TANZANIA CAPACITY AND COMMUNICATION PROJECT (TCCP)

2011 BASELINE SURVEY

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Clinic
CBR	Crude Birth Rate
CP	Concurrent Partnerships
DED	District Executive Director
DHS	Demographic and Health Survey
DMO	District Medical Officer
EA	Enumeration Area
FGM	Female Genital Mutilation
FP	Family Planning
GBV	Gender Based Violence
GFR	Gross Fertility Rate
HIV	Human Immunodeficiency Virus
ICF	Inner City Fund
IPC	Infection Prevention and Control
IUCD	Intra Uterine Contraceptive Devices
JHU-CCP	Johns Hopkins University - Centre for Communication Programs
JHU IRB	Johns Hopkins University Institutional Review Board
MC	Male Circumcision
MCH	Maternal and Child Health
MCP	Multiple Concurrent Partnership
MFDI	Media for development International
MOHSW	Ministry of Health and Social Welfare
NBS	National Bureau of Statistics
NIMR	National Institute for Medical Research
OCGS	Office of the Chief Government Statistician
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
OVC	Orphans and Vulnerable Children
POUZN	Point of Use Water Disinfection and Zinc Treatment
PSU	Primary Sampling Unit
RAS	Regional Administrative Secretary
RCHS	Reproductive and Child Health Section
SD	Standard Deviation
SES	Social Economic Status
SPSS	Statistical Package for Social Studies
SRPS	Sexual Relationship Power Score
STI	Sexually Transmitted Infection
TACAIDS	Tanzania Commission for AIDS
TCCP	Tanzania Capacity and Communication Project

TDHS	Tanzania Demographic and Health Surveys
TFR	Total Fertility Rate
THIS	Tanzania HIV/AIDS Indicator Survey
THMIS	Tanzania HIV/AIDS and Malaria Indicator Survey
TNBS	Tanzania National Bureau of Statistics
TRCHS	Tanzania Reproductive and Child Health Survey
UNAIDS	Joint United Nations Program on HIV and AIDS
USAID	US Agency for International Development
USD	United States Dollar
VEO	Village Executive Officer
WEO	Ward Executive Officer
ZAC	Zanzibar AIDS Control

SURVEY BACKGROUND

The Tanzania Capacity and Communication Project (TCCP) is led by the Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU·CCP) in collaboration with Media for Development International (MFDI) and CARE Tanzania. TCCP is a 5-year, USAID-funded project working in partnership with the Tanzania Ministry of Health and Social Welfare (MOHSW), Tanzania Commission for AIDS (TACAIDS), the MOHSW Reproductive and Child Health Section (RCHS), regional and local Governments, local non-government organizations, private sector organizations, and other United States Government organizations. The project's areas of focus include HIV prevention, reproductive health, and maternal and child health. TCCP's vision is a Tanzania where people take charge of their own health, creating healthy households in an environment supportive of and conducive to individual and system level change. The objectives of the project are to execute evidence-based, coordinated social and behavior change communication initiatives at scale, reinforce systems for coordinating and delivering social and behavior change communication, and transfer social and behavior change communication skills to Tanzanian institutions, organizations, and individuals. This baseline survey, conducted June to August 2011, was used to measure knowledge, attitudes, and behaviors about key outcomes of interest in the health areas that will be addressed throughout the project.

Existing research in Tanzania has identified the following trends in the areas of interest for TCCP:

HIV/AIDS – About 1.5 million Tanzanians are infected with HIV, of which approximately 10% are children (The United Republic of Tanzania, 2009). Although HIV prevalence has stabilized at 6-7%, a secondary increase in prevalence in the future is likely (National Bureau of Statistics (NBS) [Tanzania] & ICF Macro, 2011; TACAIDS, Zanzibar AIDS Control (ZAC), NBS, Office of the Chief Government Statistician (OCGS) & Macro International Inc., 2008; UNAIDS, 2008). Women continue to be more likely to be infected than men (UNAIDS, 2008), and the nature of the HIV epidemic has shifted from an urban to a rural epidemic, where new infections have grown steeply over time (NBS [Tanzania] & ICF Macro, 2011; UNAIDS, 2008). However, there is a widespread knowledge of HIV/AIDS prevention methods: according to the 2010 Tanzania Demographic and Health Survey (NBS [Tanzania] & ICF Macro, 2011), nearly nine in ten respondents (87% of women and 90% of men) know that the chance of becoming infected with the AIDS virus is reduced by limiting sexual intercourse to one uninfected partner who has no other problems. Also, 76% of both women and men know that the chance of contracting HIV/AIDS is reduced by using condoms (NBS [Tanzania] & ICF Macro, 2011).

Maternal & Infant Health – The maternal mortality ratio during the ten-year period before the 2010 TDHS was estimated at 454 maternal deaths per 100,000 live births – meaning for every 1000 births about 4-5 women died of pregnancy-related causes. The infant mortality rate for 2006-2010 was 51 deaths per 1,000 live births (NBS [Tanzania] & ICF Macro, 2011). The child mortality rate was 32 deaths per 1,000 children, lower than the infant mortality rate, which implies that the main contributing factors to infant mortality are neonatal and post-neonatal mortality (NBS [Tanzania] & ICF Macro, 2011; TACAIDS et al., 2008). The

under-five mortality rate for the period of 2006-2010 was 81 per 1,000 live births (NBS [Tanzania] & ICF Macro, 2011).

Child Health – Diarrhea is estimated to account for 5 percent of child deaths in Tanzania (POUZN Project, 2010). About 13 percent of children experienced diarrhea within the last two weeks - a rate that has not changed since 1999 (National Bureau of Statistics (NBS) [Tanzania] & ORC Macro, 2005). To prevent dehydration, children need zinc treatment and oral rehydration solution (ORS) or oral rehydration therapy (ORT). Although zinc treatment and ORS/ORT is recognized by a large percent of both mothers and providers as an appropriate treatment for childhood diarrhea, introducing the new zinc treatments and improving the practice of ORS/ORT continues to remain a challenge (POUZN Project, 2010).

Multiple and Concurrent Partners (MCP) – Widespread risky behaviors such as having multiple and concurrent sexual partners can contribute to new STI and HIV infections every year. The 2007-2008 Tanzania HIV and Malaria Indicator Survey (THMIS) (TACAIDS et al., 2008) reports that HIV prevalence continues to increase with the number of sexual partners over a lifetime. In 2008, 18% of men and 3% of women reported having had multiple sexual partnerships in the previous year, and 29% of married or cohabiting men and 16% of married or cohabitating women have had extramarital sex (TACAIDS et al., 2008).

Family Planning – The TDHS (2010) reports 5.4 births per woman as the total fertility rate (TFR), a comparable rate reported in the THMIS (TACAIDS, et al., 2008), which estimates 5.6 births per woman. These rates are similar to the 1996 TDHS, which estimated the rate at 5.8 births (NBS [Tanzania] & ICF Macro, 1997), and the 1999 Tanzania Reproductive and Child Health Survey (TRCHS) (NBS & Macro International Inc., 2000), which estimated the rate at 5.6 births. These statistics seem to indicate that fertility has not declined in Tanzania for more than a decade. Furthermore, the TFR is higher in Mainland rural areas at 6.1 births per woman compared to Mainland urban areas at 3.7 births per woman (NBS [Tanzania] & ICF Macro, 2011). The Crude Birth Rate (CBR) in Tanzania is 38.1 births per 1,000 (NBS [Tanzania] & ICF Macro, 2011). The General Fertility Rate (GFR) is 188 live births per 1,000 women of reproductive age. As is the case with TFR, the GFR is also higher in Mainland rural areas (210) as compared to Mainland urban areas (135) (NBS [Tanzania] & ICF Macro, 2011).

Use of Condoms - Although the THMIS showed that condom use during casual sex for the period of 2003-2008 increased from 38% to 43% among women and from 50% to 53% among men aged 15-49 years, less than half of the individuals who engaged in these risky sexual acts used condoms at their last encounter (TACAIDS, et al., 2008; The United Republic of Tanzania, 2009). As expected, better educated women and men and those in higher wealth quintiles were more likely than other respondents to use condoms and be aware of prevention methods (NBS [Tanzania] & ICF Macro, 2011).

Gender Based Violence – Evidence continues to show that gender-based violence (GBV) in the form of coerced sex or rape increases the risk of HIV infection for young girls and women (The United Republic of Tanzania, 2009). In addition, HIV positive women are more

than twice as likely as HIV negative women to report physical and sexual violence (The United Republic of Tanzania, 2009). Also, 39% of Tanzanian women ages 15-49 reported to have ever experienced physical violence since the age of 15 (NBS [Tanzania] & ICF Macro, 2011). Unfortunately, GBV continues to be an acceptable social norm even among women in Tanzania: 41% of women in Dar es Salaam believe that male violence is justified when women are disobedient, unfaithful, or have not completed the housework; and 16.8% feel that fear of HIV infection is an inadequate justification for refusing sex (The United Republic of Tanzania, 2009). Nonetheless, the fear of violence prevents women from reporting acts of violence to authorities or in negotiating protective measures against HIV infection (The United Republic of Tanzania, 2009; Zimmerman, 1994).

Male Circumcision (MC) - 70% of men between the ages of 15-49 are circumcised in Tanzania (TACAIDS et al., 2008). However, circumcision rates vary greatly between regions, varying from 26% to 97% (TACAIDS et al., 2008), and the practice is not associated with one specific religion—98% of Muslims and 68% of Protestants indicated in 2003 that they were circumcised (Urassa et al., 1997; TACAIDS, NBS [Tanzania] & ORC Macro, 2005; Weiss et al., 2008). In Tanzania, male circumcision is becoming more popular among a traditionally non-circumcising ethnic groups, especially in urban areas and amongst educated men (UNAIDS, 2008).

Infection Prevention Control (IPC) - Transmission of infections continues to be a major problem in Tanzania. Health facility-acquired infections are one of the major causes of preventable morbidity and mortality (Tanzania Ministry of Health, 2004), reiterating the importance of developing and implementing IPC protocols. There is a risk of becoming infected while receiving health care, whether in a hospital or clinic, unless precautions are taken to prevent infections (Tietjen, Bossemeyer, & McIntosh, 2003). The implementation of protocols such as hand washing with soap, especially after contact with feces, can reduce the risk of diarrhea by 42%, making it one of the most effective interventions available for reducing childhood mortality and morbidity (Curtis & Cairncross, 2003).

METHODS

A. Sample Design

Tanzania Mainland is divided into 21 administrative regions. The TCCP Baseline Survey was conducted in 8 priority regions: Dar es Salaam, Iringa[1], Mara, Mbeya, Mwanza, Pwani, Shinyanga, and Tabora and 8 comparable control regions: Ruvuma, Morogoro, Rukwa, Tanga, Lindi, Mtwara, Kagera, and Dodoma; all in mainland Tanzania. Adults aged 15 to 49 years with equal gender distribution were surveyed. Urban respondents were overrepresented purposely to match TCCP objectives, which are aimed at primarily targeting urban populations.

For the selection of the sample, a power analysis for χ^2 tests, with input parameters whereby the effect size =0.5 and alpha=.05 and 15 degrees of freedom, projected a total sample size of 112 per group times the 16 regions. However, assuming a design effect of 2.0 (for well-designed studies, the design effect ranges from 1.0 to 3.0), non-response, refusals, and potential interviewer error (approximately 10%), the survey targeted 2,000 men and 2,000 women for a total of 4,000 participants.

Each region in Tanzania is divided into districts, wards (or Enumeration Areas-EA) and villages. Tanzania has approximately 10,000 EAs, according to the Tanzania National Bureaus of Statistics (TNBS). The EAs were the primary sampling units (PSUs), households the secondary sampling units, and individuals aged 15 years and above the final sampling units. Due to the lack of an updated database of villages and streets, the sample selection followed four stages:

i) The selection of the participating village/street was conducted once the team reached the selected ward in the sampling list. Using a list of villages/streets obtained through the ward secretary, the participating village/street was selected randomly. One village was selected in the rural areas and one street was selected in the urban areas;

ii) Landmark features from different parts of the village (e.g., mosque, church, bridge, health facility, school, etc.) were identified through the village executive secretary office/street chairman to serve as starting points. The first two landmark features were selected for each interviewer pair, ensuring that the interviews were well distributed in the village;

iii) Households were selected through a random route walk method following the left hand rule: the first house to sample was dependent on the sum of that particular day – for example, if the date was 02, the interviewer skipped

[1] The Iringa region has since been broken into two new regions, Iringa and Njombe. Our survey includes respondents from both of these new regions.

one household and started sampling from the second residential house from the landmark feature. If the date was the 23rd, the first household from the landmark was the fifth residential household. If the interview was successful, the interviewer skipped four consecutive houses before knocking again, always moving anticlockwise towards the left. If the interview was not successful, the interviewer continued to the next house. This procedure continued until the next successful interview was achieved;

iv) Using a Kish grid (Kish, 1965), a man or woman (aged 15-49) from the household was randomly selected and administered the survey.

The sample was self-weighted as a result of these randomization procedures. Characteristics of the survey sample are not compared to the population estimates in this report because we chose to sample with a 75/25 urban/rural split, which is not representative of the Tanzanian population. Therefore, as would be expected in urban areas, education levels, income, access to family planning services and therefore use, etc. would all be higher than that found in the rural areas. This approach was taken due to the fact that a majority of our programming is focused on the urban areas in the country.

B. Procedure

Prior to beginning the survey, the head of household was read a consent script in either Swahili or English, asking for permission to speak with a member of the household. If consent was not obtained, the interviewer moved to the next household. A total of 79 households were not eligible for the survey because the head of household declined to consent; the main reason for refusal being the head of household felt the survey had no benefit to the household. A total of 5115 contacts were made to achieve the final sample of 4000 cases, which represents a 78% response rate.

If the head of household consented for the survey to be conducted with only members of the household aged 18 years and above, those aged 15-17 years were exempted from the Kish grid. Once a participant within the household was randomly selected, a gender-matched interviewer continued with the adult consent/child assent process and the survey. Data were collected by a structured questionnaire through face-to-face interviewing with the randomly selected respondent. During questionnaire development, the instrument was translated into Kiswahili and back translated into English to check for consistency of the questions.

The total sample size for this baseline survey consisted of 782 households made up of 4,000 participants between 15 and 49 years. The regional distribution of the sample is shown in Table 1. The mean age for all participants was 27.2 years (female: 27.0; male: 27.5).

Table 1. Distribution of the sample by region.

Region	Males – % (n)	Females – % (n)	Total – % (n)
Dar-es-salaam	50.00 (376)	50.00 (376)	18.80 (752)
Morogoro	49.77 (216)	50.23 (218)	10.85 (434)
Tanga	50.00 (146)	50.00 (146)	7.30 (292)
Dodoma	50.00 (146)	50.00 (146)	7.30 (292)
Mwanza	49.64 (137)	50.36 (139)	6.90 (276)
Kagera	50.00 (114)	50.00 (114)	5.70 (228)
Mtwara	50.00 (109)	50.00 (109)	5.45 (218)
Mbeya	49.76 (105)	50.23 (106)	5.28 (211)
Shinyanga	50.00 (106)	50.00 (106)	5.30 (212)
Rukwa	50.26 (97)	49.74 (96)	4.83 (193)
Ruvuma	50.80 (95)	49.20 (92)	4.68 (187)
Tabora	50.00 (83)	50.00 (83)	4.15 (166)
Lindi	50.00 (78)	50.00 (78)	3.90 (156)
Mara	47.95 (70)	52.05 (76)	3.65 (146)
Iringa	52.05 (76)	47.95 (70)	3.65 (146)
Pwani	50.55 (46)	49.45 (45)	2.28 (91)
Total	100.00 (2000)	100.00 (2000)	100.00 (4000)

C. Materials

The baseline survey was developed to measure current knowledge, attitudes, and behaviors surrounding HIV/AIDS, family planning, and maternal and child health in Tanzania.

The questionnaire covered the following topics:

i. *Socio demographics* – characteristics of participants such as age, religion and education, marital status, as well as ownership of various household items to obtain a proxy for socioeconomic level.
ii. *Family Planning* – methods and level of self-efficacy to use various methods.
iii. *Maternal & Child Health* (MCH) – questions regarding most recent birth and knowledge on MCH issues.
iv. *Child Health* – use and knowledge of Oral Rehydration Solution/Therapy (ORS/ORT) and zinc products.
v. *Sexual behavior* – sexual protection self efficacy, sexual risk communication behavior, age at first sex, number of sex partners, specific information for each partner (up to three) the participant had sex with in the last 12 months, attitudes towards condoms.
vi. *HIV/AIDS* - counseling, protection, perceptions, and prevention knowledge.
vii. *Social Norms* – perceived norms regarding multiple and concurrent partners.
viii. *Sexual Relationship Power* – items assessing level of power held in a romantic relationship.

ix. *Gender Based violence* – a hierarchy of items assessing sexually aggressive acts (oral, vaginal, anal) from mild to severe (threats, arguments, physical violence, rape), with whom and when they occurred, and how often, as well as experience with female circumcision/genital cutting.
x. *Male Circumcision* – knowledge and perceptions, use of male circumcision, preference for a circumcised partner and male child.
xi. *Infection Prevention Control* – experience with latest health facility visit surrounding cleanliness, assessing knowledge of hand washing, injections, and glove use.

Demographics. Participants were first asked a series of demographic questions, including age, education, religion, employment status, marital status, number of children, and several questions to determine socio-economic status (SES). SES was calculated from eight different parameters, including household possessions (e.g., refrigerator, television); roofing material; floor material; and frequency of lack of food, shelter, school fees, health needs, and feeling hungry. The possible score on the SES measure ranged from 0 to 21.

Family planning and self efficacy. Participants were asked questions about their knowledge of family planning and the various known methods. They were asked about their current use of family planning, knowledge of its side effects, and the deciding factors and decision makers (e.g., me, husband/partner, both) on their use of family planning methods. Additionally, self efficacy of family planning was measured; responses were given on a 4-point Likert scale, ranging from "strongly disagree" to "strongly agree," to items such as, "I feel confident that I can use contraceptives to avoid unwanted pregnancies," "Women who do not get pregnant within the first year of marriage are barren." Participants were also asked about their family size preference and to indicate reasons why they prefer a smaller or larger family.

Maternal health. If female participants had a child under the age of 5, they were asked about where they gave birth and weeks of antenatal care. Additional questions addressing the performance of Tanzania maternal and child health service provisions asked mothers about their birth preparedness plan, delivery and postnatal care, breastfeeding, danger signs during pregnancy and delivery, and symptoms of common childhood illnesses. Knowledge and confidence questions on antenatal care were asked on a 4-point Likert scale. Finally, participants were asked about the responsibility for care of orphans and vulnerable children. These items were adapted from the Tanzania Demographic Health Survey (2010).

Child health. If participants had a child under the age of 5, they were asked questions on their use of zinc for their child's treatment of diarrhea. These questions were adapted from the collection toolkit of Point-of-Use Water Disinfection and Zinc Treatment (POUZN) project (MacDonald & Banke, 2010). Participants were also asked about their child's dosage of ORS/ORT, exact number of days of usage, benefits of the zinc products, where they can locate such products, and if they found it to be an effective treatment for children.

