards adolescent, unmarried, and nulliparous women:

An evaluation of the Beyond Bias project

[Pre-Analysis Plan]

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Abstract

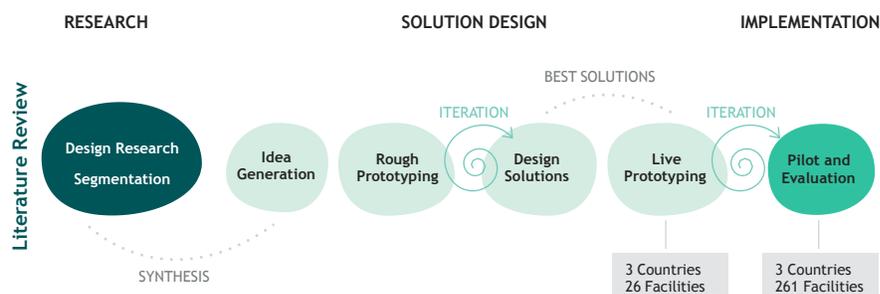
We evaluate the impact of an intervention designed to reduce family planning provider bias towards young, unmarried, and nulliparous women in Tanzania, Burkina Faso, and Pakistan. The intervention has three components: 1) a summit that highlight the consequences of provider bias and instructions on how not to be biased, 2) a forum for continued communication between providers and implementation staff that reinforces the information from the summit, and 3) a rewards program where facilities in which providers exhibit less biased client interactions or who have improved the most towards this end are rewarded with social recognition and a ceremony. We randomized half of the eligible clinics in each country to receive the intervention and the other half to be a control group. We evaluate the impact of the intervention on a range of outcomes using four types of quantitative data: 1) provider surveys, 2) mystery client visits, 3) client exit surveys, and 4) service provision data routinely collected by the clinics. We report the impact of the intervention on providers' biased attitudes and beliefs, family planning counseling, family planning methods dispensed, and client perceptions of family planning care. We contextualize our quantitative results with qualitative interviews with key stakeholders, managers, providers, and clients. The document outlines our general analysis plan. This document is in a "rough draft" format but nonetheless pre-specifies our main approach. Some of the writing will be included verbatim in the final paper and thus is written in the past tense (even though most of the work has yet to be performed).

Setting

- Tanzania: 80 Public clinics in Dar es Salaam
- Burkina Faso: 80 Public clinics in Centre, Hauts-Bassins, and Cascades
- Pakistan: 80 Private providers in Karachi

Description of intervention design process

The intervention was designed using a human centered design approach (HCD) that involved in depth qualitative work. This worked identified key drivers of bias, tested out several intervention options designed to reduce bias through prototyping and field testing, and finalized a package of interventions were concluded to have the best potential for reducing provider bias. The design process is document in detail elsewhere.



Description of intervention

Our evaluation team provided input on the intervention design but did not have final say in the design or any part in implementation. The following lists the interventions and provides a brief description.

- *Summit*: a summit that highlights the consequences of provider bias and instructions on how not to be biased that occurred at the beginning of the study
- *Connect*: a forum for continued communication between providers and implementation staff that reinforces the information from the summit.
- *Rewards*: a rewards program where facilities in which providers exhibit less biased client interactions or who have improved the most towards this end are rewarded with social recognition and a ceremony

COVID and pause period

After implementing the intervention for about 6 months in each country, the COVID-19 pandemic required a pause in all implementation activities. The intervention was paused starting in March 2020 and restarted in September 2020. The restart of the intervention in September 2020 included a “refresher summit” and all other intervention components. In the evaluation, we only focus on the restart phase; September 2020 to August 2021.

Methods

Randomization

Randomization was conducted at the clinic level in Tanzania and Burkina Faso, and the provider level in Pakistan (provider-level assignment was infeasible in Tanzania and Burkina Faso due to the nature of the intervention). We stratified randomization on different characteristics based on the different types of data available to us at baseline. In Tanzania, we stratified on district, urban/rural, volume of clients under age 20, and number of providers in the clinic. In Burkina Faso, we stratified randomization on district, share of under-20 FP users, number of providers at the clinic, and whether the facility was recently added to the Pathfinder network. In Pakistan, we stratified on number of clients of different age groups, whether the provider was a midwife, and whether the facility was a newly part of the Greenstar network.