Sexual protection. We measured self-efficacy about sexual protection with questions on the same 4-point Likert scale, ranging from "strongly disagree" to "strongly agree," with items such as, "You feel confident you can purchase condoms," and "You feel confident that you can have a sexual relationship with only one person at a time."

Sexual risk behavior. Risk behavior was assessed through an adapted version of the sexual risks scale (DeHart & Birkimer, 1997), by asking participants how many partners they

have had in the past 6 months, whether they had a cross-generational partner (a partner 10 or more years older for females and 10 or more years younger for males) in the past 6 months, whether they currently have a cross-generational partner, how often they used condoms in the past 6 months (always, most of the time, sometimes, none of the time), and whether they had traded anything for sex in the past year. Participants were also asked how important it was to have sex only with someone close in age (within 5 years). Participants were also asked if they had spoken with their main partner and/or other partners about not having additional partners and condom use.

HIV counseling and testing. Participants were asked about HIV testing behavior, knowledge of their HIV status, their partner's knowledge of their status, and if they had been tested with their partner. Testing self-efficacy questions, included the items "How confident do you feel that you could get tested for HIV in the future?" and "How confident are you that you could get tested for HIV with your sexual partner in the future?" These items were measured using a 4-point Likert scale.

HIV risk perceptions and prevention knowledge. Participants' risk perceptions and prevention knowledge of HIV was accessed through a 4-point Likert scale, ranging from "strongly disagree" to "strongly agree," with items such as, "It is likely that I will become infected with HIV during my lifetime," and "Condoms should be used even if a woman is pregnant."

Social norms about multiple and concurrent partners. Participants were asked a series of items about their views of their friends' opinions regarding sexual relationships. Responses were given on the same 4-point Likert scale. Sample items were, "Your friends think it is okay to have more than one sexual partner," "Your friends would be angry if they knew you cheated on your main sexual partner," and "Your friends are all faithful to their sexual partners."

Sexual relationship power. Those participants who currently have or at one point had a main sexual partner were asked an adapted version of the relationship control subscale of the Sexual Relationship Power Scale (Pulerwitz, Gortmaker, & DeJong, 2000). This scale was originally developed to measure power of female partners in intimate heterosexual relationships. It was adapted to the Tanzanian context and for use with male partners. Responses were also given on a four-point Likert scale, ranging from "strongly disagree" to "strongly agree." The items in this scale address decision-making dominance, relationship control and commitment, condom use, and freedom of thought within the relationship (Pulerwitz et al., 2000).

Gender-based violence. These items were adapted from Sexual Experiences Survey (SES; Koss, Gidycz, & Wisniewski, 1987), a commonly used instrument for assessing various degrees of sexual aggression and victimization among male offenders and female victims. Female participants were asked if they experienced physical violence ever in their lifetime and during the past year. They were also asked if their partner ever threatened and/or pressured them into having sex during their lifetime and in the past year. If yes, they were additionally asked about the severity of the violence, who had committed the violence (stranger, relative, etc.), and how often the violence and/or sex occurred. Additionally female participants were asked if they had ever experienced female circumcision/genital cutting and their exact age during this experience. Male participants were asked if they had ever participated in physical violence, held someone down against their will, and ever had

any type of sex with a woman against her will. If yes, participants were asked about the severity of the violence, the relationship with the woman the violence and/or sex was inflicted upon, and how often this violence and/or sex occurred.

Male circumcision. Participants were shown pictures of a circumcised and uncircumcised penis for clarification before being asked about their opinions on male circumcision. Responses were given on the 4-point Likert scale for such sample items, "Men who are circumcised are less likely to contract HIV," and "A circumcised penis is more attractive for a woman." They were also asked if they would circumcise a future male child and if they had one, their current teenage son. Female participants were asked if their current partner was circumcised and their preference for a circumcised or uncircumcised partner. Male participants were asked if they were circumcised, and if they were not, their intention of getting circumcised, as well as their knowledge of places to receive the procedure.

Infection prevention and control. If participants had ever been to a health facility, they were asked questions about their providers' hand washing; use of gloves, new syringes and linens; and cleanliness of the facility. Items on a four-point Likert scale, ranging from "strongly disagree" to "strongly agree," included, "Washing hands prevents infections," and confidence questions such as, "You feel confident that you could ask your healthcare provider to change his/her gloves before seeing you." These items were based on the National Infection and Control Guidelines for Health Services in Tanzania (Tanzania Ministry of Health, 2004).

D. Field Operations

Ethical clearance for this study was obtained from the Johns Hopkins University Institutional Review Board (JHU IRB) and the Tanzania National Institute for Medical Research (NIMR). After ethical clearance, local authorities (regional, district, ward and village levels) were informed of the study, and the field team sought permission to conduct the surveys in the respective areas. Data collection took place from June to July 2011. Field teams were organized in teams of 4 interviewers (2 female and 2 male), with each team monitored by a supervisor. Each team was assigned to collect data in one region.

The field protocols and tools were pretested in 8 EAs in Dar es Salaam with 400 individuals prior to fielding the surveys (these areas were excluded from the final sampling frame). The objective of this exercise was to check for consistency, flow, and comprehension of the questions. It was also useful in evaluating how the questions were being interpreted, if they were yielding relevant answers, and estimating the time necessary to complete the questionnaire. The few challenges that were encountered were addressed in the debrief meeting with fieldworkers, team leaders, and field managers.

All questionnaires from regions were brought to the contracted agent head office in Dar es Salaam where coding was completed by trained and experienced data clerks. Data entry was done using a specialized scanner (FORMIC software). To ensure that data was correctly captured, 15% of the questionnaires were re-scanned and 10% physically checked for consistency. The data was then exported and analyzed using Statistical Package for Social Science (SPSS) software version 18.0.

DEMOGRAPHICS

Table 2 and Figures 1-3 show the socio-demographic breakdown of the sample, stratified by gender. These values are not weighted because the randomization procedures described in the methods allow for the values to be self-weighted. The mean age for females was 27.07 years (SD = 9.35, median = 26 years) and 27.48 years for males (SD = 9.6, median = 26 years). For women, 40% (n = 795) of those married were monogamous, while 5% (n = 110) were polygynous. For men, 39% (n = 782) of those married were monogamous, while 4% (n = 86) were polygynous.

Table 2. Socio-demographic distribution of the study sample

VARIABLE	Females – % (n)	Males – % (n)	Total – % (n)
Setting			
Urban	73.30 (1466)	73.80 (1476)	73.55 (2942)
Rural	26.70 (534)	26.20 (524)	26.45 (1058)
Age groups			
15-18	24.15 (483)	22.95 (459)	23.55 (942)
19-24	21.65 (433)	22.30 (446)	21.98 (879)
25-35	33.70 (674)	30.90 (618)	32.30 (1292)
36-49	20.50 (410)	23.85 (477)	22.18 (887)
Education			
None	5.30 (106)	2.65 (53)	3.98 (159)
Primary	50.30 (1006)	46.50 (930)	48.40 (1936)
Secondary	39.70 (794)	44.70 (894)	42.20 (1688)
Post-secondary	4.70 (94)	6.15 (123)	5.43 (217)
Religion			
Muslim	43.90 (878)	46.55 (931)	45.23 (1809)
Catholic	29.35 (587)	24.35 (487)	26.85 (1074)
Other Christian	26.75 (535)	29.10 (582)	27.93 (1117)
Marital status			
Single	44.15 (883)	53.50 (1070)	48.83 (1953)
Married	45.25 (905)	43.40 (868)	44.33 (1773)
Div/Sep/Wid	10.60 (212)	3.10 (62)	6.85 (274)
Total	100.00 (2000)	100.00 (2000)	100.00 (4000)

Figure 1. Participant education levels, stratified by gender

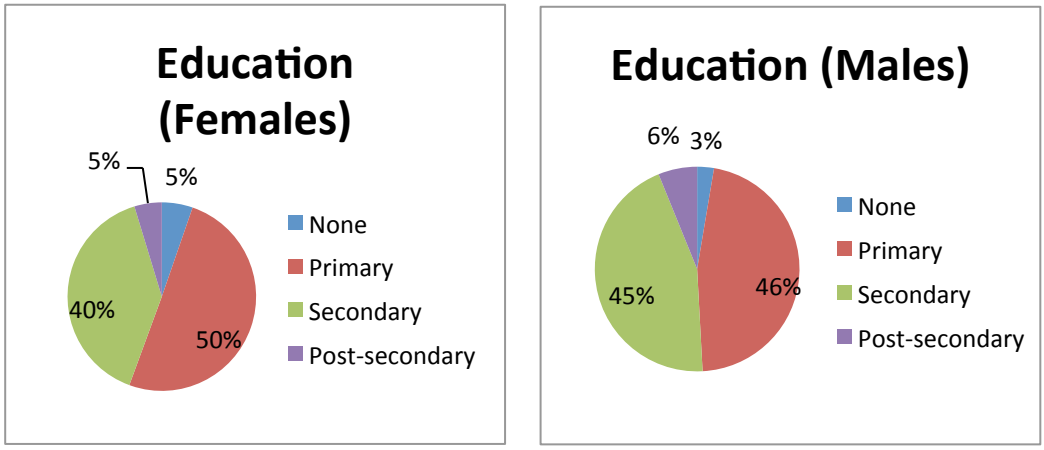


Figure 2. Participant religion, stratified by gender

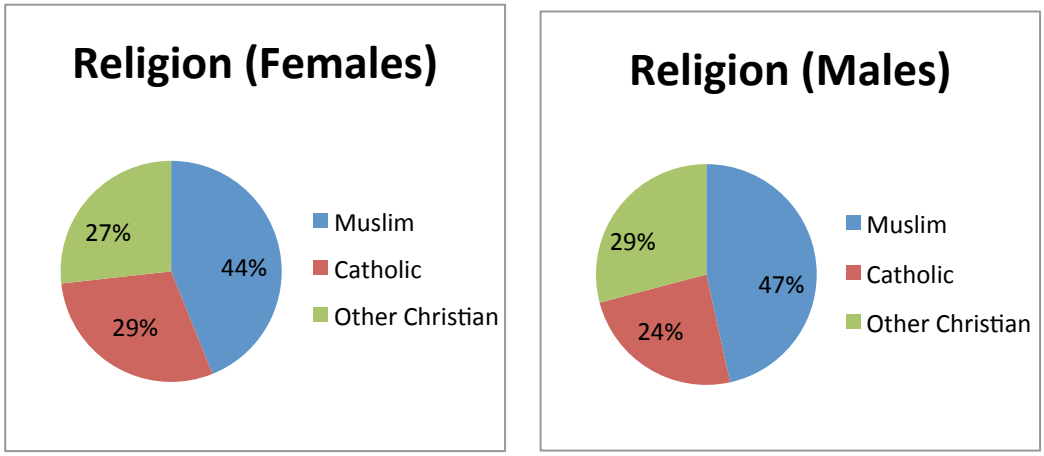
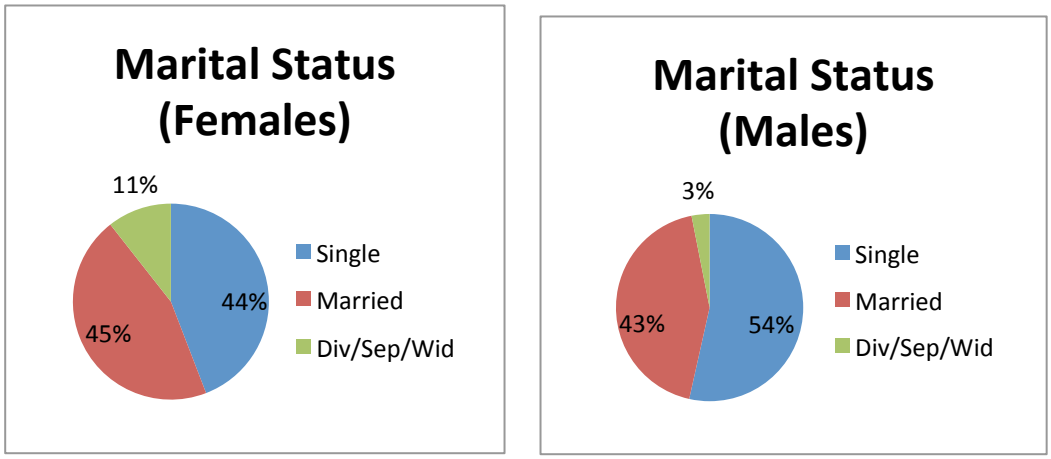


Figure 3. Participant marital status, stratified by gender



Family Size

Table 3. Participants' number of biological children

Number of children ever born	Females – % (n)	Males – % (n)	Total – % (n)
Mean	1.82	1.42	1.62
SD	2.12	1.96	2.01
0	38.55 (771)	50.70(1014)	44.54(1785)
1	16.45 (329)	13.05 (261)	14.75 (590)
2	14.25 (285)	12.40 (248)	13.33 (533)
3	11.50 (230)	9.15 (183)	10.33 (413)
4+	19.60(385)	14.70 (294)	16.98 (679)

Note: Women were asked for the "number of times given birth to a living baby in your life" while men were asked for "number of biological children."

Table 4. Number of biological children by gender and setting

	Male		**Female**	
	Rural	*Urban*	*Rural*	*Urban*
Mean	1.75	1.30	2.20	1.63
SD	2.33	1.80	2.34	1.87

Males reported currently caring for an average of 1.56 (SD = 2.00) children, while females reported currently caring for an average of 1.81 (SD = 1.962) children.

Table 5. Number of children currently cared for by gender of parents and children

Total children cared for	Males		Females		Total
	Boys	*Girls*	*Boys*	*Girls*	
1	407	380	533	467	1787
2	316	226	306	329	1177
3	125	117	121	122	485
4+	65	47	101	138	351
Total	913	770	1061	1056	3800

Of those with children, males reported desiring 3.94 children (SD = 1.99) and females desire an average of 3.40 (SD = 1.84). Of those without children, males desired an average of 3.46 (SD = 1.55) and females an average of 2.90 (SD = 1.40). The range of number of children desired by males was 0-13 and 0-14 females.

Employment and Socioeconomic Status

Table 6. Employment status by gender

	Males –% (n)	Females –% (n)
Employed in formal sector/self-employed	34.75 (695)	25.30 (506)
Employed in informal sector	6.35 (127)	3.85 (77)
Not employed	11.10 (222)	31.00 (620)
Student	27.35 (547)	24.25 (485)
Farmer	20.45 (409)	15.60 (312)
Total	100.00 (2000)	100.00 (2000)

Note: "Not employed" includes housewife, retired/pensioner, unemployed looking, unemployed not looking, and casual laborer.

For **males**, mean monthly income was 289,760 Tshs ($193 USD), with a range of 5,000 to 9,500,000 Tshs ($3.10 to $5,884 USD). For this item, 395 participants did not know their households' average monthly income.

For **females**, mean monthly income was 186,918 Tshs ($116 USD), with a range of 10,000 to 1,850,000 Tshs ($6.20 to $1146 USD). For this item, 486 participants did not know the their households' monthly income

Socioeconomic status was calculated by combining variables indicating material wealth (electricity, paraffin lamp, working radio, working television, telephone, mobile, iron, refrigerator and plough) and whether someone had ever encountered problems with food, shelter, the ability to send kids to school, and money to buy medications. The possible values ranged from 0-21, and in the current sample scores ranged from 2-20. We then divided these scores into quintiles to get a sense of the wealth distribution of the sample.

Table 7. Socioeconomic scores by gender

	Females	**Males**
Mean	13.99	14.49
Median	14.0	15.0
SD	3.37	2.98

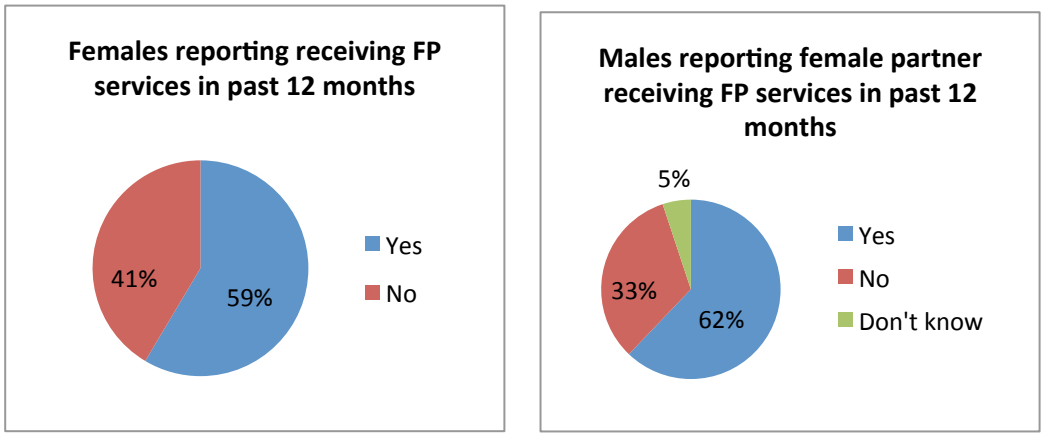
Table 8. Socioeconomic status by quintile, stratified by gender

	SES Level (score range)	**Females – % (n)**	**Males – % (n)**
1st Quintile	Low SES (1-12)	30.00 (600)	22.05 (441)
2nd Quintile	Mild SES (13-14)	22.70 (454)	23.35 (467)
3rd Quintile	Moderate SES (15-17)	31.00 (620)	37.70 (754)
4th Quintile	High SES (18-21)	16.30 (326)	16.90 (338)

FAMILY PLANNING USE

Of all females surveyed, 78% reported having a sexual partner within the past year. Out of 2000 females, 95% (n=1894) had ever heard of modern family planning (FP) methods, and out of the 2000 surveyed males, 96% (n=1923) had heard of any modern methods. Of the women who heard of FP methods, 61.8% (n= 1171) had used at least one modern method *in the past 12 months*. Figure 4 shows how many women received FP services in the past year. The high usage rate among women is probably due to the fact that we oversampled in urban areas where such services are more readily available.

Figure 4. Use of FP services in the past 12 months by females, self-report and as reported by male partners



Current use of modern family planning was calculated by "yes" responses to one of the following methods: pills, implants, injectables, IUCD (intra-uterine contraceptive device), male condom, female condom, lactational amenorrhea, or female sterilization. About 57.1% (n=1143) of all women reported *currently* using at least one form of any method of FP. Tables 9 and 10 show the family planning methods *recalled* by women and men, and Tables 11 and 12 show methods *currently* being used by women, both self-report and as reported by male partners. About 57.1% (n=1143) of women reported *currently* using any contraceptive method, and 54.6% (n= 1093) reported *currently* using a modern method.

Table 9. FP methods *recalled* by females, unprompted (total n=1894; multiple responses possible)

Method recalled	% (n)
Pills	93.76 (1776)
Injectable	93.55 (1772)
Male condom	54.11 (1025)
Implant	54.80 (1038)
IUCD/Loop	44.03 (834)
Calendar	30.83 (584)
Female sterilization	26.82 (508)
Female condom	26.08 (494)

Withdrawal	16.78 (318)
Male sterilization	10.03 (190)
Lactation amenorrhea	5.75 (109)
Emergency contraception	5.43 (103)
Foam /Gel	1.79 (34)
Diaphragm	1.79 (34)

The fact that more women recalled injectables as a family planning method than they did male condoms could be indicative of viewing condoms as an HIV prevention method, rather than a contraceptive.

Table 10. FP methods recalled by males, unprompted (total n=1923; multiple responses possible)

Method recalled	**% (n)**
Male condom	84.14 (1618)
IUCD/Loop	77.95 (1499)
Pills	75.92 (1460)
Injectable	65.26 (1255)
Female condom	38.22 (735)
Female sterilization	26.94 (518)
Implants	26.73 (514)
Calendar	25.33 (487)
Male sterilization	12.95 (249)
Withdrawal	10.92 (210)
Emergency contraception	2.76 (53)
Lactation amenorrhea	1.14 (22)
Foam/Gel	0.73 (14)
Diaphragm	0.42 (8)

Table 11. Types of FP methods *currently* used by females, self-report (n=1215; multiple responses possible)

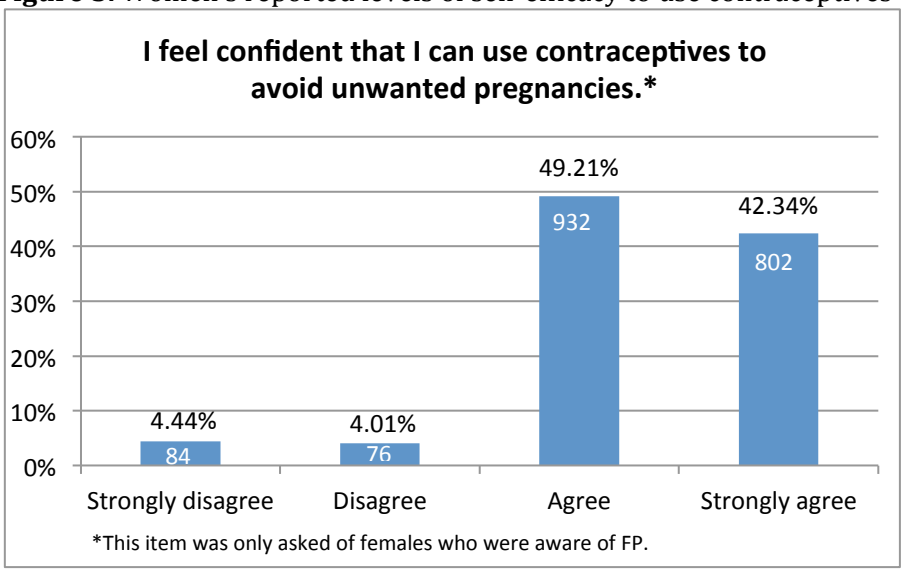
Method	**% (n)**
Male condom	42.96 (522)
Injectable	33.33 (405)
Pills	22.47 (273)
Calendar	13.33 (162)
Implants	9.79 (119)
Withdrawal	9.55 (116)
IUCD/Loop	4.28 (52)
Female sterilization	3.37 (41)
Lactation amenorrhea	2.63 (32)
Female condom	2.30 (28)
Emergency contraception	0.57 (7)
Male sterilization	0.33 (4)
Foam /Gel	0.16 (2)
Diaphragm	0.08 (1)

Table 12. Types of FP methods *currently* used by either males or their partners, as reported by men (n=1195; multiple responses possible)

FP method received	% (n)
Male condom	81.92 (979)
Female sterilization	43.35 (518)
Calendar	26.44 (316)
Pills	21.67 (259)
Injectable	11.38 (136)
Withdrawal	8.70 (104)
Implants	3.18 (38)
Female condom	2.01 (24)
IUCD/Loop	0.59 (7)
Emergency contraception	0.42 (5)
Lactation amenorrhea	0.25 (3)
Male sterilization	0.08 (1)
Diaphragm	0.08 (1)

A vast majority of women had high levels of self-efficacy that they could use contraceptives, as shown in Figure 5.

Figure 5. Women's reported levels of self-efficacy to use contraceptives



Note: This item corresponds with TCCP Indicator 1.2.3.

There were several reasons for not currently using any family planning methods given by the 751 non-users, as shown in Table 13 below. Table 15 shows the reported side effects that are believed to result from using modern FP methods. Only 25 women (1.32%) never heard of any potential side effects.

Table 13. Females' reasons for not using FP methods (n=751; multiple responses possible)

Reason	% (n)
Not currently having sex	41.81 (314)
Want to get pregnant	24.90 (187)
Not familiar with any method	8.25 (62)
Fear of side effects	7.32 (55)
Partner doesn't allow	6.12 (46)
Menopause/hysterectomy	5.05 (38)
Religion doesn't allow	3.46 (26)
Just delivered a baby	2.13 (16)
Family doesn't allow	1.99 (15)
Other	4.66 (35)
No specific reason	14.11 (106)

Table 14. Reasons for (partner) not using FP methods, as reported by men (n=728; multiple responses possible)

Reason	% (n)
Not currently having sex	42.03 (306)
Menopause/hysterectomy	15.38 (112)
Partner doesn't allow	7.97 (58)
Not familiar with any method	7.55 (55)
Fear of side effects	1.92 (14)
Health concerns	1.92 (14)
Not effective	1.65 (12)
Want to get pregnant (partner)	1.37 (10)
Too expensive	0.69 (5)
Preferred method not available	0.41 (3)

TCCP INDICATOR 1.2.1 *Men and women who cite fear of side effects as a reason to not use modern methods of family planning.*

	Females – % (n)	**Males – % (n)**	**Total – % (n)**
No	91.92 (626)	95.83 (598)	93.79 (1224)
Yes	8.08 (55)	4.17 (26)	6.21 (81)
Total	*100.00 (681)*	*100.00 (624)*	*100.00 (1305)*

Table 15. Side effects believed to result from use of modern FP methods, as reported by females (n=1894; multiple responses possible)

Side effect reported	% (n)
Weight gain	44.51 (843)
Prolonged bleeding	40.97 (776)
Cancer	37.01 (701)
Stomach ache	30.99 (587)
Irregular pattern of bleeding	29.62 (561)
Nausea	17.11 (324)
Headache	12.35 (234)
Cramping	10.82 (205)
Weight loss	10.51 (199)
Breast tenderness	8.71 (165)
Low libido	7.50 (142)
Delayed return of normal fertility	3.33 (63)
Destroying the uterus	2.32 (44)
Giving birth to mentally disabled children	1.90 (36)
Growth in the uterus	1.32 (25)
Disappearance of monthly period	1.32 (25)
Watery discharge from the vagina	1.06 (20)
Other	3.64 (69)

Family planning use was higher among females aged 19-35 years compared to other age groups. The use of FP methods was also higher among those who received formal education. In addition, the use of FP methods was higher among those who had never experienced gender-based violence (GBV), but there was no difference in use between those who had experienced GBV in the past year and those who had not. Other characteristics associated with modern FP use are shown in Table 16.

Table 16. Demographic characteristics associated with women's modern FP use

Variable	Total	Modern FP use in past year - % (n)	x^2(df)	p-value
Age groups				
15-18	483	30.85 (149)	236.078 (3)	0.001*
19-24	433	72.06 (312)		
25-35	674	71.81 (484)		
36-49	410	55.12 (226)		
Level of Education				
None	106	30.19 (32)	60.314 (3)	0.001*
Primary	1006	61.03 (614)		
Secondary	794	56.42 (448)		
Post-secondary	94	81.91 (77)		
Religion				
Muslim	878	60.02 (527)	1.416 (2)	0.493
Catholic	587	57.58 (338)		
Other Christian	535	57.20 (306)		

Marital status				
Single	883	51.19 (452)	101.322 (2)	0.001*
Married	905	70.17 (635)		
Div/Sep/Wid	212	39.62 (84)		
Setting				
Urban	1466	59.96 (879)	4.492 (1)	0.034*
Rural	534	54.68 (292)		
Discussed FP with partner				
No	578	45.60(269)	332.06(1)	0.001*
Yes	985	88.80(875)		
Ever experienced GBV				
No	1005	60.70 (610)	9.948 (1)	0.002*
Yes	509	68.96 (351)		
Experienced GBV in past year				
No	1431	63.59 (910)	0.156 (1)	0.693
Yes	83	62.65 (52)		

FAMILY PLANNING COMMUNICATION

With regards to communication around FP, a total of 985 (63%) of the female respondents had discussed FP with their main sexual partner in the past 12 months. Among only those currently using FP, 74.36% (n = 850) discussed FP with their partner in the past year. Among men surveyed, 1015 (50.75%) had discussed FP with their main partner in the past year. Tables 17 and 18 show characteristics of women and men who have had such discussions recently with their main partners.

Table 17. Characteristics of *females* who have discussed FP with their main sexual partner (74.36%, n = 850) in the past year

Variable	Total	% (n)	X^2 (df)	p-value
Age group (years)				
15-18	188	61.70 (116)	8.001 (3)	0.046*
19-24	394	65.48 (258)		
25-35	648	65.12 (422)		
36-49	333	56.76 (189)		
Setting				
Urban	1166	63.38 (739)	0.254 (1)	0.614
Rural	397	61.96 (246)		
Education Level				
None	73	42.47 (31)	16.822 (3)	0.001*
Primary	840	62.50 (525)		
Secondary	561	65.24 (366)		
Post-secondary	89	70.79 (63)		
Marital status				
Single	551	59.71 (329)	41.118 (2)	0.001*
Married	893	68.20 (609)		
Div/Sep/Wid	119	39.50 (47)		
Religion				
Muslim	703	63.73 (448)	0.374 (2)	0.829
Catholic	460	61.96 (285)		
Other Christian	400	63.00 (252)		
Ever experienced GBV				
No	979	65.17 (638)	5.191 (1)	0.023*
Yes	584	59.42 (347)		
Experienced GBV in past year				
No	1472	64.06 (943)	11.794 (1)	0.001*
Yes	91	46.15 (42)		

It should be noted that those women who experienced GBV in the past year were also significantly less likely to have spoken with their partners about FP in the past year.

Table 18. Characteristics of *males* who have discussed FP with their main sexual partner in the past year

Variable	Total	% (n)	X^2(df)	p-value
Age group (years)				
15-18	122	54.10 (66)	31.246 (3)	< 0.001*
19-24	386	56.22 (217)		
25-35	594	71.72 (426)		
36-49	465	65.81 (306)		
Setting				
Urban	1169	65.95 (771)	2.810 (1)	0.094
Rural	398	61.31 (244)		
Education level				
None	41	39.02 (16)	24.494 (3)	<0.001*
Primary	767	61.28 (470)		
Secondary	640	69.22 (443)		
Post-secondary	119	72.27 (86)		
Marital status				
Single	658	57.14 (376)	39.668 (2)	<0.001*
Married	863	71.49 (617)		
Div/Sep/Wid	46	47.83 (22)		
Religion				
Muslim	755	481 (63.7)	1.804 (2)	0.406
Catholics	365	233 (63.8)		
Other Christian	447	301 (67.3)		
Ever perpetrated GBV				
No	1105	67.69 (748)	13.994 (1)	0.001*
Yes	462	57.79 (267)		

Again, it should be noted that men who ever perpetrated GBV were significantly less likely to have talked with their partners about FP in the past year.

The relationship between power in one's sexual relationship and FP communication is explored further in Tables 19 and 20. These tables show that for women currently using FP, those who discussed FP with their main partner in the past year have a significantly higher level of relationship power (SRPS) than those who have not discussed FP. Interestingly, the finding is the same for men: those who discussed FP with their main partner in the past year had a significantly higher level of relationship power as compared to men who did not have such discussions.

Table 19. Relationship between sexual relationship power and FP use communication with main partner in the past year among females *currently using FP*

		Discussed FP w/ partner	n	Mean	SD	MD	t (df)	p-value
Females	SRPS	No	263	48.08	8.23	1.08	2.081 (1110)	0.038
		Yes	849	49.16	7.06			
Males	SRPS	No	537	51.77	6.402	2.25	7.549 (1533)	0.001*
		Yes	998	54.03	5.071			

Table 20. Relationship between sexual relationship power and FP use communication with main partner in the past year among males

	Discussed FP w/ partner	n	Mean	SD	MD	t(df)	p-value
SRPS	No	537	51.77	6.402	2.25	7.549 (1533)	0.001*
	Yes	998	54.03	5.071			

Table 20 shows factors associated with women's discussion of FP use with their main sexual partner in the past year. After controlling for other variables, a regression analysis showed that SRPS and experience with GBV in the past year were both found to be significant predictors of FP communication among partners for females. For female participants, as the SRP score increased by 1 unit, the odds of communicating about FP among partners increased by 4%. Those who had experienced GBV in the past year had a 40% lower chance of communicating about FP with their partners compared to those who had not had such an experience. This finding points to the need for focusing on gender equality in sexual relationships, as it has a significant effect on FP communication.

Table 21. Factors associated with FP partner communication in the past year among females currently using FP

		95% Confidence Interval		
	Odds Ratio	Lower	Upper	Sig.
Age groups				
15-18	1			
19-24	0.998	0.66	1.52	0.994
25-35	0.738	0.47	1.16	0.186
36-49	0.561	0.34	0.94	0.028*
Level of Education				
None	1			
Primary	1.391	0.79	2.46	0.256
Secondary	1.416	0.78	2.56	0.248
Post-secondary	1.685	0.78	3.63	0.183
Marital status				
Single	1			
Married	0.775	0.46	1.30	0.335
Div/Sep/Widow	3.487	2.46	4.94	0.001*
Experienced GBV ever				
No	1			
Yes	0.526	0.32	0.87	0.012*
Currently using FP				
No	1			

Yes	8.553	6.511	11.234	0.001*
SRPS score	1.032	1.014	1.050	0.001*

A similar regression analysis for males showed that those with secondary education or higher, those who are married, and those who have ever perpetrated GBV were more likely to have communicated with their main sexual partners about FP use in the past year.

Table 22. Factors associated with FP communication in the past year among males

Variable	Odds Ratio (OR)	95% CI	p-value
Age groups (years)			
15-18	1		
19-24	1.143	0.74-1.78	0.553
25-35	1.598	0.98-2.60	0.058
36-49	1.018	0.58-1.77	0.949
Education			
None	1		
Primary	1.766	0.89-3.51	0.105
Secondary	2.938	1.46-5.93	0.003*
Post-secondary	2.920	1.33-6.42	0.008*
Marital status			
Single	1		
Married	2.319	1.64-3.28	0.001*
Div/Sep/Wid	0.688	0.34-1.39	0.295
Ever perpetrated GBV			
No	1	0.58-0.94	0.014
Yes	0.739	0.91-0.95	0.001*
SRPS	0.931	0.91-0.95	0.001*

Future studies should explore whether the perpetration of GBV is at all related to discussions of FP brought up by a female partner.

Figures 6, 7, and 8 show who makes key decisions on FP, as reported individually by males and females. Males tend to feel FP is a joint decision, while women claim they are leading the decision-making process. The exception to this finding is the decision on the number of children to be had, which most participants (male and female) claim is a joint decision between the partners.

Figure 6. Who makes the decision on whether to use FP methods?

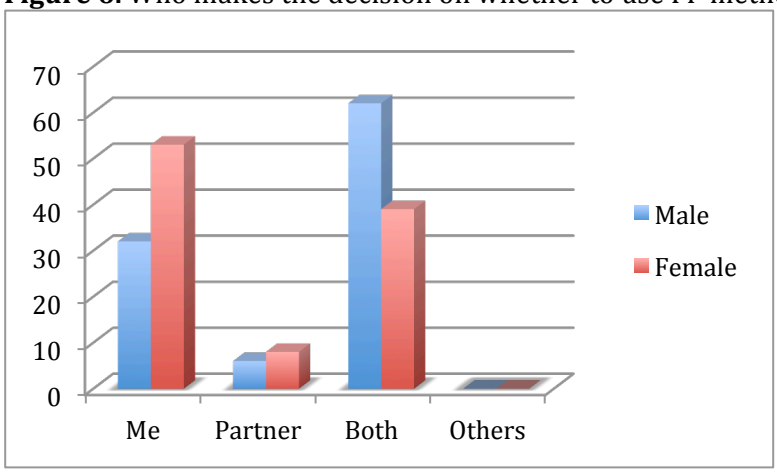


Figure 7. Who makes the decision on the type of FP method to be used?

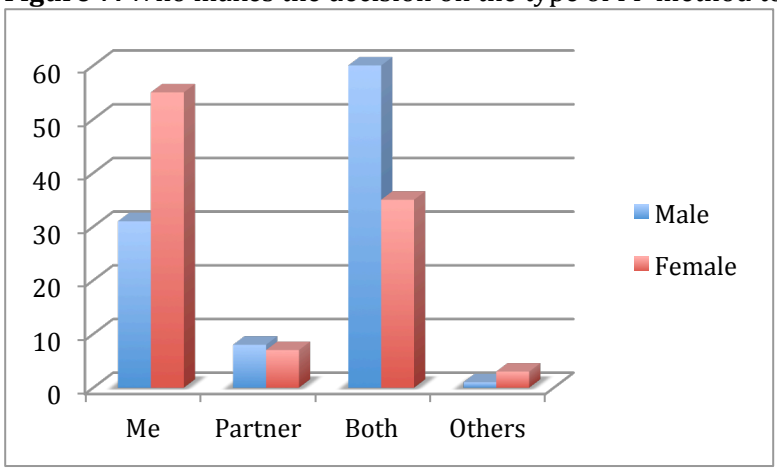
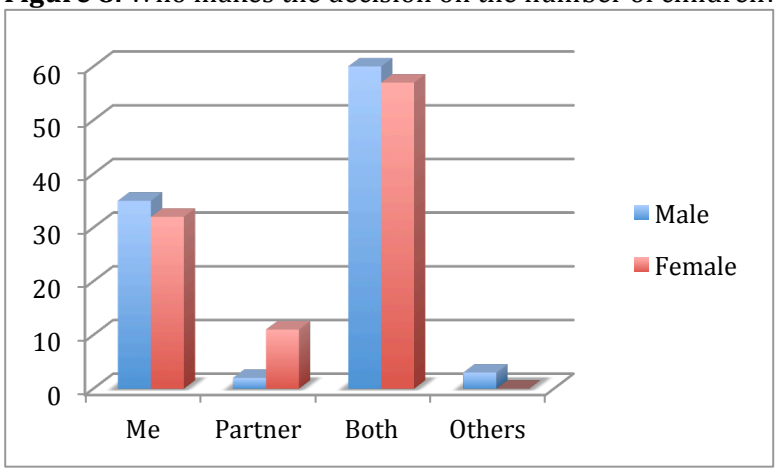


Figure 8. Who makes the decision on the number of children?



Females also report that their main sexual partners tend to support their use of modern FP methods.