In Pakistan, the integrity of the randomized design was compromised because of high refusal in the intervention arm (mostly because providers were not available to attend the first summit meeting) but much lower refusal in the control arm. 15 of the 40 providers refused to participate in the intervention arm compared to only xx in the control arm. While we were initially told that we only had 80 clinics that were eligible for the intervention, Pathfinder was able to convince Greenstar to recruit additional providers to participate in the intervention. As a result, providers who refused were replaced with providers who were willing to participate so that a total of 40 providers were enrolled in the intervention. However, this differential refusal (and replacement) compromises the comparability of the treatment and control, if refusal and/or replacement is correlated with study outcomes. We attempt to address this by assessing the willingness of the control group to participate in a similar intervention and running sensitivity analyses that only include control facilities that would have agreed to participate.

Attrition:

- 2 facilities in the treatment group in TZ were never engaged in the study because they could not meet project requirements
- In PK: 9 providers dropped out of the study after the COVID-19 pause (at different times), 5 providers were added to the sample and each new clinic was randomized the treatment or control arm

Quantitative Data

Client Exit Surveys

The study will make use of client exit survey data collected in all study clinics (in both study arms) for the duration of the intervention (12 months of continuous data collection). In each country, the client exit surveys were administered by youth enumerators locally contracted by Pathfinder. Each youth enumerator was trained on the instrument and assigned to 1 or 2 clinics, where they are posted for the duration of the intervention. Client exit data collection started approximately 1 to 5 weeks before the initial launch of the intervention, as marked by the first summit event. This provides a baseline for comparison of clinics. However, in Pakistan the enumerators were not able to collect data in all facilities prior to the first summit event due to security concerns and logistical issues. As such, baseline data is missing from most treatment and control clinics in Pakistan. In all three countries, our main analyses will not incorporate baseline data.

Youth enumerators visit the assigned clinics for 3 days a week for the duration of the intervention. At the clinic's premises, the enumerators approached female clients at their exit, and asked them for verbal consent to conduct a survey about their visit to the clinic. If the client provides consent and reports that family planning services was the reason for their visit, or that they received family planning counseling during the visit, the instrument goes on to record basic demographics about the client (age, parity, and marital status), information on the questions the provider asked and the services the provider offered, as well as on the subjective experience of the client. We did not record any identifying information about the client.

The surveys were administered in the local language (Kiswahili in Tanzania, Urdu in Pakistan, and French in Burkina Faso), offline, on a tablet, using the Kobo Toolbox survey software. At the end of each day, they were uploaded by the youth enumerator to a designated server. In treatment clinics, Pathfinder used these surveys to calculate scores for each clinic that were used for the rewards intervention. Pathfinder agreed to provide access to these non-identifiable data through a secure web portal.

Mystery Client Visits

Each clinic received several anonymous visits from members of the research team who pretending to be real family planning clients. This approach allowed us to record data on client-provider interactions without providers knowing they were being observed. We worked with local survey firms to train enumerators to act as family planning clients. The mystery clients visits were unannounced and

anonymous. This is a validated methodology that has been used on many occasions to measure quality of family planning care.¹

When we developed mystery client profiles, we ensured that profiles were realistic in the country context to avoid mystery clients being “discovered”. We also carefully varied key client characteristics across profiles so that we could identify the effect of each characteristic on outcomes of interest. We focused on varying marital status (married/unmarried), parity (one child or no children), and age (16/17 or 24) and created 8 profiles that included every combination of these attributes. Thus, each attribute is equally paired with other attributes. For example, unmarried profiles are equally likely to be nulliparous compared to married visits, which allows to compare all unmarried visits to all married visits without bias, and to compare treatment effects by marital status. This is conceptually similar to a discrete choice experiment. In Pakistan, it was not feasible to include some profiles due to cultural issues, so we only included 3 profiles, all mystery clients were 18 years old, but we varied marital status and parity.

Each clinic received 4 mystery client visits in Tanzania and Burkina Faso and 2 mystery client visits in Pakistan. Mystery clients went through the standard process to see the provider (check in at register, wait in line, etc.). They did not actually receive a family planning method; instead, they informed the provider at the end of the visits that they want to think about the information provided by the provider before taking a method or talk to their mother (if unmarried) or husband (if married) before they proceed with getting a method. If the provider insisted they take methods, they took condoms. Mystery clients will complete a debriefing survey directly after their encounter about the quality of services they received, including the methods the provider counseled on, whether they were made to feel comfortable, and whether the provider asked about their preferences.