TCCP INDICATOR 1.2.2 *My main sexual partner supports my use of modern family planning methods.*

Females	% (n)
Strongly disagree	10.14 (192)
Disagree	10.56 (200)
Agree	29.46 (558)
Strongly agree	32.42 (614)
Total	*100.00 (1564)*

*Missing data includes those who do not have a main partner or have never had sex.

SEXUAL RELATIONSHIP POWER

The Sexual Relationship Power Score (SRPS) measures relationship control (the ability to control a partner's actions or engage in behaviors against a partner's wishes) and decision-making dominance (who has more sway in decisions that affect a relationship; Pulerwitz, Gortmaker, & De Jong, 2000). For this study, only relationship control was measured (18 items). For a list of items used in the score, see Appendix. Scores ranged from 18 to 76, with a mean score of 48.13 for women and a mean score of 53.17 for men. A higher score is indicative of more sexual relationship power. Table 22 shows the mean scores by gender and setting.

Table 23. Mean SRPS by gender and setting

Setting	n	Mean	MD	t(df)	p-value
Females					
Urban	1229	48.4654	1.2558	3.006 (1666)	0.003*
Rural	432	47.2096			
Males					
Urban	1199	53.681	5.415	6.159 (1604)	0.001*
Rural	407	51.638	6.162		

Women perceived less power in their relationships than did men, and rural residents perceived less relationship power than did urban counterparts.

Table 24. SRPS scores by gender and education level

				95% CI for Mean	
Education	**n**	**Mean**	**SD**	**Lower bound**	**Upper bound**
Females					
None	100	44.15	8.77252	42.41	45.89
Primary	898	47.4421	7.39953	46.96	47.93
Secondary	583	49.5729	7.33474	48.98	50.17
Post-secondary	87	50.2299	5.85225	48.98	51.48
Total	**1668**	**48.1349**	**7.53296**	**47.77**	**48.50**
Males					
None	44	49.5455	6.32623	47.62	51.47
Primary	781	52.662	5.73303	52.26	53.06
Secondary	661	53.9924	5.37995	53.58	54.40
Post-secondary	120	53.3917	5.83714	52.34	54.46
Total	**1606**	**53.1787**	**5.67817**	**52.90**	**53.46**

Perceived level of sexual relationship power was higher among males than among females. For both genders, level of education was related to a higher level of sexual relationship power (females: $F(3, 1666) = 15.437$; males: $F(3, 1602) = 13.029$, all p's<0.001).

Table 24 shows a breakdown for each of the items used to measure relationship power, stratified by gender.

Table 25. Sexual relationship power score items, stratified by gender

	Females – % (n)	Males – % (n)	Total – % (n)
I/my partner would get angry if asked to use a condom.			
Strongly disagree	21.84 (369)	30.67 (500)	26.18 (869)
Disagree	39.02 (659)	50.12 (817)	44.47 (1476)
Agree	21.66 (366)	10.36 (169)	16.12 (535)
Strongly agree	17.46 (295)	8.83 (144)	13.23 (439)
Total	**100.00 (1689)**	**100.00 (1630)**	**100.00 (3319)**
I/my partner would get violent if asked to use a condom.			
Strongly disagree	25.93 (447)	34.21 (557)	29.95 (1004)
Disagree	42.63 (735)	50.49 (822)	46.45 (1557)
Agree	16.41 (283)	8.97 (146)	12.80 (429)
Strongly agree	15.02 (259)	6.33 (103)	10.80 (362)
Total	**100.00 (1724)**	**100.00 (1628)**	**100.00 (3352)**
Most of the time, we do what (the male partner) wants to do.			
Strongly disagree	13.86 (234)	11.42 (186)	12.66 (420)
Disagree	33.41 (564)	40.45 (659)	36.87 (1223)
Agree	35.55 (600)	35.97 (586)	35.76 (1186)
Strongly agree	17.18 (290)	12.15 (198)	14.71 (488)
Total	**100.00 (1688)**	**100.00 (1629)**	**100.00 (3317)**
I won't let my partner/my partner won't let me wear certain things.			
Strongly disagree	13.05 (220)	9.29 (151)	11.20 (371)
Disagree	26.63 (449)	29.46 (479)	28.02 (928)
Agree	38.20 (644)	40.84 (664)	39.49 (1308)
Strongly agree	22.12 (373)	20.42 (332)	21.29 (705)
Total	**100.00 (1686)**	**100.00 (1626)**	**100.00 (3312)**
When together, (female partner) is quiet.			
Strongly disagree	31.00 (524)	34.30 (559)	32.62 (1083)
Disagree	51.30 (867)	55.71 (908)	53.46 (1775)
Agree	11.37 (192)	6.44 (105)	8.95 (297)
Strongly agree	6.330 (107)	3.56 (58)	4.97 (165)
Total	**100.00 (1690)**	**100.00 (1630)**	**100.00 (3320)**
I/my partner have/has more to say about important decisions that affect both of us.			
Strongly disagree	11.30 (191)	8.53 (139)	9.94 (330)
Disagree	21.23 (359)	29.22 (476)	25.15 (835)
Agree	39.56 (669)	41.37 (674)	40.45 (1343)
Strongly agree	27.91 (472)	20.87 (340)	24.46 (812)
Total	**100.00 (1691)**	**100.00 (1629)**	**100.00 (3320)**
(male partner) tells (female partner) who she can spend time with.			
Strongly disagree	17.19 (290)	10.21 (166)	13.76 (456)

Disagree	34.44 (581)	30.57 (497)	32.54 (1078)
Agree	28.75 (485)	41.82 (680)	35.16 (1165)
Strongly agree	19.62 (331)	17.40 (283)	18.53 (614)
Total	**100.00 (1687)**	**100.00 (1626)**	**100.00 (3313)**
If asked to use a condom (male partner) would think (female partner) was having sex with other people.			
Strongly disagree	23.62 (399)	32.51 (529)	27.99 (928)
Disagree	37.89 (640)	45.97 (748)	41.86 (1388)
Agree	18.35 (310)	10.26 (167)	14.38 (477)
Strongly agree	20.13 (340)	11.25 (183)	15.77 (523)
Total	**100.00 (1689)**	**100.00 (1627)**	**100.00 (3316)**
I feel trapped or stuck in my relationship.			
Strongly disagree	32.12 (540)	28.83 (470)	30.50 (1010)
Disagree	47.71 (802)	57.61 (939)	52.58 (1741)
Agree	15.70 (264)	8.90 (145)	12.35 (409)
Strongly agree	4.46 (75)	4.66 (76)	4.56 (151)
Total	**100.00 (1681)**	**100.00 (1630)**	**100.00 (3311)**
(male partner) does what he wants even if (female partner) doesn't want him to.			
Strongly disagree	23.02 (387)	16.70 (272)	19.91 (659)
Disagree	49.99 (838)	57.88 (943)	53.81(1781)
Agree	17.13 (288)	17.80 (290)	17.46 (578)
Strongly agree	10.00 (168)	7.61 (124)	8.82 (292)
Total	**100.00 (1681)**	**100.00 (1629)**	**100.00 (3310)**
I am more committed to our relationship than my partner is.			
Strongly disagree	13.67 (230)	6.33 (103)	10.07 (333)
Disagree	31.93 (537)	32.23 (524)	32.07 (1061)
Agree	38.35 (645)	41.14 (669)	39.72 (1314)
Strongly agree	16.05 (270)	20.30 (330)	18.14 (600)
Total	**100.00 (1682)**	**100.00 (1626)**	**100.00 (3308)**
When we disagree, (male partner) gets his way most of the time.			
Strongly disagree	18.48 (311)	41.95 (683)	30.02 (994)
Disagree	43.73 (736)	15.54 (253)	29.87 (989)
Agree	21.00 (353)	14.43 (235)	17.76 (588)
Strongly agree	16.82 (283)	28.07 (457)	22.35 (740)
Total	**100.00 (1683)**	**100.00 (1628)**	**100.00 (3311)**
(male partner) gets more out of the relationship than (female partner) does.			
Strongly disagree	17.00 (286)	10.94 (178)	14.02 (464)
Disagree	40.19 (676)	44.25 (720)	42.19 (1396)
Agree	28.30 (476)	33.56 (546)	30.89 (1022)
Strongly agree	14.51 (244)	11.25 (183)	12.90 (427)

Total	**100.00 (1682)**	**100.00 (1627)**	**100.00 (3309)**
(male partner) always knows where (female partner) is.			
Strongly disagree	8.26 (139)	9.28 (151)	8.76 (290)
Disagree	19.19 (323)	20.16 (328)	19.67 (651)
Agree	42.90 (722)	42.90 (698)	42.90 (1420)
Strongly agree	29.65 (499)	27.66 (450)	28.67 (949)
Total	**100.00 (1683)**	**100.00 (1627)**	**100.00 (3310)**
I feel satisfied by my partner sexually.			
Strongly disagree	4.34 (73)	1.59 (26)	2.99 (99)
Disagree	7.97 (134)	5.45 (89)	6.73 (223)
Agree	41.70 (701)	40.07 (654)	40.90 (1355)
Strongly agree	45.98 (773)	52.90 (863)	49.38 (1636)
Total	**100.00 (1681)**	**100.00 (1632)**	**100.00 (3313)**
I feel satisfied by the way my partner cares about my emotional needs.			
Strongly disagree	4.70 (79)	1.47 (24)	3.11 (103)
Disagree	11.06 (186)	6.50 (106)	8.82 (292)
Agree	40.81 (686)	43.44 (708)	42.10 (1394)
Strongly agree	43.43 (730)	48.59 (792)	45.97 (1522)
Total	**100.00 (1681)**	**100.00 (1630)**	**100.00 (3311)**
I feel financially secure with my main partner.			
Strongly disagree	8.44 (142)	7.20 (117)	7.83 (259)
Disagree	21.93 (369)	16.86 (274)	19.44 (643)
Agree	40.40 (680)	40.92 (665)	40.66 (1345)
Strongly agree	29.23 (492)	35.01 (569)	32.07 (1061)
Total	**100.00 (1683)**	**100.00 (1625)**	**100.00 (3308)**
(male partner) is/might be having sex with someone else.			
Strongly disagree	11.68 (197)	29.10 (474)	20.24 (671)
Disagree	37.66 (635)	32.11 (523)	34.93 (1158)
Agree	37.66 (636)	24.99 (407)	31.46 (1043)
Strongly agree	12.93 (218)	13.81 (225)	13.36 (443)
Total	**100.00 (1686)**	**100.00 (1629)**	**100.00 (3315)**

The score on the SRPS ranged from 18 to 72, with a high score meaning more power for the woman. The score was significantly higher among users of family planning methods; this means that higher levels of relationship power are related to a higher likelihood of having used FP methods in the past 12 months.

Table 26. Relationship between sexual relationship power and FP use among females

	Used FP in the past year	n	Mean	SD	MD	t (df)	p-value
SRPS	No	506	46.3439	7.62359	2.57093	2.5706 (1668)	0.001*
	Yes	1162	48.9148	7.36138			

SRPS was a significant predictor for FP use even after controlling for other variables, as shown in Table 26. As the sexual relationship power decreased by 1 unit, the odds of using FP method decreased by 4%.

Table 27. Predictors of FP use in the past 12 months among females

Variable	OR	95% CI	p-value
Age group (years)			
15-18	1		
19-24	1.615	0.08-2.42	0.020*
25-35	1.776	1.15-2.75	0.010*
36-49	1.421	0.88-2.30	0.154
Level of Education			
None	1		
Primary	3.547	2.23-5.65	0.001*
Secondary	4.030	2.46-6.61	0.001*
Post-secondary	6.341	2.98-13.48	0.001*
Marital status			
Single	1		
Married	0.746	0.53-1.05	0.089
Div/Sep/Wid	0.228	0.15-0.36	0.001*
Setting			
Urban	1		
Rural	0.974	0.76-1.25	0.840
GBV ever			
No	1		
Yes	1.038	0.82-1.31	0.755
SRPS	1.042	1.03-1.06	0.001*

Hosmer & Lemeshow Test X^2 =4.309, p-value = 0.828.

FAMILY PLANNING ATTITUDES

Participants were asked several items about their attitudes towards modern methods of FP. For a complete list of items used to measure family planning attitudes, see the Appendix. Scores on this scale ranged from 7 to 28 with a mean score of 18.28 for women and 18.18 for men. A low total score is indicative of a less supportive attitude towards modern FP methods. Table 27 shows mean scores stratified by gender and setting, while Table 28 shows mean scores by gender and education level.

Table 28. Mean score on FP scale by gender and setting

Setting	**n**	**Mean**	**SD**	**t (df)**	**p-value**
Females					
Urban	1379	18.38	0.36	2.056 (1868)	0.04
Rural	491	18.02			
Males					
Urban	1421	18.2700	0.37	2.022 (1921)	0.043
Rural	502	17.9044			

There were significant differences for both females and males in the FP attitudes score by setting, whereby the urban residents scored higher than their rural counterparts.

Table 29. FP attitude scores by gender and education level

				95% CI for Mean	
Education	**n**	**Mean**	**SD**	**Upper bound**	**Lower bound**
Females					
None	98	16.52	3.56	15.81	17.24
Primary	951	18.27	3.16	18.07	18.47
Secondary	730	18.35	3.39	18.11	18.60
Post-secondary	91	19.80	2.71	19.24	20.37
Total	**1870**	**18.28**	**3.29**	**18.14**	**18.43**
Males					
None	46	17.87	3.46	16.84	18.90
Primary	885	18.14	3.43	17.92	18.37
Secondary	869	18.09	3.57	17.85	18.32
Post-secondary	123	19.16	3.47	18.54	19.78
Total	**1923**	**18.18**	**3.50**	**18.02**	**18.33**

For females: There was a significant difference in score by education level (F (3, 1866) = 16.344, p-value = 0.001). Those with a higher level of education had a more positive attitude towards FP than those with a lower level of education.
For males: The score for those with post-secondary education was higher than for any other level of education (F (3, 1919) = 3.607, p=0.013)

Table 29 shows a breakdown of each of the items addressing FP attitudes, stratified by gender. It should be noted that a large number of men (34%) believe that unmarried

women who use FP are promiscuous. This could be an area to be addressed by future programs focused on men's involvement in and support of FP.

Table 30. FP attitude items, stratified by gender

	Females – % (n)	**Males – % (n)**
Modern methods of family planning are safe.		
Strongly disagree	7.67 (145)	4.99 (96)
Disagree	18.98 (359)	9.62 (185)
Agree	44.90 (849)	51.22 (985)
Strongly agree	28.45 (538)	34.17 (657)
Total	**100.00 (1891)**	**100.00 (1923)**
Side effects from modern methods of family planning are manageable.		
Strongly disagree	6.13 (116)	11.80 (227)
Disagree	13.00 (246)	4.26 (82)
Agree	25.85 (489)	59.75 (1149)
Strongly agree	55.02 (1041)	24.18 (465)
Total	**100.00 (1892)**	**100.00 (1923)**
I support my main sexual partner's use of modern family planning methods.		
Strongly disagree	12.28 (192)	6.70 (110)
Disagree	12.79 (200)	9.45 (155)
Agree	35.68 (558)	44.00 (722)
Strongly agree	39.26 (614)	39.85 (654)
Total	**100.00 (1564)**	**100.00 (1641)**
Unmarried women who use family planning are promiscuous.		
Strongly disagree	44.29 (838)	31.05 (597)
Disagree	34.30 (649)	34.79 (669)
Agree	13.42 (254)	21.48 (413)
Strongly agree	7.98 (151)	12.69 (244)
Total	**100.00 (1892)**	**100.00 (1923)**
The benefits of using family planning outweigh the side effects.		
Strongly disagree	11.00 (208)	11.39 (219)
Disagree	24.96 (472)	30.63 (589)
Agree	42.31 (800)	36.14 (695)
Strongly agree	21.73 (411)	21.84 (420)
Total	**100.00 (1891)**	**100.00 (1923)**
I feel confident that I can use contraceptives to avoid unwanted pregnancies.		
Strongly disagree	4.33 (82)	

Disagree	4.02 (76)	
Agree	49.26 (932)	
Strongly agree	42.39 (802)	
Total	**100.00 (1892)**	

FAMILY PLANNING PERCEPTIONS

Tables 30 and 31 show 2 items measuring family planning perceptions, the first being that women who do not get pregnant soon after marriage are barren, and that using FP can reduce the ability to conceive. Females do not agree with the first statement, however, about one third of women surveyed agree that FP can reduce the ability to conceive. This could be an important point to address with programming.

Table 31. FP perceptions among women, stratified by education and setting

	Strongly disagree – % (n)	**Disagree – % (n)**	**Agree – % (n)**	**Strongly agree – % (n)**	**Total – % (n)**
Women who do not get pregnant within first year of marriage are barren					
Education					
None	43.75 (35)	48.75 (39)	2.50 (2)	5.00 (4)	100.00 (80)
Primary	57.34 (406)	36.72 (260)	3.81 (27)	2.12 (15)	100.00 (708)
Secondary	47.20 (135)	50.35 (144)	1.40 (4)	1.05 (3)	100.00 (286)
Post-secondary	47.17 (25)	52.83 (28)	0.00 (0)	0.00 (0)	100.00 (53)
Total	**53.33 (601)**	**41.79 (471)**	**2.93 (33)**	**1.95 (22)**	**100.00 (1127)**
Setting					
Urban	54.20 (439)	41.48 (336)	2.72 (22)	1.60 (13)	100.00 (810)
Rural	51.10 (162)	42.59 (135)	3.47 (11)	2.84 (9)	100.00 (317)
Total	**53.33 (601)**	**41.79 (471)**	**2.93 (33)**	**1.95 (22)**	**100.00 (1127)**
Using modern methods of family planning can reduce woman's ability to conceive					
Education					
None	35.80 (29)	43.21 (35)	16.05 (13)	4.94 (4)	100.00 (81)
Primary	28.63 (203)	37.09 (263)	23.70 (168)	10.58 (75)	100.00 (709)
Secondary	27.02 (77)	42.81 (122)	20.70 (59)	9.47 (27)	100.00 (285)
Post-secondary	15.69 (8)	35.29 (18)	29.41 (15)	19.61 (10)	100.00 (51)
Total	**28.15 (317)**	**38.90 (438)**	**22.65 (255)**	**10.30 (116)**	**100.00 (1126)**
Setting					
Urban	26.33 (213)	38.07 (308)	23.60 (191)	11.62 (97)	100.00 (809)
Rural	32.81 (104)	41.01 (130)	20.19 (64)	5.99 (19)	100.00 (317)
Total	**28.15 (317)**	**38.90 (438)**	**22.65 (255)**	**10.30 (116)**	**100.00 (1126)**

Men are more likely to believe that woman who do not get pregnant in the first year after marriage are barren, however, this is only among 14% of men. Similar to women, a majority of men believe FP can reduce a woman's ability to conceive.

Table 32. FP perceptions among men, stratified by education and setting

	Strongly disagree – % (n)	**Disagree – % (n)**	**Agree – % (n)**	**Strongly agree – % (n)**	**Total - % (n)**
Women who do not get pregnant within first year of marriage are barren					
Education					
None	14.30 (19)	43.50 (20)	6.50 (3)	8.70 (4)	100.00 (46)
Primary	30.80 (273)	54.80 (485)	8.90 (79)	5.40 (48)	100.00 (886)
Secondary	33.10 (288)	53.20 (462)	8.50 (74)	5.20 (45)	100.00 (869)
Post-secondary	42.30 (52)	44.70 (55)	9.80 (12)	3.30 (4)	100.00 (123)
Total	**32.90 (632)**	**53.10 (1022)**	**8.70 (168)**	**5.30 (101)**	**100.00 (1923)**
Setting					
Urban	33.40 (474)	52.60 (748)	8.70 (124)	5.30 (75)	100.00 (1421)
Rural	31.50 (158)	54.60 (274)	8.80 (44)	5.20 (26)	100.00 (502)
Total	**32.90 (632)**	**53.10 (1022)**	**8.70 (168)**	**5.30 (101)**	**100.00 (1923)**
Using modern methods of family planning can reduce a woman's ability to conceive					
Education					
None	13.00 (6)	13.00 (6)	41.30 (19)	32.60 (15)	100.00 (46)
Primary	10.10 (89)	18.10 (160)	36.30 (321)	35.60 (315)	100.00 (885)
Secondary	11.60 (101)	18.50 (161)	36.40 (316)	33.50 (291)	100.00 (869)
Post-secondary	15.40 (19)	27.60 (34)	31.70 (39)	25.20 (31)	100.00 (123)
Total	**11.20 (215)**	**18.80 (361)**	**36.10 (695)**	**33.90 (652)**	**100.00 (1923)**
Setting					
Urban	12.50 (177)	18.70 (266)	34.50 (490)	34.30 (488)	100.00 (1421)
Rural	7.60 (38)	18.90 (95)	40.80 (205)	32.70 (164)	100.00 (502)
Total	**11.20 (215)**	**18.80 (361)**	**36.10 (695)**	**33.90 (652)**	**100.00 (1923)**

MATERNAL HEALTH

Out of 2000 women, 34.8% (n= 696) reported delivering a child in the past 5 years. Out of 2000 men, 27.3% (n= 545) reported their partner had delivered a child in the past 2 years. These women delivered their babies in a variety of locations, as shown in Table 32 below. About 76% reported delivering in a government health facility. While this is high compared to DHS data—which shows 50% reported delivering in a hospital, with 44% in rural areas and 83% in urban areas (NBS [Tanzania] & ICF Macro, 2011)—this could be due to the fact that our sample has a 3:1 urban:rural sample distribution, while the DHS has a 1:3 urban:rural sample distribution.

Table 33. Delivery place of last birth, as reported by females (n=696) and males (n=545)

Place of last delivery	**Females – % (n)**	**Males – %(n)**
Government health facility	76.15 (530)	81.47 (444)
Mission hospital	8.05 (56)	8.44 (46)
At home	7.76 (54)	9.91 (54)
Private hospital	5.75 (40)	2.02 (11)
At mkunga's house (Traditional Birth Attendant)	1.29 (9)	1.47 (8)
On my/partner's way to deliver	1.00 (7)	0.55 (3)

About 81% and 89% of women, as reported by males and females respectively, had their most recent delivery in a health facility. Table 33 shows reasons given by 11% of women for *not* delivering in a facility. Table 34 shows reasons given by 3% of men for why their partners did not deliver in a health facility.

Table 34. Reasons reported by females (n=68) for not giving birth in a health facility

Reason why not delivering in a health facility	**Females – % (n)**
Inconvenient hour	35.29 (24)
Too far/no transport	29.41 (20)
No one to accompany	16.18 (11)
Long waiting time	14.71 (10)
Not first child	14.71 (10)
Costs too much	8.82 (6)
Not necessary	8.82 (6)
Family didn't think it was necessary	7.35 (5)
Facility not open	5.88 (4)
Poor quality of services	4.41 (3)
Don't know where to go	2.94 (2)

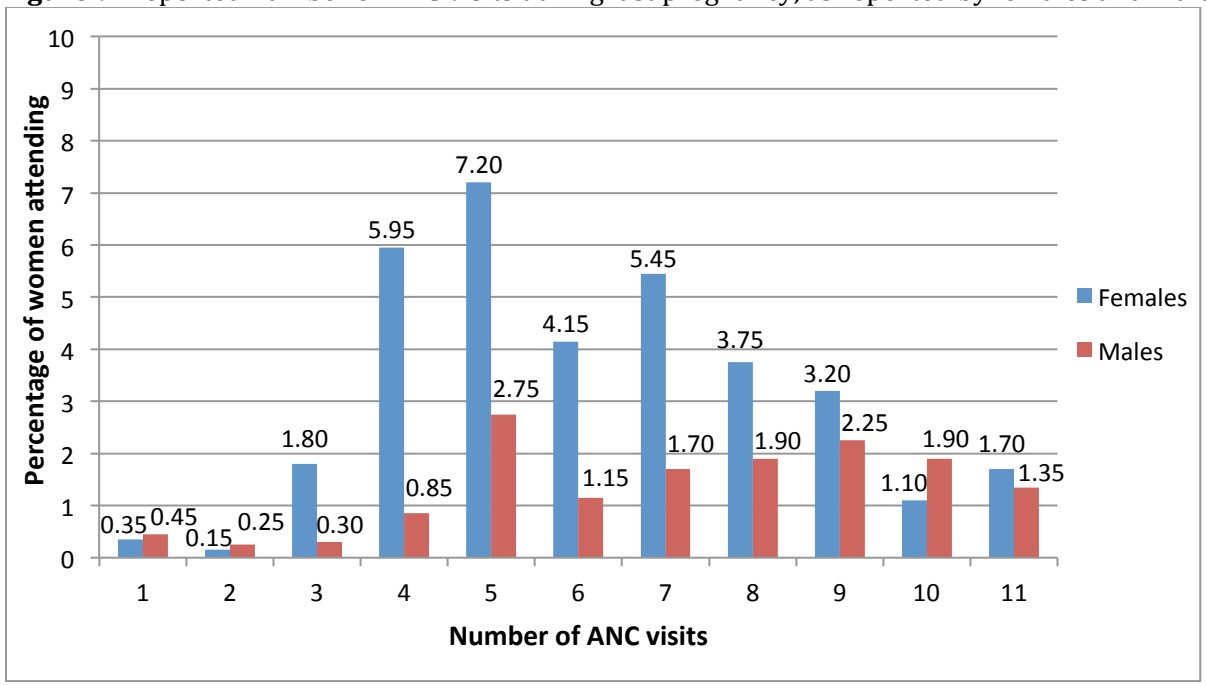
Table 35. Reasons reported by males (n=65) for partner not giving birth in a health facility

Reason why partner did not deliver in a health facility	**Males – % (n)**
Inconvenient hour	30.77 (20)
Too far/no transport	27.69 (18)
I/partner/family did not think necessary	23.08 (15)
Costs too much	10.77 (7)

Not first child	10.77 (7)
No one to accompany	9.23 (6)
Poor quality of services	7.69 (5)
Facility not open	6.15 (4)
Other	6.15 (4)
Don't trust facility	3.08 (2)
No female provider	3.08 (2)
I/family did not allow	1.54 (1)
Not customary	1.54 (1)
Long waiting time	1.54 (1)

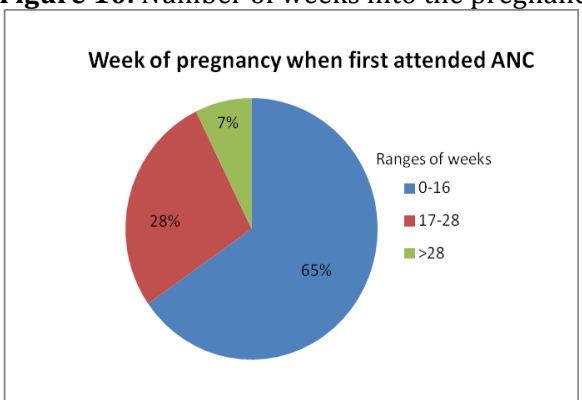
Women reported visiting an antenatal clinic (ANC) a mean of 2.0 times (SD = .82) during their last pregnancy (see Figure 9). Also, over 35% of women reported their first ANC visit occurring 17 or more weeks into their pregnancy. Earlier initial visits as well as greater frequency of visits would be important areas of focus for programming concerning maternal healthcare.

Figure 9. Reported number of ANC visits during last pregnancy, as reported by females and males with partners who were pregnant



n=696

Figure 10. Number of weeks into the pregnancy women reported first visiting ANC (n=696)



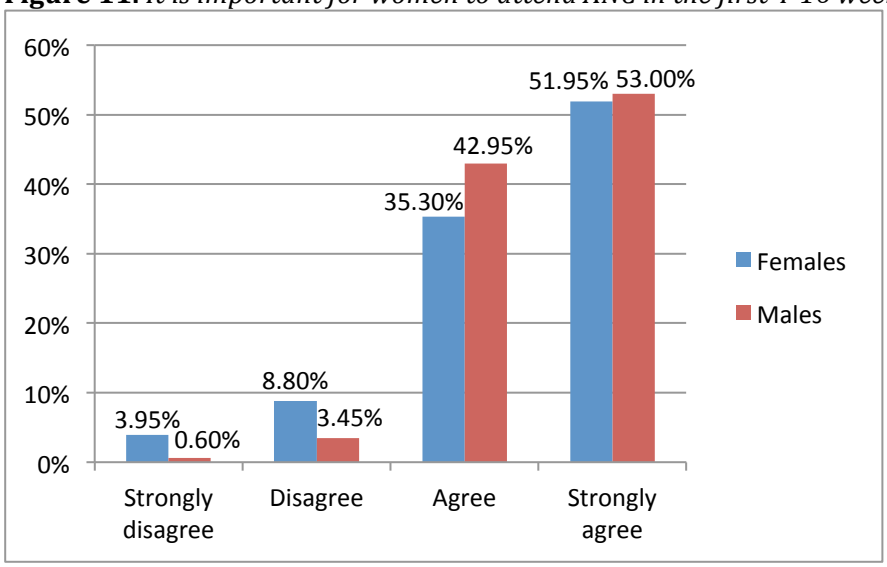
All participants believed that pregnant women should visit an ANC at least once during their pregnancy, with a mean number of suggested visits of 7.2 visits (SD=2.6), as reported by women and 8.42 visits (SD=5.8), as reported by men. The range of recommended visits was 1-36.

Table 36. Number of times a pregnant woman should visit an antenatal clinic

Number of times pregnant woman should visit an antenatal clinic	**Females – % (n)**	**Males – % (n)**
1-3 times	4.90 (98)	2.50 (50)
4 times	10.80 (216)	5.55 (111)
4+ times	63.35 (1267)	39.10 (782)
Don't know	20.95 (419)	52.85 (1057)
Total	100.00 (2000)	100.00 (2000)

87.1% of respondents agreed or strongly agreed that it is very important for women to visit an antenatal clinic in the first 4-16 weeks of pregnancy (see Figure 11).

Figure 11. *It is important for women to attend ANC in the first 4-16 weeks of pregnancy*



A very high number of women were tested for HIV, prepared a birth preparedness plan, and planned emergency transport during their last pregnancy (Table 36). However, only 27% of women reported having their partner with them during ANC visits. Table 37 shows preparations made by women and men's partners during their last pregnancy. Programming focused on encouraging men to be more involved in the parenting process should focus on getting more men to attend visits with their partners.

Table 37. Actions related to safe motherhood taken during last pregnancy, as reported by females (n=696) and males (n=545)

Behavior	Females –% (n)	Males – % (n)
Got tested for HIV	93.25 (649)	90.46 (493)
Had a birth preparedness plan	85.34 (594)	86.24 (470)
Had an emergency transport plan	68.68 (478)	65.69 (358)
Partner attended ANC visits	27.44 (191)	20.73 (113)

Table 38. Preparations made during last pregnancy, as reported by females (n=696) and males (n=545)

Preparation	Females – % (n)	Males – % (n)
Save money for emergency	80.46 (560)	83.12 (453)
Plan for delivery supplies	73.85 (514)	63.30 (345)
Plan for caretaker in your absence	52.59 (366)	44.40 (242)
Plan place of baby delivery	50.00 (348)	48.07 (262)
Plan for any danger sign during pregnancy	43.97 (306)	36.15 (197)
Arrange for emergency transport	42.67 (297)	57.43 (313)
Plan for decision maker in case of emergency	42.39 (295)	24.77 (135)
Plan for any danger sign during delivery	39.66 (276)	35.60 (194)
Know baby's due date	39.22 (273)	29.17 (159)
Plan birth attendant	23.28 (162)	15.23 (83)
Plan when to be taken to health facility	20.40 (142)	28.26 (154)

A large percentage (82%) of women reported that they discussed their birth plan with their male partner during their last pregnancy, but only 17% discussed it with a provider.

Table 39. Who women discussed their birthing plan with during last pregnancy

Discussed birth plan with	**% (n = 696)**
Husband/partner	82.18 (572)
Female relative(s)	47.84 (333)
Provider	17.39 (121)
Friends	6.61 (46)
Male relative(s)	6.32 (44)

In addition to men generally not attending ANC visits with their partners, a majority also did not attend the birth of the child. This is an additional area on which to focus programming if the objective is to have men more involved in the child-bearing process.

Table 40. Who attended last birth, as reported by females (n=696)

Attended birth	**% (n)**
Nurse/midwife	74.57 (519)
Doctor	32.18 (224)
Family/friend/relative	11.06 (77)
Husband/partner	8.91 (62)
Community health worker	6.61. (46)
Trained traditional birth attendant	3.59 (25)
Untrained traditional birth attendant	1.29 (9)
No one	1.01 (7)
Traditional practitioner	0.57 (4)

Interestingly, far more men reported having attended their partner's last birth than did women. This could be due to social desirability bias (Table 40).

Table 41. Who attended partner's last birth, as reported by males (n=545)

Attended birth	**% (n)**
Nurse/midwife	97.06 (529)
Doctor	84.77(462)
Self	38.35 (209)
Family/friend/relative	13.39 (73)
Traditional practitioner	5.14 (28)
Community health worker	4.22 (23)
Trained traditional birth attendant	1.10 (6)
Community health volunteer	0.73 (4)
Untrained traditional birth attendant	0.37 (2)

Tables 41, 42, and 43 show that females are much better than males at listing danger signs during delivery, post-delivery, and for an ill child. But better education for both females and males is needed for all of these circumstances.

Table 42. Danger signs during delivery listed by females (n = 2000) and males (n=2000), unprompted

Danger sign	Females – % (n)	Males – % (n)
Vaginal bleeding/discharge	49.25 (985)	30.55 (611)
Prolonged labor	32.55 (651)	32.90 (658)
Loss of consciousness/convulsions	25.75 (515)	16.45 (329)
Severe vomiting	23.30 (466)	0.00 (0)
Placenta not delivered without labor	21.45 (429)	7.20 (144)
Decreased/absent fetal movement	21.25 (425)	12.50 (250)
Severe abdominal pain/contraction	18.25 (365)	14.85 (297)
Extreme swelling of hands, feet, face	18.00 (360)	14.60 (292)
Severe headache, dizziness/blurred vision	15.00 (299)	21.30 (426)
High blood pressure	14.95 (290)	11.40 (228)
Difficulty breathing	6.70 (134)	7.40 (148)
Other	4.70 (94)	2.70 (54)

Table 43. Danger signs in mother shortly after delivery listed by females (n=2000) and males (n=2000), unprompted

Danger sign	Females – % (n)	Males – % (n)
Severe vaginal bleeding	56.20 (1124)	37.70) (754)
Placenta retention longer than 7 hours	38.20 (764)	10.20 (204)
Seizure/convulsions	31.70 (634)	14.45 (289)
Anemia/excessive fatigue	29.20 (584)	27.45 (549)
Loss of consciousness	23.25 (465)	20.80 (416)
High fever	21.40 (428)	28.15 (563)
Vaginal discharge with bad smell	15.35 (307)	9.10 (182)
Severe vomiting	12.75 (255)	14.90 (298)
Swelling of hands/feet	9.80 (196)	8.20 (164)
Difficulty breathing	9.00 (180)	10.10 (202)
Severe headache	7.50 (150)	11.50 (230)
Blurred vision	6.30 (126)	5.15 (103)
Tetanus	6.00 (120)	7.05 (141)

Table 44. Signs and symptoms in a child that would be cause for an immediate visit to a health facility list by females (n=2000) and males (n=2000), unprompted

Sign/Symptom	Females – % (n)	Males – % (n)
Fever	75.95 (1519)	73.90 (1478)
Vomiting	37.20 (744)	41.55 (831)
Persistent crying	35.45 (709)	30.40 (608)
Not able to feed	24.20 (484)	27.15 (543)
Seizure/shaking	21.45 (429)	17.20 (344)
Difficulty breathing	13.80 (276)	11.35 (227)
Diarrhea	13.25 (265)	27.10 (542)
Getting very sick	12.05 (241)	16.25 (325)
Blood in stool	11.60 (232)	7.90 (158)

Fast breathing	11.15 (223)	11.30 (226)
Drinking poorly	7.75 (155)	9.10 (182)
Chest indrawing	4.30 (86)	3.55 (71)

Both women and men feel that the government is primarily responsible for caring for orphans and vulnerable children (OVC), followed by communities, as shown in Table 44.

Table 45. Who is responsible for caring for OVC

Who is responsible for caring for orphans and vulnerable children?	**Females – % (n)**	**Males – % (n)**
Communities	39.80 (796)	36.40 (727)
Government	41.45 (829)	44.60 (892)
Family	13.35 (267)	13.60 (272)
Religious institutions	4.30 (86)	5.30 (106)
Others	1.10 (22)	0.20 (3)

CHILD HEALTH

Table 46 shows how many parents gave a child under 5 years of age ORS/ORT and zinc the last time the child had diarrhea. Table 47 shows the frequencies for how many days zinc was given, with an average of 4.4 days. For a complete list of items addressing child health, see Appendix.

Table 46. ORS and/or zinc given to a child under 5 in the household during last incidence of diarrhea

ORS given last time a child in household had diarrhea	**Females – % (n)**	**Males – % (n)**
Yes	64.53 (575)	52.49 (200)
No	21.21 (189)	24.67 (94)
DK	5.16 (46)	8.92 (34)
No child with diarrhea	6.29 (56)	7.87 (30)
Don't know ORS	2.81 (25)	6.04 (23)
Total	100.00 (891)	100.00 (381)
Zinc product given to child		
Yes	22.78 (190)	22.22 (78)
No	40.05 (334)	40.17 (141)
Don't know	3.00 (25)	7.69 (27)
Don't know Zinc	34.17 (285)	29.91 (105)
Total	**100.00 (834)**	**100.00 (351)**

Table 47. Frequency of days zinc given to child under 5 with diarrhea, as reported by females (n=190) and males (n=78)

Number of days	**Females – % (n)**	**Males – % (n)**
1	2.11 (4)	2.56 (2)
2	7.89 (15)	15.38 (12)
3	32.11 (61)	37.18 (29)
4	13.68 (26)	15.38 (12)
5	15.79 (30)	6.41 (5)
6	3.16 (6)	2.56 (2)
7	5.26 (10)	5.13 (4)
10	7.37 (14)	2.56 (2)
14	1.05 (2)	0 (0)
Don't know	11.58 (22)	21.4 (21)

SEXUAL PROTECTION SELF-EFFICACY

Sexual protection self-efficacy, or the belief that one can limit their sexual risk behavior, was measured using 4 items. For a list of the items, see Appendix. Scores ranged from 4 to 16, with a mean score of 12.13 for women and 12.14 for men. A higher score is indicative of a high level of self-efficacy to protect oneself. Tables 48 and 49 show mean scores by setting and education, while Table 50 shows a breakdown of the individual items by gender.