Provider Survey

We enrolled xx providers across Burkina Faso (n=xx), Tanzania (n=xx), and Pakistan (n=xx) from both intervention and control facilities. The number of providers surveyed at each clinic was proportional to the total number of personnel at each clinic. In both Burkina Faso and Tanzania, all providers worked at medium-sized, urban public clinics that provided family planning services (average of four providers per clinic). Public health facilities in Burkina Faso had an average of XX providers administering family planning services, and each facility provides family planning counseling to an average of xx women per month. In Tanzania, facilities have an average of XX providers administering family planning services, with xx women served each month. All providers in Pakistan operated their own private clinic, where they were the only provider. In Pakistan, the sole providers working at the private clinics provides counseling to an average of 6 women per month.² Clinics were selected from Hauts Bassins, Centre, and

¹ See: King et al., 2019; Sieverding et al., 2018; Chandra-Mouli et al., 2018; and Fitzpatrick and Tumlinson, 2017.

² Site descriptions and family planning counseling volumes obtained from implementing partner data.

Cascades districts in Burkina Faso, Dar es Salaam, Tanzania, and Karachi, Pakistan. Table 1 provides a more detailed geographic breakdown of provider characteristics.

The study team collected data from providers using two instruments: a provider survey and a DCE. The provider survey recorded information on the providers' demographic characteristics and general attitudes and beliefs about young people, and details on the clinic environment where they practice, especially as they relate to youth and family planning services. The DCE complements the provider survey, in that it also elicits information about provider attitudes and beliefs towards youth and contraceptive access, but it does so in an indirect way, to encourage revelation of true beliefs and preferences. This is a particularly useful methodology for this analysis because it evaluates providers' willingness to trade off attributes of patients when making care decisions.

Administrative Service Delivery Data

These data are routinely collected by clinics in Tanzania and Burkina Faso and reported to the ministry of health each on a monthly basis. In Pakistan these data are collected by Greenstar, a social marketing organization in Pakistan of which all enrolled clinics are a part. The service delivery data includes the monthly number of new contraceptive users, return/repeat/revisit contraceptive users, and method mix, all of which are broken down by age groups 15-19, 20-24, 25+.

Cost Data

All costs incurred by Pathfinder were recorded and categorized for the entirety of the project. We include all costs that are related to intervention implementation in each country and exclude all costs related to research or international oversight (e.g., Pathfinder staff based in the US that would not be involved in a scaled-up version of the intervention).

Qualitative Data

For client and provider interviews, a subset of all enrolled facilities were selected for participation in the qualitative sampling. In Burkina Faso and Tanzania, 11 treatment and 4 control facilities were selected. In Pakistan 22 treatment and 8 control providers were selected. Selection of facilities was based off facility characteristics, primarily the region or district, and performance on the first and second rewards ceremonies. We also aimed to vary the volume of youth clients served at selected facilities and the urbanicity where there was variation. Specifically, X. Within region/districts, we picked control facilities that were similar to at least one of the selected treatment facilities using client exit survey data. We included at least one provider/facility in each region that received a reward during one of the rewards ceremonies.

Client IDIs

- Descriptions of sampling
- Description of interview content

Provider IDIs

- Descriptions of sampling
- Description of interview content
 - Intervention
 - Control

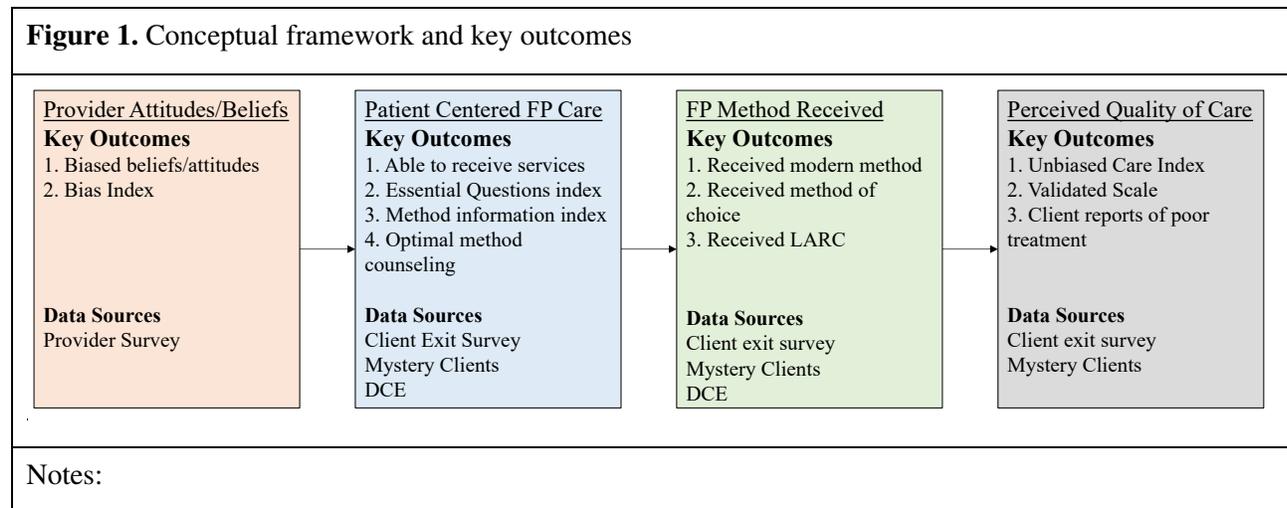
Health facility manager IDIs

Administrator IDIs

- Descriptions of sampling- BB Advisory committees
- Description of interview content- Implementation and scaleup

Main Outcomes

The figure below describes our main outcomes of interest. We categorize outcomes into four distinct bins that outlines our conceptual framework. Provider bias is a provider level outcome that is based on providers' attitudes and beliefs. Provider bias affects the quality of the FP care of the provider and the FP method the client receives. These outcomes in turn influence the client's perception the of the care they received.



Provider bias (provider survey)

- Bias index
 - Index that combines all the question related to bias into one measure.
 - Index will be created using methods outline by Anderson (2008)

- List of questions that will be used to create the bias scale can be found in appendix table A1
- This index will be the main outcome used to assess whether the intervention effected provider attitudes/beliefs
- Specific biased beliefs and attitudes (questions that go into the scale)
 - Specific questions that are particularly important with respect to provider biased. This will be more exploratory. Examples include.
 - Contraceptives are more appropriate for women over 25
 - At times it can be embarrassing for me to discuss sex with clients under the age of 19
 - Young people aged 15-24 today have no modesty when they talk about sex
 - Unmarried youth clients require consent from their parents before contraceptives are provided.
 - Young married clients require the consent of the husband before contraceptives are provided.
 - Sex is part of a healthy life for young people under 25
 - Minimum age for any method
 - Any method not appropriate for unmarried women
 - Any method not appropriate for nulliparous women

Patient centered FP care (exit survey, mystery clients, and DCE)

- Able to receive services (exit survey, mystery clients, and DCE):
 - set to 1 if able to receive services that day and zero otherwise.
- Essential questions index:
 - Base on a set of key questions that the provider should ask during a counseling session
 - Asked about method preferences
 - Asked about spacing preference [Might be omitted]
 - Asked if have any questions
- Optimal counseling measure
 - For mystery clients, optimal counseling should include IUD, Implant, Injectable, and Pill
 - With real clients assessed using the exit survey, this will be set to 1 if counselled on all methods that fit with the clients preferences. Full set of methods includes IUD, Implant, Injectable, and Pill. If no preferences then they should be counselled on all 4 types. Each preference removed methods from the set.

Construction of optimal counseling measure:

If switching method, method used previously is not required for counseling. We based the measure on the methods recommended based on client preference from the [WHO Decision-Making Tool for Family Planning Clients](#) and Providers and recommendations made in the [WHO Family Planning Global Handbook for providers](#). If clients had more than one preference, union of optimal methods considered where there was at least one method that fit the preferences was considered. Where no method satisfied the preferences, we required providers to counsel on all methods listed under “no preference”. Finally, we excluded users who would like to switch but whose preferences and past method leave no methods that satisfy the preferences.

Due to a low number of clients reporting counseling on emergency contraception in all countries, we did not include this method in the construction of the method.

Table 1. methods considered as “optimal” based on different client preferences	
Method Preferences	Optimal Methods
No Preference	IUD, Implant, Injectable, Pill
Easy to hide	IUD, Implant, Injectable
Easy to stop using	Pill, Injectable
Last a long time	IUD, Implant
Does not require taking a pill	IUD, Implant, Injectable
Does not require a procedure	Injectable, Pill
Does not want another child (Q9)	Permanent, IUD, Implant

- Method Information Index
 - Average of the following questions (all binary variables)
 1. Were you informed about other methods of family planning aside from the one you received?
 2. Were you informed about possible side effects or problems with the method you took?
 3. Were you told what to do if you experienced side effects or problems?
- Counseled/offered a LARC
 - Set to one if counselled on IUD or implant.