Table 48. Mean sexual protection self-efficacy score by gender and setting

Setting	**n**	**Mean**	**MD**	**t(df)**	**p-value**
Females					
Urban	1458	12.1351	0.00048	0.004(1987)	0.996
Rural	531	12.1356			
Males					
Urban	1476	12.0008	0.1493	2.169 (1998)	0.141
Rural	524	11.8588			

There was no significant difference in scores for rural and urban areas for either gender.

Table 49. Mean sexual protection self-efficacy scores by gender and education level

Education	**n**	**Mean**	**SD**	**Lower bound**	**Upper bound**
Females					
None	104	12.13	2.34	11.68	12.59
Primary	999	11.97	2.17	11.83	12.10
Secondary	792	12.33	2.04	12.19	12.47
Post-secondary	94	12.29	2.26	11.83	12.76
Total	1989	12.14	2.14	12.04	12.23
Males					
None	53	11.64	2.04	11.08	12.20
Primary	930	11.93	2.02	11.80	12.06
Secondary	894	12.00	1.95	11.87	12.13
Post-secondary	123	12.15	2.08	11.78	12.53
Total	2000	11.97	1.99	11.88	12.06

For females, there was a significant difference in the means among different education levels, $F(3,1985) = 4.554$, $p = 0.004$. The difference was among primary and secondary levels of education, with the primary scoring lower than secondary. For males, there was no difference in the mean score by level of education; $F(3, 1996) = 1.002$, $p = 0.391$.

Table 50. Sexual protection self-efficacy items, stratified by gender

	Females – % (n)	**Males – % (n)**	**Total – % (n)**
You feel confident you can talk to your partner about having other sex partners in addition to you.			
Strongly disagree	29.81 (595)	25.05 (501)	27.43 (1096)
Disagree	35.92 (717)	45.30 (906)	40.62 (1623)
Agree	15.33 (306)	15.80 (316)	15.57 (622)
Strongly agree	18.94 (378)	13.85 (277)	16.39 (655)
Total	**100.00 (1996)**	**100.00 (2000)**	**100.00 (3996)**
Mean (sd)	2.2 (1.07)	2.2 (0.96)	2.2(1.04)
You feel confident you can talk to your partner about practicing protected sex (using a condom).			
Strongly disagree	8.52 (170)	4.10 (82)	6.31 (252)
Disagree	13.68 (273)	7.40 (148)	10.54 (421)
Agree	38.10 (760)	41.15 (823)	39.62 (1583)
Strongly agree	39.70 (792)	47.35 (947)	43.53 (1739)
Total	**100.00 (1995)**	**100.00 (2000)**	**100.00 (3995)**
Mean (sd)	3.09 (0.93)	3.3 (0.78)	3.2(0.72)
***You feel you can have a sexual relationship with only one person at a time.* (TCCP OUTCOME INDICATOR 1.1.4)**			
Strongly disagree	2.41 (48)	3.30 (66)	2.86 (114)
Disagree	8.28 (165)	14.20 (284)	11.25 (449)
Agree	37.15 (740)	40.55 (811)	38.85 (1551)
Strongly agree	52.16 (1039)	41.95 (839)	47.04 (1878)
Total	**100.00 (1992)**	**100.00 (2000)**	**100.00 (3992)**
Mean (sd)	3.4 (0.74)	3.2 (0.81)	3.3(0.6)
You feel confident you can abstain from sex even if you are away from your partner for a long time and want to have sex.			
Strongly disagree	3.46 (69)	3.15 (63)	3.30 (132)
Disagree	8.17 (163)	14.25 (285)	11.21 (448)
Agree	31.18 (622)	36.50 (730)	33.84 (1352)
Strongly agree	57.19 (1141)	46.10 (922)	51.64 (2063)
Total	**100.00 (1995)**	**100.00 (2000)**	**100.00 (3995)**
Mean (sd)	3.4 (0.78)	3.3 (0.82)	3.3(0.64)

SEXUAL BEHAVIOR

The mean number of sex partners in the past year reported by women was 1.38 (SD = 1.04) and 1.55 (SD = 0.9) for men. It appears as if reporting of sexual acts in this survey is inaccurate, as few people report having anal sex, and only 16% of men report receiving oral sex while over 25% of women report giving it. It is unclear whether this is due to sexual stigma or a misunderstanding of the question by respondents. Our formative research and previous studies conducted in Tanzania do not support this data. Table 51 shows a breakdown, by gender, of sexual acts experienced.

Table 51. Types of sex experienced by those who have had sex in the past year

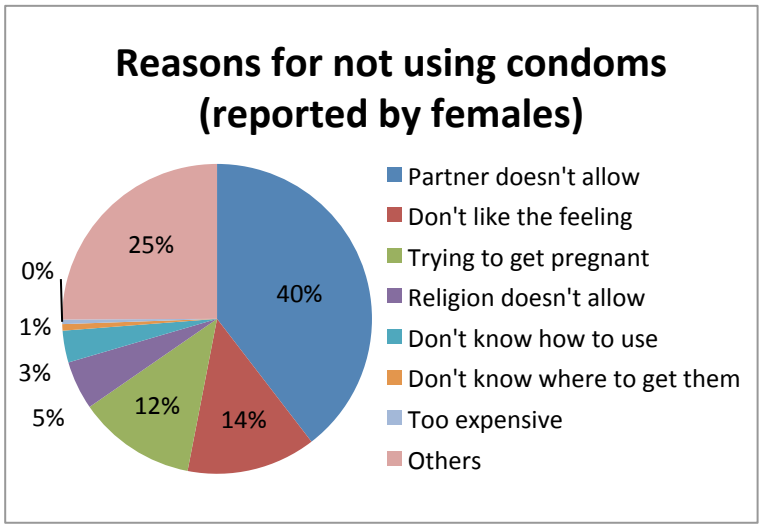
Type of sex	**Females –% (n)**	**Males –% (n)**
Vaginal	99.75 (1567)	99.75 (1573)
Anal given	--	0.25 (4)
Anal received	3.25 (51)	2.45 (39)
Oral given	25.46 (400)	3.87 (61)
Oral received	21.71 (341)	16.67 (263)
	78.55 (1571)	**78.85 (1577)**

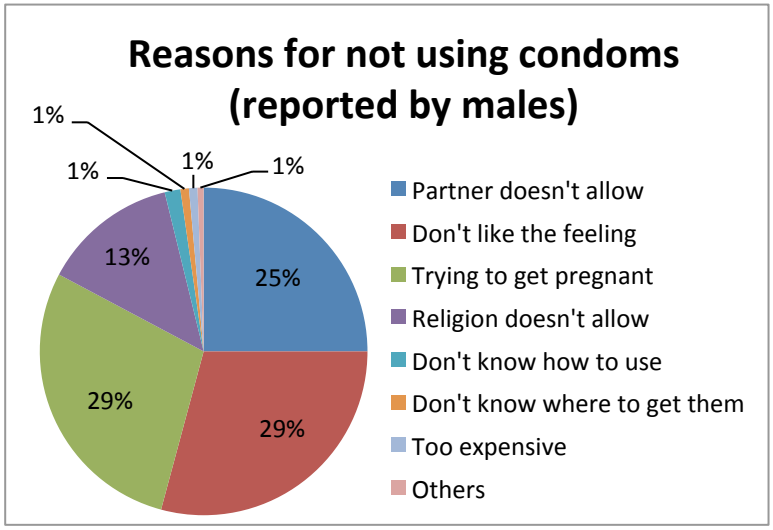
Table 52 shows condom use with the most recent sexual partner, at last sex, and if alcohol was used at last sex. It should be noted that a majority of participants report only sometimes or never using condoms, which has great implications for programming and the need to continue to stress consistent and correct condom use with every partner. Figure 12 shows reasons reported for not using condoms, with the most common response for both males and females being their partner does not allow it. Figure 13 shows reported communication with partners about sexual risk behaviors.

Table 52. Condom use with most recent partner, condom use last sex and alcohol use before last sex, for females (n=1566) and males (n=1577)

Condom use with the most recent partner	**Females – % (n)**	**Males –% (n)**
Always	8.88 (139)	20.74 (327)
Most often	13.67 (214)	14.65 (231)
Sometimes	35.31 (553)	35.95 (567)
Never	42.15 (660)	28.66 (452)
Condom use last sex		
No	71.78 (1124)	53.77 (848)
Yes	28.22 (442)	46.23 (729)
Alcohol use before sex		
No	93.30 (1461)	93.47 (1474)
Yes	6.70 (105)	6.53 (103)

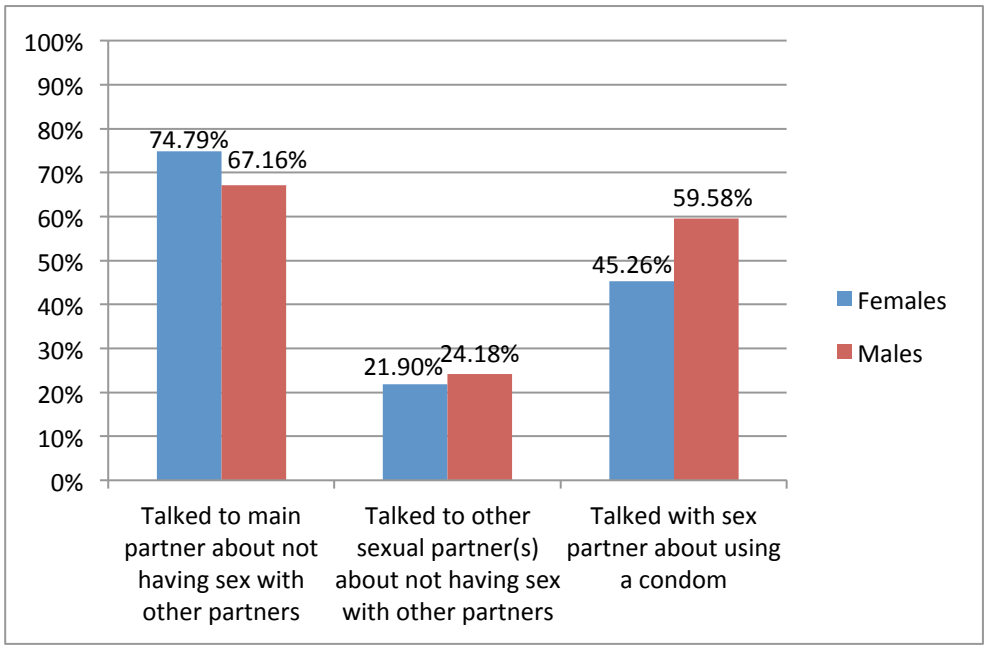
Figure 12. Reasons for not using condoms, reported by females (n=1124) and males (n=501)





Sexual Risk Communication Behavior

Figure 13. Reported communication behaviors related to sexual risk



Note: 60.28% (n = 947) of females and 50.92% (n = 417) of males reported not having other sex partners in the past 12 months.

HIV TESTING

A high percentage of people have ever been tested for HIV, especially women (67%). However, there is still much need for increased numbers of HIV testing, especially discussing and getting tested with a partner. Figure 14 shows testing behavior, stratified by gender. Table 53 shows belief in discordant couples' ability to remain discordant.

Figure 14. HIV testing behavior

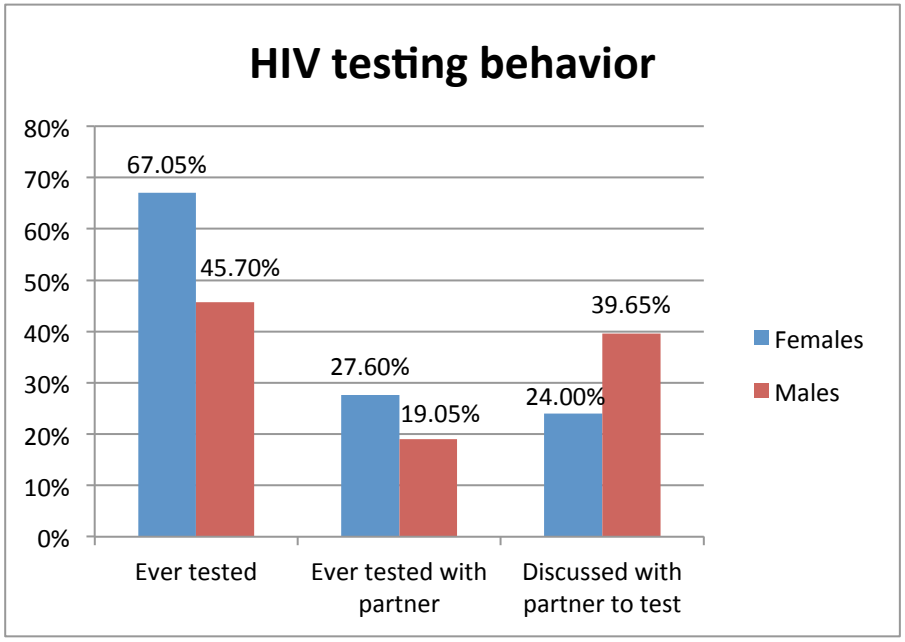
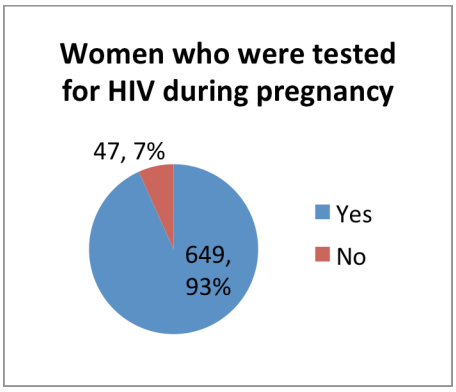


Table 53. Response to the item: *It is possible for one person in a sexual relationship to have HIV and the other partner to NOT be infected, even if they have been having sex together for a long time.*

	Females –% (n)	**Males –% (n)**
Strongly disagree	20.15 (403)	9.25 (185)
Disagree	24.60 (492)	15.85 (317)
Agree	34.80 (696)	46.15 (923)
Strongly agree	20.45 (409)	28.75 (575)
Total	100.00 (2000)	100.00 (2000)

TCCP INDICATOR 1.1.5 *Women who were tested for HIV during pregnancy.*



HIV RISK PERCEPTIONS AND PREVENTION KNOWLEDGE

Participants were asked several items assessing their knowledge about HIV prevention. For a complete list of items, see the Appendix. Scores on this scale ranged from 3 to 12, and the mean for males was 8.8 (SD=1.30) and 9.11 (SD=1.46) for females. Table 54 shows the responses to the individual items, stratified by gender.

Table 54. HIV risk prevention items, stratified by gender

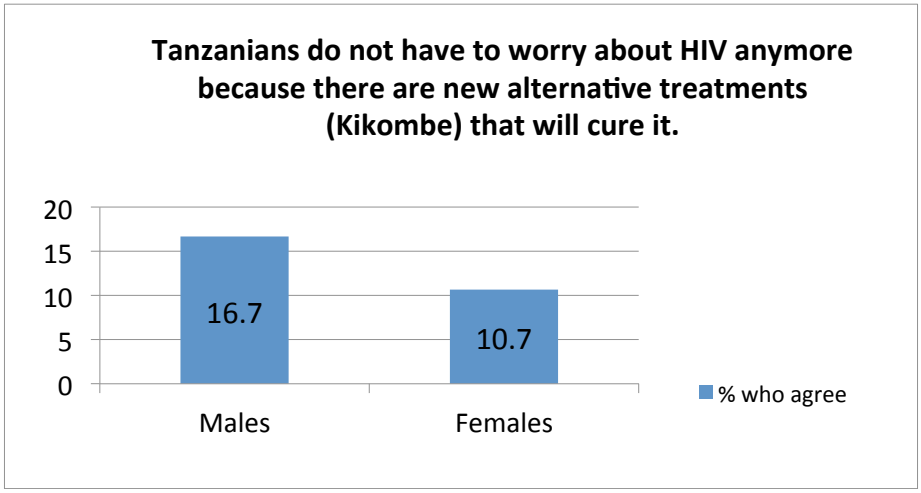
	Females – % (n)	**Males – % (n)**	**Total – % (n)**
***Having more than one sex partner in a short span of time increases one's risk for HIV.* (TCCP OUTCOME INDICATOR 1.1.1)**			
Strongly disagree	1.60 (32)	2.35 (47)	1.98 (79)
Disagree	5.50 (110)	3.20 (164)	6.85 (274)
Agree	31.80 (636)	32.05 (641)	31.93 (1277)
Strongly agree	61.10 (1222)	57.40 (1148)	59.25 (2370)
Total	100.00 (2000)	100.00 (2000)	100.00 (4000)
Someone who has only one sexual partner can still be at risk for HIV if her/his partner has other sexual partners.			
Strongly disagree	3.45 (69)	1.65 (33)	2.55 (102)
Disagree	4.75 (95)	7.80 (156)	6.28 (251)
Agree	39.30 (786)	38.35 (767)	38.83 (1553)
Strongly agree	52.50 (1050)	52.20 (1044)	52.35 (2094)
Total	100.00 (2000)	100.00 (2000)	100.00 (4000)
***A pregnant woman with HIV will definitely transmit it to her baby.* (TCCP OUTCOME INDICATOR 1.1.4)**			
Strongly disagree	14.80 (296)	8.00 (160)	11.40 (456)
Disagree	37.05 (741)	31.75 (635)	34.40 (1376)
Agree	27.45 (549)	35.70 (714)	31.58 (1263)
Strongly agree	20.70 (414)	24.55 (491)	22.63 (905)
Total	100.00 (2000)	100.00 (2000)	100.00 (4000)

Participants were also asked 2 items regarding their perceived risk of HIV infection, as shown below. Figure 15 shows those who think they no longer have to worry about HIV because of the use of kikombe, an herbal tea by some healers throughout the country.