Method received

Method received is only measured using the exit survey because mystery clients cannot actually receive a method. However, we will explore this in the mystery client data based on whether mystery client thought they would have been able to take a method.

- Received modern method
 - Set to one if received IUD, Implant, Injectable, Pill, condom, emergency contraception, or permanent method
- Received method of choice
 - Set to 1 if they reported not preferring another method to the one they received or if they reported that they did not get the method that was right for them or if they did not receive a method at all
- Received LARC
 - Set to on if they received an IUD or implant

Perceived quality of care

We used two methods to aggregate the subjective responses of clients and mystery clients about their feelings related to the visit. First, we used an approach common in economics where we aggregate all outcomes related to client perceptions (33 questions) into 1 index using the Anderson (2008) method. The list of questions can be found in Appendix Table 2. In addition, we used this approach separately for each principle of unbiased care developed by Pathfinder (each outcome was categorized into the different principles). Second, we used a scale developed and validated using psychometric analysis techniques, an approach common in psychology. This scale resulted in 12 questions that were found to be the best measure clients' perceptions of patient centeredness. These questions include the following.

1. Felt provider paid attention to him/her
2. Felt provider cared for you as person
3. Felt s/he could trust the provider
4. FP provider clearly explained things
5. FP provider allowed you give opinion
6. Provider gave enough information for best decision (new
7. Given enough info to understand visit
8. Felt s/he could ask any questions
9. Provider interested in your opinions
10. Felt listened to
11. Felt involved by provider in FP decisions
12. Provider let you say what mattered about your FP method

Respondent reported whether the provider did this never, some of the time, most of the time, or all of the time. All of these questions were both in the client exit survey and to mystery clients.

In addition to these aggregate measures, we also conduct exploratory analysis of specific questions that are indicative of bias:

1. did the client feel scolded by the provider (exit survey and mystery clients)
2. did the client feel judged by the provider (exit survey and mystery clients)
3. was the client asked if they had permission from parents/husband (exit survey and mystery clients)
4. did the provider make the client feel uncomfortable about their sex life (exit survey and mystery clients)
5. did the client feel treated poorly because of their age/marital status/parity (mystery clients only)
6. Did the provider express any judgments about your romantic relationship? (mystery clients only)
7. Did the provider express any judgements about your sexual activity? (mystery clients only)
8. Did the provider express any judgments about you wanting to use contraception? (mystery clients only)
9. Did the provider express any judgements about your decision about when to have children? (mystery clients only)

Exploratory outcomes

Method mix

- distribution of methods (exit survey and admin data)

Uptake

- Number of methods dispensed (admin data)
- Whether client is a new client (admin data and exit survey)
- Chose clinic because heard good things about it (exit survey)

Statistical Analysis

Balance at baseline

We did not collect baseline data through mystery clients. We collected baseline provider survey data but the providers who were part of the Pathfinder network changed after the baseline data was collected making these data not useful for the impact evaluation. Therefore, our balance checks rely on data collected through administrative data and exit surveys. Administrative data is collected differently in each country and therefore we will use this data to check for balance differently in each country. Using the administrative data, we test for balance on number of youth clients at facility and method mix by age group. In the exit survey, we test for balance on all the key outcomes listed in figure 1.

Inclusion criteria for exit survey data

Our main analyses focus on women under age 25 who are first time family planning users and came the clinic seeking family planning care.

Standard errors

We cluster standard errors at the facility level in all analyses

Main regressions

We use a similar regression framework for all data sources. We estimate regressions where we pool all three countries in addition to separate regressions for each country. Because we measure the same outcomes with several different data sources, we estimate regressions separately for each data source and compare the effects across data sources. Consistent results across data sources adds validity to our results.

- (1) Separate for each country: $Y_{if} = \beta_0 + \beta_1 T_f + X'_{if} \beta_3 + \epsilon_{if}$
- (2) All countries pooled: $Y_{ifc} = \beta_0 + \beta_1 T_f + X'_{ifc} \beta_3 + \alpha_c + \epsilon_{ifc}$

Where Y_{if} is one of our respective outcomes for individual i (either a provider in the provider survey, a real client in the exit survey, a mystery client visit, or profile-provider combination in the DCE) from facility f . T indicates the facility's treatment assignment and β_1 is the treatment effect. In equation (2) we pool all countries and thus include a set of country fixed effects, α_c . X is a vector of control variables that will be selected using a machine learning based cross validation approach. Control variables will primarily be selected to improve precision of our estimates.

The exit survey and administrative data is longitudinal and collected from the onset of the study. This allows us to estimate intervention impacts for each month of the study using the following regressions.

- (3) Separate for each country: $Y_{if} = \beta_0 + \sum_{t=1}^{12} \beta_t (T_f \times Month_t) + X'_{if} \beta_3 + \epsilon_{if}$
- (4) All countries pooled: $Y_{ifc} = \beta_0 + \sum_{t=1}^{12} \beta_t (T_f \times Month_t) + X'_{ifc} \beta_3 + \alpha_c + \epsilon_{ifc}$

Where the β_t represent the impact of the intervention in each study month T and all other terms are the same as in equations 1 and 2. We expect that outcomes will improve around the time of the rewards ceremony when the desired behavior is more salient.

In addition to the intervention effects across the entire sample, we will also assess whether the intervention reduces disparities between with respect to age (15-19, 20-24, and 25+), marital status (married vs. unmarried) and parity (no children vs. at least one living child). To do this we will include the full sample (not restricting to 15- to 24-year-olds) and include interaction terms between the group identifiers and the treatment effect. Analyses for each country separately will be assessed with the following equation.

$$(5) \quad Y_{if} = \beta_0 + \beta_1 T_f + \beta_2 (T_f \times Z_i) + \lambda Z_i + \epsilon_{if}$$

Where Z is the client's characteristic for which we expect there to be bias. We set the reference level of Z to be the non-priority group (25+, married, or parous). Thus, λ represents the disparity in the outcome in control facilities, which we expect to be negative. β_1 represents the treatment effect for the non-priority group and β_2 represents change in the disparity as a result of the intervention, which we expect to be positive (i.e., the disparity gets smaller).

For the DCE, we structure our data at the profile level, so Y_{if} is the outcome for profile i from a provider at facility f (providers will report how they would treat different types of clients). Each provider responded about how a hypothetical visit would go for 4 different randomly assigned profiles. We will cluster standard errors by providers for this analysis.

Mediation/mechanisms analysis

We will examine several mechanisms to better understand why and how the intervention did or did not work for various outcomes. We use intervention exposure data to assess whether facilities where providers engaged more with the various pillars of the intervention improved more. This will also help assess whether certain pillars appear to be more important than others. We will use intervention exposure data to look at

- Engagement with the intervention
- heterogeneity in the treatment effect by engagement (facility level)

Qualitative Analysis

[CORRINA/ALLIE CAN YOU ADD TO THIS?]

Interviews will be transcribed and translated to English. A codebook will be iteratively generated using the interview guides, relevant theoretical frameworks, and review of the transcripts. Transcripts will be coded using qualitative software (Atlas.ti or Dedoose). Thematic analysis will be conducted to understand experiences and implementation of the Beyond Bias intervention. Among clients, experiences of care will be compared by site and intervention group. Among control providers, we will focus on identifying areas of bias and poor quality care, and understand potential spillover effects. Among stakeholders, the analysis will primarily focus on understanding the potential for scale up of the Beyond Bias project.

Results

The tables and descriptions of figures are preliminary examples of how we plan on presenting out results form the analyses describe above

Description of sample

Description of facilities

Table 1						
	Tanzania		Burkina Faso		Pakistan	
Variables	Treatment	Control	Treatment	Control	Treatment	Control
Number of Facilities						
Average number of providers						
Number of methods provided to clients in 2020						

Description of clients

Table 2: Description of client sample

	Tanzania		Burkina Faso		Pakistan	
Variables	Treatment	Control	Treatment	Control	Treatment	Control
Number of Facilities						
Number of Total Clients						
<i>Age</i>						
15-19						
20-24						
25+						
Marital Status						
Have Children						
Education						