TCCP INDICATOR 1.1.2 *It is likely that I will become infected with HIV during my lifetime.*

Strongly disagree	22.30 (446)	28.35 (567)	25.33 (1013)
Disagree	33.05 (661)	35.75 (715)	34.40 (1376)
Agree	32.10 (642)	29.80 (596)	30.95 (1238)
Strongly agree	12.55 (251)	6.10 (122)	9.33 (373)
Total	100.00 (2000)	100.00 (2000)	100.00 (4000)

Figure 15. Percent who agree that Tanzanians should no longer be concerned about HIV because of herbal treatments



SOCIAL NORMS ABOUT CONCURRENT PARTNERSHIPS (CP)

Concurrent partnerships (CP) are defined as overlapping sexual relationships where sex with one partner occurs between two acts of intercourse with another partner. CP has been identified as one of the key drivers of HIV transmission. We wanted to assess the prevalence of CP as a norm in this survey. Social norms regarding CP was measured using 3 items (see Appendix), with a range of scores from 3 to 12, with a high score meaning the social norm is one that discourages CP. The mean score for females was 8.2 (SD=2.48) and for males was 7.6 (SD=2.22), with females reporting social norms that are less supportive of CP than did males. Tables 55 and 56 show mean CP scores by gender, setting, and education. Urban females show a belief in a norm that supports CP behavior more than do rural females, while urban males do not show a statistically significant difference in social norms supporting CP than do rural males.

Table 55. Mean CP scores stratified by gender and setting

Setting	**n**	**Mean**	**SD**	**MD**	**t(df)**	**p-value**
Females						
Urban	1458	8.13	2.50	0.51	4.089 (1988)	0.001
Rural	532	8.61	2.39			
Males						
Urban	1476	7.59	2.23	0.20	1.796 (1998)	0.078
Rural	524	7.79	2.20			

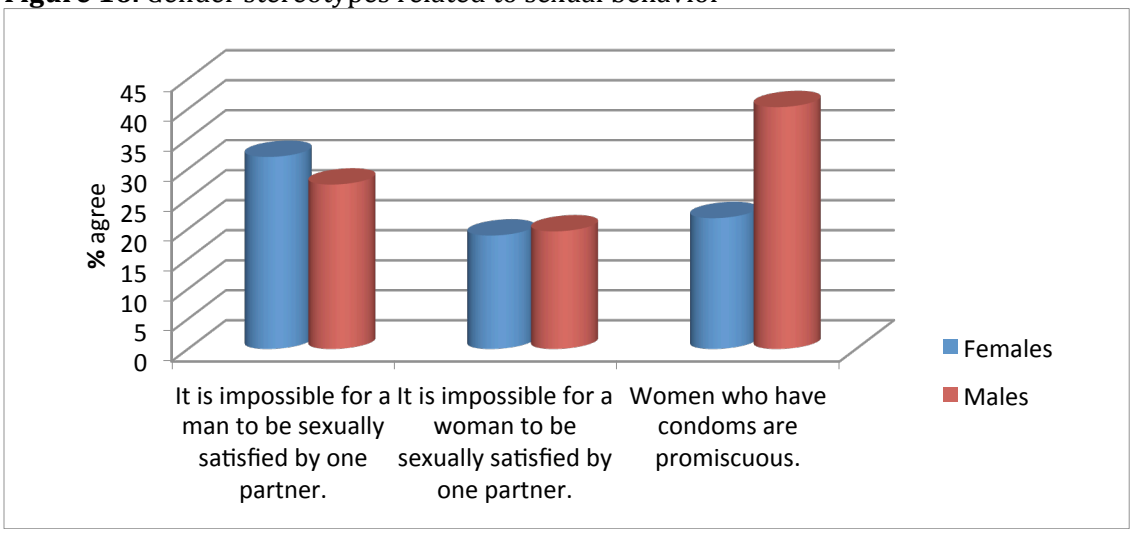
Table 56. Mean CP scores stratified by gender and education level

				95% CI for Mean	
Education	**n**	**Mean**	**SD**	**Lower Bound**	**Upper Bound**
Females					
None	103	8.60	2.55	8.10	9.10
Primary	1003	8.35	2.43	8.20	8.50
Secondary	790	8.17	2.53	7.99	8.34
Post-secondary	94	7.84	2.59	7.31	8.37
Total	**1990**	**8.27**	**2.49**	**8.16**	**8.37**
Males					
None	53	7.30	2.73	6.55	8.05
Primary	930	7.72	2.22	7.58	7.86
Secondary	894	7.58	2.19	7.43	7.72
Post-secondary	123	7.68	2.33	7.27	8.10
Total	**2000**	**7.64**	**2.23**	**7.55**	**7.74**

For both males and females, there was no significant difference in the mean CP social norms score by level of education (males: F (3, 1985)=1.066, p=0.362; females: F (3, 1986) = 2.351, p = 0.071).

We also asked participants a few items related to gender stereotypes around CP, as shown in Figure 16.

Figure 16. Gender stereotypes related to sexual behavior



GENDER BASED VIOLENCE (GBV)

Experiences with gender based violence (GBV) for women and history of perpetration of GBV for men were assessed with several items to determine how much sexual violence is an issue within Tanzania, and therefore, if it should be taken into account when developing sexual health and family planning programming. The following tables display females' experience with various levels of violence and who perpetrated the violence. Of those women surveyed, 61.25% said they have ever experienced sexual coercion or violence, and 38.6% reported experiencing it within the past year. It is clear that GBV is an experience for a majority of Tanzanian women; therefore, it must be taken into account when trying to change sexual behavior and heterosexual relationships.

Table 57. Females who had sex with a man even though they didn't really want to because of coercion or violence from a male partner (n=2000)

Male actions	**Ever – % (n)**	**Last year – % (n)**
Threatened her with causing trouble/to end relationship	19.35 (387)	11.15 (223)
Pressured with arguments	22.70 (454)	15.55 (311)
Threatened to use physical force	10.25 (205)	5.85 (117)
Physically forced	8.95 (179)	6.05 (121)

Table 58. Person who threatened to cause trouble/end the relationship for females that have ever had sex with a man without really wanting to (n=387)

Person who threatened	**% (n)**
Relationship partner	84.00 (325)
Other known person	9.30 (36)
Authority	7.20 (28)
Stranger	1.60 (6)
Relative	0.53 (2)

It should be noted that of those women who experienced threats as a way to convince them to have sex, 7% of the women said the threats came from an authority figure.

Table 59. Person who used pressure with continual arguments for females that have ever had sex with a man without really wanting to (n=454)

Person who pressured	**% (n)**
Relationship partner	90.52 (411)
Other known person	6.68 (31)
Authority	3.23 (15)
Relative	0.88 (4)
Stranger	0.64 (3)

Table 60. Person who threatened to use physical force for females that have ever had sex with a man without really wanting to (n=205)

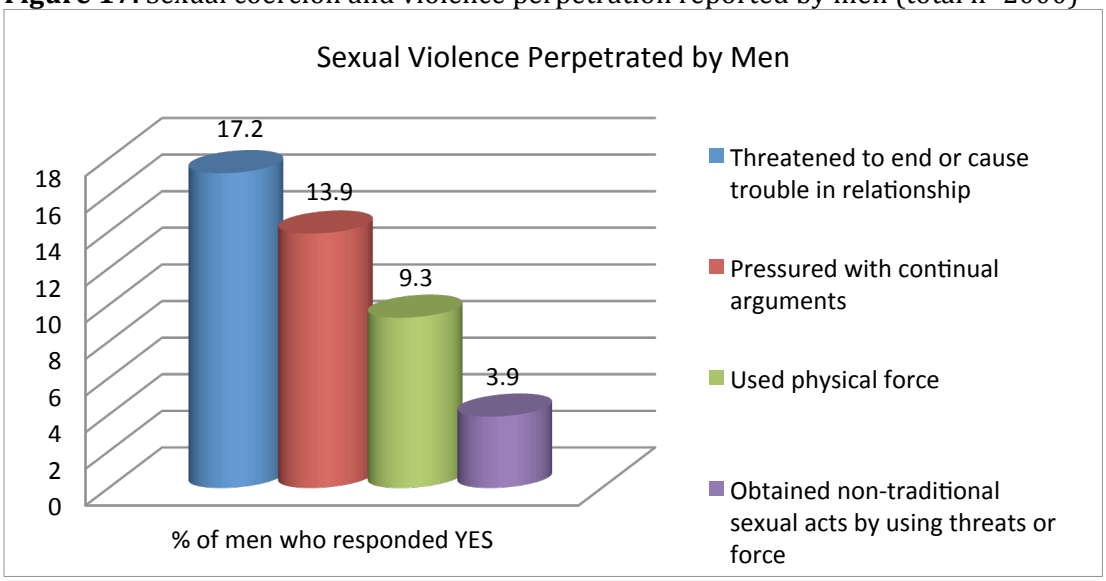
Person who threatened to use physical force	**% (n)**
Relationship partner	80.97 (166)
Other known person	11.21 (23)
Authority	6.82 (14)
Stranger	3.44 (7)
Relative	2.50 (5)

Table 61. Person who used physical force against females that have ever had sex with a man without really wanting to (n=179)

Person who physically forced	**% (n)**
Partner	75.97 (136)
Other known	12.29 (22)
Authority	10.61 (19)
Relative	1.67 (3)
Stranger	0.53 (1)

Figure 17 shows men's responses to items asking about GBV they ever committed. About 17% of men admitted to threatening to end or cause trouble in a relationship unless the woman had sex with him, and over 9% reported actually using physical force to get a woman to have sex with him. This high rate of admittance to GBV is an important issue to consider when developing programs related to sexual behavior and HIV prevention. Perhaps a first step in increasing safer sexual behavior would be to address men's tendency to commit sexual violence, or at least their tendency to threaten violence in order to have sex with an unwilling woman.

Figure 17. Sexual coercion and violence perpetration reported by men (total n=2000)



Female Genital Mutilation (FGM)

Another form of violence against women in many areas of Africa (but not so common in Tanzania) is female genital mutilation (FGM). About 4.3% (n=85) of women surveyed reported to have experienced FGM. The mean age at which FGM occurred was 11.25 years (SD=3.54), with a median of 13 years old and a range of 4-20 years. FGM was most common in Dodoma (n = 27, 31.8%), Dar es Salaam (n = 23, 27.1%), Mara (n = 15, 17.6%), and Morogoro (n = 9, 10.6%).

MALE CIRCUMCISION

Male circumcision has been shown to be protective against HIV transmission (Gray et al., 2007). Of all men circumcised, 49% (n = 756) were Muslims, and 51% (n = 797) were non-Muslims. The mean age of circumcision for all male participants was 8.94 years (SD = 4.88). For Muslims, the mean age was 8.10 years (SD = 4.18), and for non-Muslims the mean age was 9.72 years (SD = 5.33). This difference in age of circumcision by religion was significant (t = -7.02, df = 1665, p<.001).

All participants (males and females) were asked items assessing their knowledge of circumcision's benefits related to HIV. For a complete list of items, see Appendix. Knowledge scores range from a possible 5 to 25, which a higher score meaning a high level of knowledge about circumcision and HIV. The total mean score for both men and women was 15.20 (SD = 1.82). The mean score for women was 14.85 (SD = 1.90) with a range of 7-20. The mean score for men was 15.47 (SD = 1.72) with a range of 6-20. The mean scores were not significantly different for men and women (p=.057). Figure 18 and Table 62 show the individual item responses by gender.

Figure 18. Average responses to circumcision knowledge items (1=strongly disagree, 4=strongly agree)

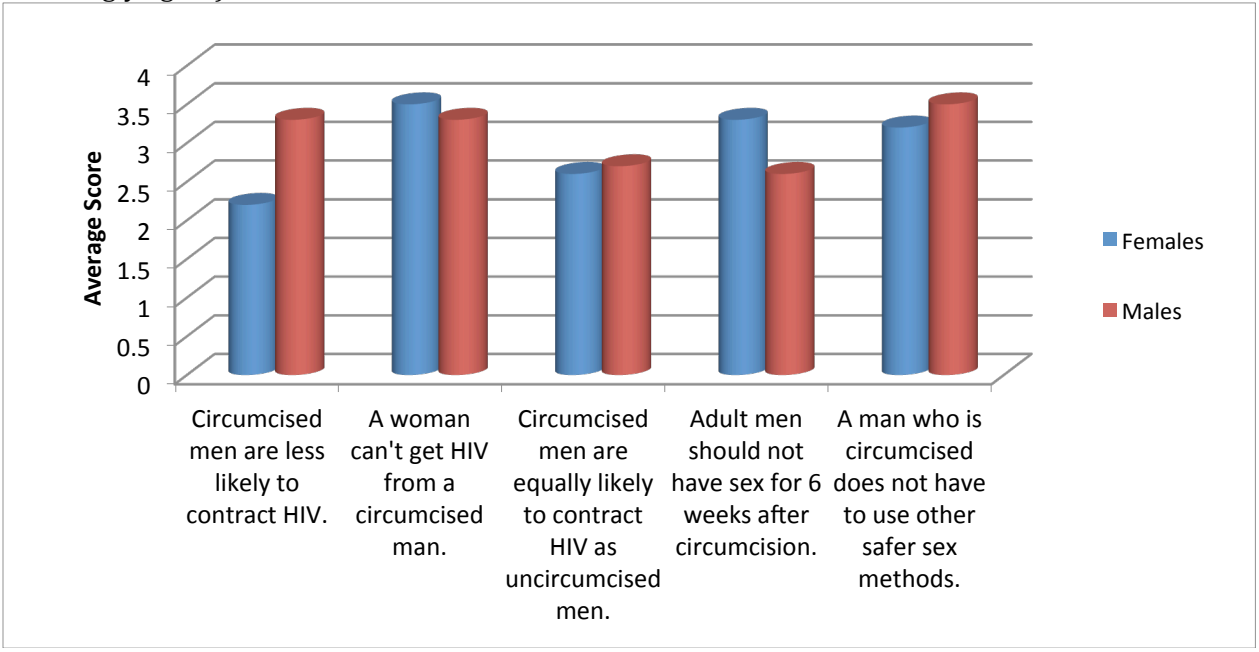


Table 62. Male circumcision knowledge items, stratified by gender

	Females – % (n)	**Males – % (n)**	**Total – % (n)**
Men who are circumcised are less likely to contract HIV.			
Strongly disagree	27.74 (554)	14.00 (280)	20.87 (834)
Disagree	34.65 (692)	28.15 (563)	31.40 (1255)
Agree	27.04 (540)	32.90 (658)	29.97 (1198)
Strongly agree	10.57 (211)	24.95 (499)	17.76 (710)

Total	**100.00 (1997)**	**100.00 (2000)**	**100.00 (3997)**
A woman cannot get HIV from a circumcised man.			
Strongly disagree	54.28 (1084)	43.10 (862)	48.69 (1946)
Disagree	39.61 (791)	50.95 (1019)	45.28 (1810)
Agree	3.76 (75)	3.50 (70)	3.63 (145)
Strongly agree	2.35 (47)	2.45 (49)	2.40 (96)
Total	**100.00 (1997)**	**100.00 (2000)**	**100.00 (3997)**
Men who are circumcised are equally likely to contract sexually transmitted infections as men who are not circumcised.			
Strongly disagree	14.77 (295)	11.85 (237)	13.31 (532)
Disagree	32.85 (656)	39.00 (780)	35.93 (1436)
Agree	25.64 (512)	22.60 (452)	24.12 (964)
Strongly agree	26.74 (534)	26.55 (531)	26.64 (1065)
Total	**100.00 (1997)**	**100.00 (2000)**	**100.00 (3997)**
Adult men should not have sex for 6 weeks after being circumcised so that the wound can heal properly.			
Strongly disagree	2.70 (54)	1.70 (34)	2.20 (88)
Disagree	9.06 (181)	3.50 (70)	6.28 (251)
Agree	41.76 (834)	41.80 (836)	41.78 (1670)
Strongly agree	46.47 (928)	53.00 (1060)	49.74 (1988)
Total	**100.00 (1997)**	**100.00 (2000)**	**100.00 (3997)**
A man who is circumcised does NOT have to use other safer sex methods.			
Strongly disagree	6.96 (139)	46.50 (930)	26.75 (1069)
Disagree	8.07 (161)	44.00 (880)	26.04 (1041)
Agree	39.68 (792)	5.75 (115)	22.70 (907)
Strongly agree	45.29 (904)	3.75 (75)	24.50 (979)
Total	**100.00 (1996)**	**100.00 (2000)**	**100.00 (3996)**

TCCP INDICATOR 1.1.7 *A man who is circumcised does NOT have to use other safer sex methods.*

Males	**% (n)**
Strongly disagree	46.50 (930)
Disagree	44.00 (880)
Agree	5.75 (115)
Strongly agree	3.75 (75)
Total	**100.00 (2000)**

Tables 63 and 64 show circumcision knowledge by setting and education, stratified by gender. Urban females showed significantly higher knowledge scores than did rural females, while urban and rural men did not show a significant difference in knowledge.

Table 63. Circumcision knowledge by setting, stratified by gender

Setting	**n**	**Mean (SD)**	**t(df)**	**p-value**
Females				
Urban	1461	14.93 (1.84)	2.73 (1990)	0.006
Rural	531	14.66 (1.20)		
Males				
Urban	1476	15.49 (1.71)	1.26 (1998)	0.21
Rural	524	15.38 (1.74)		

Table 64. Circumcision knowledge by education level, stratified by gender

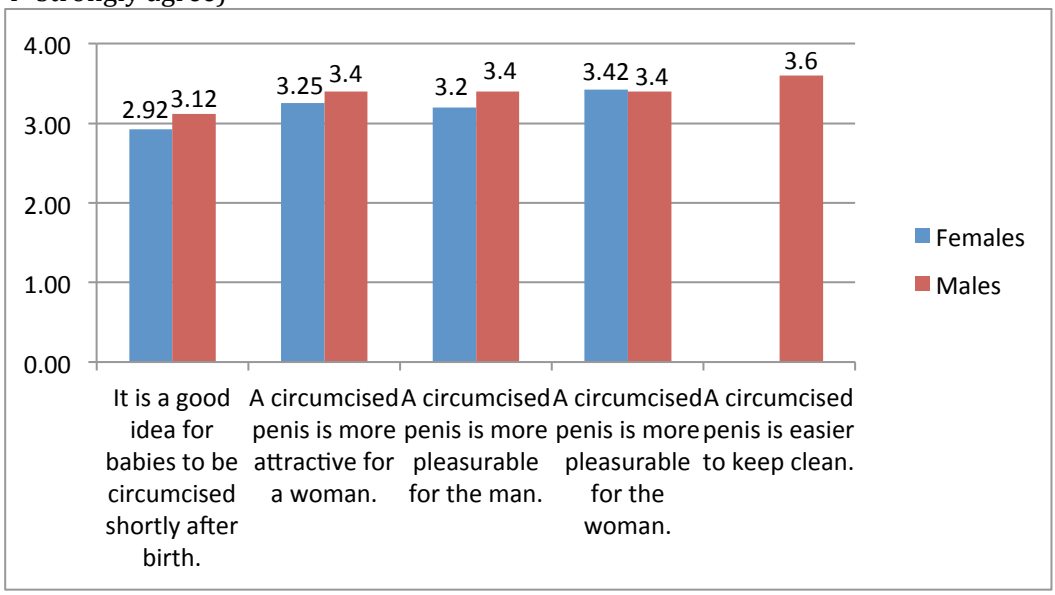
Education	**n**	**Mean (SD)**
Females		
None	106	14.82 (1.86)
Primary	1002	14.82 (1.93)
Secondary	790	14.90(1.84)
Post-secondary	94	15.14 (1.75)
Total	**1992**	**14.86 (1.90)**
Males		
None	53	15.25 (1.66)
Primary	930	15.501 (1.77)
Secondary	894	15.44 (1.70)
Post-secondary	123	15.50 (1.53)
Total	**2000**	**15.467 (1.72)**

For both males and females, there was no difference in mean circumcision knowledge score by level of education (males: F = 0.54, p = 0.45; females: F=0.971, p=0.405)

Attitudes towards Circumcision

Attitudes towards circumcision were assessed using 5 items for males and 4 items for females (see Appendix). A higher score on this scale means a more favourable attitude towards circumcision. Possible range for males was 5-20. Possible range for females was 4-16. The mean score for men was 16.9 (SD = 2.39), while the mean score for women was 12.8 (SD = 2.30). Figure 19 shows the average response to each item by gender, and Table 65 shows the individual responses for each item by gender.