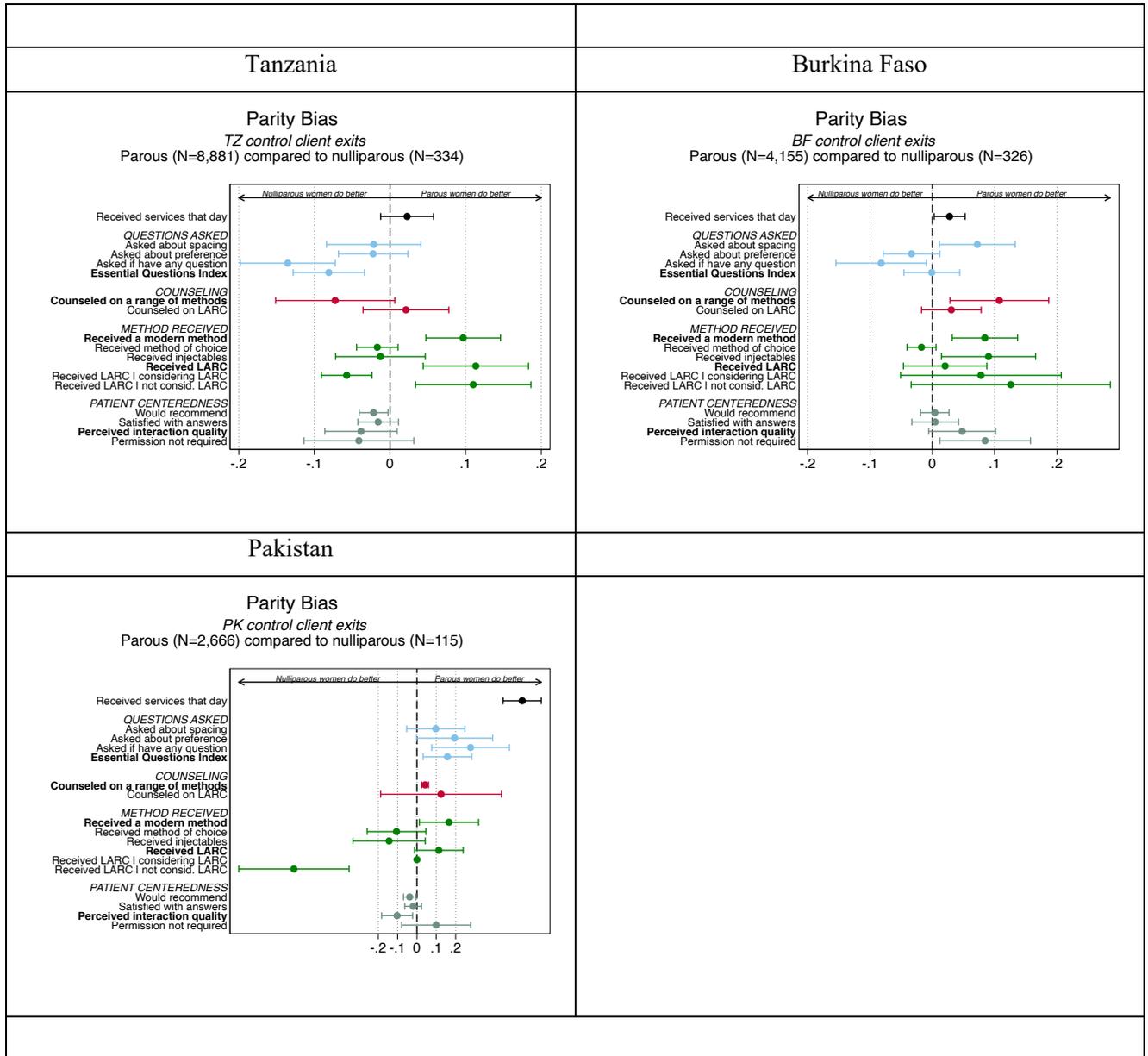
Continuing user						
Specific method in mind						
Preferences for method features						

Table 3: Description of provider sample

Variables	Tanzania		Burkina Faso		Pakistan	
	Treatment	Control	Treatment	Control	Treatment	Control
Number of Facilities						
Number of providers						
Age						
Years practicing						
Years at current clinic						
Marital Status						
Have Children						
Education						

How does **age, marital status, and parity** affect outcomes in the control group?

Three Appendix figures showing the disparities by age, marital status, and parity. Something like this. This will portray what the problem looks like without intervention.



*How did the Beyond Bias intervention impact **provider attitudes and beliefs**?*

Figure 1: Provider attitudes and beliefs

- Horizontal bar chart for each outcome with one bar for treatment and one for control. Top outcome should be the bias index and other outcomes should be specific questions related bias.

How did the *Beyond Bias* intervention impact **patient centered FP care** for women 15-24?

- Table of outcomes for exit survey, mystery clients, and DCE similar summary table above

Table 3: Patient Centered FP Care						
	Exit Survey (full 12 months)					
	Tanzania		Burkina Faso		Pakistan	
	Treatment	Control	Treatment	Control	Treatment	Control
Received Services						
Essential Questions Index						
Method Information Index						
Optimal Method Counseling						
	Mystery Clients					
	Tanzania		Burkina Faso		Pakistan	
	Treatment	Control	Treatment	Control	Treatment	Control
Received Services						
Essential Questions Index						
Method Information Index						
Optimal Method Counseling						
	DCE					
	Tanzania		Burkina Faso		Pakistan	
	Treatment	Control	Treatment	Control	Treatment	Control
Received Services						
Essential Questions Index						
Method Information Index						
Optimal Method Counseling						

- Also include figures that plot regression coefficients (something like the figure below but with outcomes on the y axis) from equation 1 for each outcomes and for each data source.
 - For each outcome have one coefficient for exit survey, one coefficient for mystery clients, and one coefficient for DCE
- Figure that plots outcomes over time between treatment and control using exit data
 - One panel for each outcome

*How did the Beyond Bias intervention impact **methods received** for women 15-24?*

[Same presentation structure as Table 3 above but for outcomes related to methods received]

- Figure that plots share of clients that receive each method by treatment and control using admin data over time
 - Separate panel for each method. Each panel includes one line for treatment and one line for control.

*How did the Beyond Bias intervention impact **perceived quality of care** for women 15-24?*

[Same presentation structure as above but for perceived quality of care outcomes]

Did the Beyond Bias intervention **reduce the effect of age, marital status, and parity** on the outcomes of interest?

- Present same table and figure formats as for other outcomes, but rather than levels of outcomes, presents differences between groups (based on equation 5)

Appendix

Table A1. Questions used to construct the provider bias index (All measured on a 5 level Likert scale; strongly agree, agree, neutral, disagree, strongly disagree)
It is okay for young clients who are unmarried to use contraception
Young married clients and young unmarried clients should have the same family planning options
Unmarried youth clients require consent from their parents before contraceptives are provided
Young married clients require the consent of the husband before contraceptives are provided
Married women who do not have any children should not be using contraception
Young women under age 20 have the capacity to make health care decisions for themselves, including about contraception.
Contraceptives are more appropriate for women at least 20 years old
It is important for women who have not yet been pregnant to first prove their fertility before using contraception
For an FP consultation, it's important to know if the client is married or unmarried
I feel comfortable providing contraception to an unmarried client under 20 years old
If the client hasn't yet had a child, she should avoid using injections
If the client hasn't yet had a child, she should avoid using an IUD
If the client hasn't yet had a child, she should avoid using an implant
I usually decide what family planning method young clients under aged 20 should use
Injections are appropriate for young women without children
Implants are appropriate for young women without children
IUDs are appropriate for young women without children
Hormonal methods are safe for youth's growing bodies (under 20)
I prefer not to provide an FP method to an unmarried client if they will not first take an HIV test
Young women without children should not use any product that might cause a delay in fertility once stopped
It's okay for other clients to come into the room while I'm giving an FP consultation
It's okay for another medical professional to come into the room when I'm giving an FP consultation
Young clients (under 20) are not capable of choosing the method that is best for them
A client with just one daughter will have different FP needs than a client with just one son
I would provide family planning services to a client even if I thought they were too young to be using contraception
I usually counsel clients under age 20 to practice abstinence (problematic question: even if they are married??)

Table A2. Questions used to construct the perceived patient centeredness index (All measured using never, a few times, most of the time, all of the time)
Felt disrespected
Felt treated in unfriendly manner
Felt staff paid attention to him/her
Allowed someone to stay
Felt staff cared for you as person
Felt s/he could trust the staff
Felt safe
Felt judged by FP provider
Felt scolded
Felt uncomfortable because of sex life
Invited to ask questions
All questions answered
Given enough info to understand visit
FP provider clearly explained things
Felt s/he could ask any questions
FP provider support anxieties and fears about procedure
FP asked about feeling
Provider interested in your opinions
Felt listened to
Provider considered personal situation
Asked about birth limiting preferences
Asked about birth spacing preferences
Any methods discussed other than current
Any methods discussed -not current FP users
Asked about your family planning method preferences
Any method strongly encouraged
Informed of other methods beyond what received
Provider pressured you to use their preferred method
Asked for permission from household members/partner
Felt involved by staff in FP decisions
FP provider allowed you give opinion
Provider gave enough information for best decision
Provider gave you time to consider
Provider let you say what mattered about your FP method