Figure 19. Average responses to circumcision attitude items (1=strongly disagree, 4=strongly agree)



Note: The final item was not asked of females.

Table 65. Attitudes towards male circumcision items, stratified by gender

	Females – % (n)	**Males – % (n)**	**Total – % (n)**
It is a good idea for babies to be circumcised shortly after birth.			
Strongly disagree	8.42 (168)	5.25 (105)	6.83 (273)
Disagree	19.19 (383)	12.55 (251)	15.87 (634)
Agree	44.14 (881)	46.75 (935)	45.45 (1816)
Strongly agree	28.26 (564)	35.45 (709)	31.86 (1273)
Total	**100.00 (1996)**	**100.00 (2000)**	**100.00 (3996)**
A circumcised penis is more attractive for a woman.			
Strongly disagree	5.66 (113)	0.95 (19)	3.30 (132)
Disagree	7.41 (148)	4.50 (90)	5.96 (238)
Agree	43.19 (862)	44.40 (888)	43.79 (1750)
Strongly agree	43.74 (873)	50.15 (1003)	46.95 (1876)
Total	**100.00 (1996)**	**100.00 (2000)**	**100.00 (3996)**
A circumcised penis is more pleasurable for the man.			
Strongly disagree	4.26 (85)	2.45 (49)	3.35 (134)
Disagree	9.42 (188)	6.20 (124)	7.81 (312)
Agree	43.89 (876)	43.05 (861)	43.47 (1737)
Strongly agree	42.43 (847)	48.30 (966)	45.37 (1813)
Total	**100.00 (1996)**	**100.00 (2000)**	**100.00 (3996)**
A circumcised penis is more pleasurable for the woman.			
Strongly disagree	3.80 (76)	1.95 (39)	2.88 (115)
Disagree	8.41 (168)	4.70 (94)	6.55 (262)

Agree	30.23 (604)	43.45 (869)	36.84 (1473)
Strongly agree	57.56 (1150)	49.90 (998)	53.73 (2148)
Total	**100.00 (1998)**	**100.00 (2000)**	**100.00 (3998)**
A circumcised penis is easier to keep clean.			
Strongly disagree	---	0.30 (6)	---
Disagree	---	1.15 (23)	---
Agree	---	40.95 (819)	---
Strongly agree	---	57.60 (1152)	---
Total	**---**	**100.00 (2000)**	**---**

Tables 66 and 67 show circumcision attitude scores by setting and education, stratified by gender. Urban males had a significantly more positive attitude towards circumcision than did rural males. There was no significant difference by setting for females.

Table 66. Circumcision attitudes by setting, stratified by gender

Setting	**n**	**Mean (SD)**	**t(df)**	**p-value**
Females				
Urban	1462	12.85 (2.30)	0.589 (1991)	0.556
Rural	531	12.80 (2.30)		
Males				
Urban	1476	16.97 (2.42)	2.35 (1998)	0.019*
Rural	524	16.69 (2.29)		

For females and males, there was no difference in circumcision attitudes by education levels (females: F = .881, p = 0.65; males: F = 1.95, p = 0.119).

Table 67. Circumcision attitudes by education

Education	**N**	**Mean (sd)**
Females		
None	105	12.64 (2.40)
Primary	1002	12.85 (2.24)
Secondary	792	12.80 (2.36)
Post-secondary	94	13.14 (2.10)
Total	**1993**	**12.84 (2.30)**
Males		
None	53	16.34 (3.50)
Primary	930	16.89 (2.48)
Secondary	894	16.90 (2.26)
Post-secondary	123	17.268 (1.93)
Total	**2000**	**16.91 (2.29)**

There was a significant difference in circumcision attitudes by religion, with Muslims showing a more positive attitude than non-Muslims.

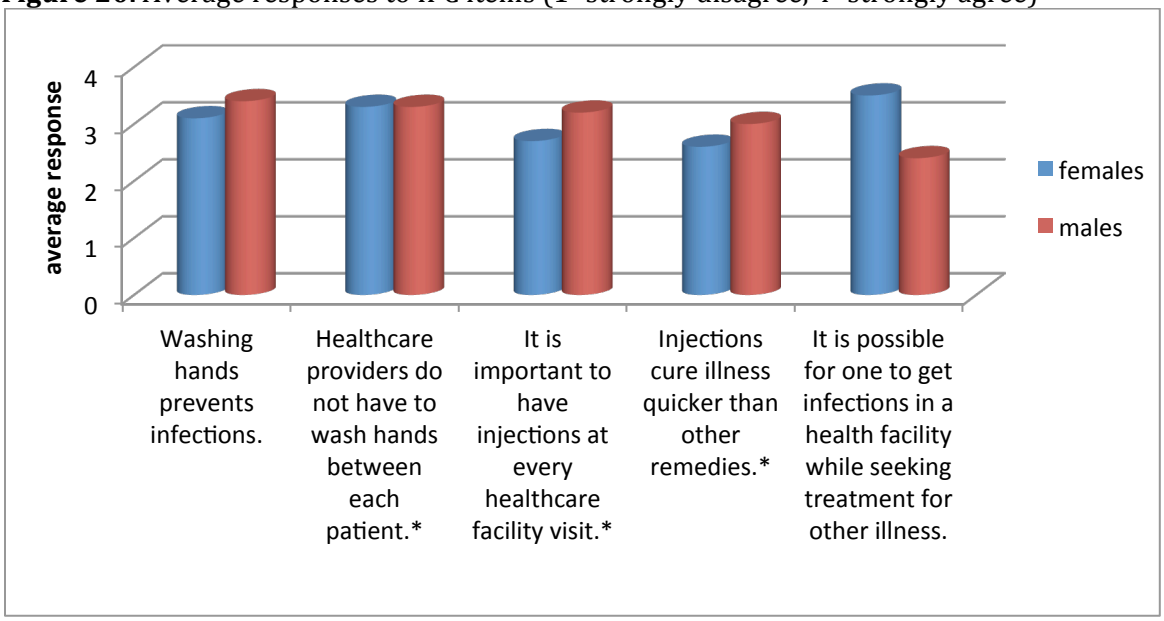
Table 68. Attitudes toward circumcision by religion

Attitude	**n**	**Mean (SD)**	**t(df)**	**p-value**
Muslim	1931	17.20 (2.30)	5.072 (1998)	<0.001*
Non Muslim	1069	16.65 (2.44)		

INFECTION PREVENTION AND CONTROL (IPC) KNOWLEDGE

Knowledge about ways to prevent and control infections was assessed using 5 items. For a list of items, see Appendix. A higher score indicates a greater level of knowledge, with a possible range of 5-20. The mean average score for females was 12.05 (SD=1.95) and 15.21 (SD=2.17) for males (t=48.28 (df=3940), p<.001). The mean score for both males and females together was 13.64 (SD=2.60). Figure 20 shows average responses to each item by gender. Table 69 shows the range of responses for each item, stratified by gender.

Figure 20. Average responses to IPC items (1=strongly disagree, 4=strongly agree)



*scoring of these items was reversed.

Table 69. IPC items, stratified by gender

	Females – % (n)	Males – % (n)
Washing hands prevents infection.		
Strongly disagree	6.62 (132)	1.55 (31)
Disagree	8.53 (170)	6.15 (123)
Agree	49.37 (984)	47.50 (950)
Strongly agree	35.47 (707)	44.80 (896)
Total	100.00 (1993)	100.0 (2000)
Mean (sd)	3.13 (0.83)	3.36 (0.67)
Healthcare providers do not have to wash their hands between patients.		
Strongly disagree	47.16 (939)	38.00 (760)
Disagree	41.64 (829)	47.50 (950)
Agree	6.73 (134)	8.15 (163)

Strongly agree	4.47 (89)	6.35 (127)
Total	100.00 (1991)	100.00 (2000)
Mean (sd)	3.31 (0.79)	3.17 (0.83)
It is important to have injections at every healthcare facility visit.		
Strongly disagree	29.19 (580)	26.70 (534)
Disagree	52.24 (1038)	55.00 (1100)
Agree	13.03 (259)	13.35 (267)
Strongly agree	5.54 (110)	4.95 (99)
Total	100.00 (1987)	100.00 (2000)
Mean (sd)	3.05 (0.80)	3.03 (0.77)
Injections cure illness quicker than other remedies.		
Strongly disagree	18.17 (361)	13.30 (266)
Disagree	34.27 (681)	30.30 (606)
Agree	31.66 (629)	36.45 (729)
Strongly agree	15.90 (316)	19.95 (399)
Total	100.00 (1987)	100.00 (2000)
Mean (sd)	2.55 (0.96)	2.34 (0.95)
It is possible to get infections in a health facility while seeking treatment for another illness.		
Strongly disagree	7.49 (149)	2.10 (42)
Disagree	14.03 (279)	9.90 (198)
Agree	45.52 (905)	45.25 (905)
Strongly agree	32.95 (655)	42.75 (855)
Total	100.00 (1988)	100.00 (2000)
Mean (sd)	3.04 (0.88)	3.29 (0.73)

Participants were also asked a number of items concerning the service received during their last visit to a health facility.

Table 70. *When is the last time you visited a health facility?*

	Females – % (n)	**Males – % (n)**
Within one week	12.99 (259)	8.40 (168)
Within one month	17.80 (355)	17.10 (342)
Within 6 months	28.34 (565)	24.30 (486)
Within 12 months	17.85 (356)	22.75 (455)
More than 12 months ago	14.69 (293)	17.15 (343)
Never visited	3.46 (69)	6.35 (127)
Don't know/Not sure	4.86 (97)	3.95 (79)
Total	**100.00 (1994)**	**100.00 (2000)**

Table 71. Provider washed hands during last visit to health facility

	Females – % (n)	**Males – % (n)**
Before	14.81 (285)	8.33 (156)
After	12.78 (246)	13.72 (257)
Both	29.35 (565)	13.35 (250)
Did not wash hands	39.22 (755)	22.05 (413)
Don't know	3.84 (74)	42.55 (797)
Total	**100.00 (1925)**	**100.00 (1873)**

Table 72. *The last time you were in a health facility did you ask your healthcare provider if he/she had washed his/her hands before seeing you?*

	Females – % (n)	**Males – % (n)**
Yes	94.27 (1874)	90.55 (1811)
No	3.67 (73)	4.60 (92)
Never visited a health facility	2.06 (41)	4.85 (97)
Total	**100.00 (1988)**	**100.00 (2000)**

Table 73. Place where received last injection

	Females – % (n)	**Males – % (n)**
Health facility	73.82 (1114)	88.93 (1237)
Traditional Medicine man	0.07 (1)	0.07 (1)
Pharmacy	6.43 (97)	3.67 (51)
Diagnostic Centre	17.43 (263)	2.66 (37)
Home based treatment	1.59 (24)	2.95 (41)
Other	0.66 (10)	1.73 (24)
Total	**100.00 (1509)**	**100.00 (1391)**

Table 74. *The last time you received an injection, was it from a new, unopened package?*

	Females – % (n)	**Males – % (n)**
Yes	0.47 (9)	0.80 (15)
No	74.51 (1432)	68.39 (1281)
Don't Know	3.59 (69)	5.07 (95)
No injections	21.44 (412)	25.73 (482)
Total	**100.00 (1922)**	**100.00 (1873)**

Table 75. *The last time you were in a health facility, how satisfied were you with the cleanliness of the area?*

	Females – % (n)	**Males – % (n)**
Very satisfied	38.71 (744)	44.31 (830)
Somewhat satisfied	44.38 (853)	39.56 (741)
Somewhat unsatisfied	11.71 (225)	4.81 (90)
Very unsatisfied	5.20 (100)	11.32 (212)
Total	**100.00 (1922)**	**100.00 (1873)**

Table 76 shows the average scores on the IPC items by gender and setting. Urban females showed significantly higher scores than did rural females, as did urban males compared to rural males.

Table 76. Average IPC scores, stratified by gender and setting

Setting	**n**	**Mean (s.d.)**	**t(df)**	**p-value**
Females				
Urban	1456	12.14 (1.89)	2.94 (8.38.1)	.004
Rural	522	11.83 (2.11)		
Males				
Urban	1476	15.29 (2.20)	2.68 (955.2)	.007
Rural	524	15.01 (2.10)		
Combined				
Urban	2932	13.73 (2.58)	3.26(3976)	.001
Rural	1046	13.42 (2.63)		

Table 77 shows the average scores on the IPC items by education level. For females, there was no difference in the mean score by education levels (F=1.23, p=.297), nor was there any difference by level of education for males (F = 0.827, p = 0.479). However, when looking at all participants regardless of gender, there was a significant difference in the means among education levels (F (3, 3977) =5.02, p=0.002).

Table 77. Average IPC scores, stratified by gender and education level

Education	**n**	**Mean (SD)**
Females		
None	103	12.01 (2.14)
Primary	997	12.01 (1.96)
Secondary	784	12.09 (1.95)
Post-secondary	94	12.39 (1.59)
Total	**1978**	**12.06 (1.95)**
Males		
None	53	14.92 (2.33)
Primary	930	15.28 (2.27)
Secondary	894	15.18 (2.39)
Post-secondary	123	15.09 (2.20)
Total	**2000**	**15.22 (2.17)**
Combined		
None	156	13.0000 (2.6)
Primary	1927	13.5885 (2.7)
Secondary	1678	13.7366 (2.5)
Post-secondary	217	13.9217(2.4)
Total	**3978**	**13.6461 (2.6)**

CONCLUSION AND RECOMMENDATIONS

This survey touched on many different health areas, including knowledge, attitudes, and behaviors related to each health topic. While many of the indicators appear to be very high, resulting in little room for improving, it is possible that further analyses taking into account socio-economic status, age, relationship status, education, or setting would reveal more heterogeneity of indicators for different stratified groups. These further analyses are beyond the scope of this report.

It should also be noted that due to the fact that a majority of our programming is focused in urban areas of Mainland Tanzania, we conducted a sampling with a 75/25 urban/rural split. Therefore, these results are not representative of the Tanzanian population as a whole but rather what we expect to be our target audience.

Despite the high values on many of the indicators of interest, there are several areas showing non-ideal results that could be addressed by future programs. We recommend focusing on the following areas:

Men's belief that women who use modern FP are promiscuous. A large number of men (34%) believe unmarried women who use FP are promiscuous. This could be an area to be addressed by future programs focused on men's involvement in and support of FP.

Modern FP reduces the ability to conceive. Females were shown not to agree that women who do not get pregnant soon after marriage are barren. However, about one third of women agree that using FP can reduce the ability to conceive. This is an important perception to be addressed in FP programming.

Early and frequent ANC visits. Women reported visiting an antenatal clinic (ANC) a mean of 2.0 times (SD = .82) during their last pregnancy, and over 35% of women reported their first ANC visit occurring 17 or more weeks into their pregnancy. Earlier initial visits as well as a greater frequency of visits are important areas on which to focus programs concerning maternal healthcare.

Including men in the birthing process. A very high number of women were tested for HIV, prepared a birth preparedness plan, and planned emergency transport during their last pregnancy. However, only 27% of women reported having their male partner with them during ANC visits. In addition to men generally not attending ANC visits, a majority also did not attend the birth of their child. Programming focused on encouraging men to be more involved in the parenting process should begin with getting more men to attend ANC visits and to be present during the birthing process.

Consistent and correct condom use with every partner. A majority of participants reported only sometimes or never using condoms, which is indicative of the need to continue to stress consistent and correct condom use with every partner. The most common reason for not using condoms for both male and female participants was that their partner does not allow it. Condom negotiation skills with a non-supportive partner appear to be important for programming targeting both men and women.

Perpetration of gender based violence by men. About 17% of men admitted to threatening to end or cause trouble in a relationship unless the woman had sex with him, and over 9% reported actually using physical force to get a woman to have sex with him. This high rate of admittance to GBV is an important issue to consider when developing programs related to sexual behavior and HIV prevention. Perhaps a first step in increasing safer sexual behavior would be to address men's tendency to commit sexual violence, or at least their tendency to threaten violence in order to have sex with an unwilling woman.

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APPENDIX

Sexual Relationship Power Score (page 35)

Items: 18 for females

1. If I asked my partner to use a condom, he would get angry.
2. If I asked my partner to use a condom, he would get violent.
3. Most of the time, we do what my partner wants to do.
4. My partner won't let me wear certain things.
5. When my partner and I are together, I am pretty quiet.
6. My partner has more say than I do about important decisions that affect us.
7. My partner tells me who I can spend time with.
8. If I asked my partner to use a condom, he would think I am having sex with other people.
9. I feel trapped or stuck in my relationship.
10. My partner does what he wants, even if I do not want him to.
11. I am more committed in our relationship than my partner is.
12. When my partner and I disagree, he gets his way most of the time.
13. My partner gets more out of our relationship than I do.
14. My partner always wants to know where I am.
15. I feel satisfied by my partner sexually.
16. I feel satisfied by the way my partner cares about my emotional needs.
17. I feel financially secure with my main partner.
18. My partner might be having sex with someone else.

FP Attitudes Score (page 40)

Items: 6 for females, 5 for males

For females:
1. I feel confident that I can use contraceptives to avoid unwanted pregnancies.
2. Modern methods of family planning are safe.
3. Side effects from modern methods of family planning are manageable.
4. My main sexual partner supports my use of modern family planning methods.
5. Unmarried women who use family planning are promiscuous.
6. The benefits of using family planning outweigh the side effects.

For males:
1. Modern methods of family planning are safe.
2. Side effects from modern methods of family planning are manageable.
3. I support my main sexual partner's use of modern family planning methods.
4. Unmarried women who use family planning are promiscuous.
5. The benefits of using family planning outweigh the side effects.

Child Health (page 52)

Items: 8 for females and males

1. Does this household have a child aged 5 years or below ?
2. The last time the youngest child under 5 in this household had diarrhea, was he or she given ORS/ORT?
3. How often did you give the ORS/ORT to the child?
4. Did you give the child a zinc product?
5. From where did you receive the zinc product?
6. For how many days did you give zinc to the child?

Following questions asked if the respondent is aware of both ORS/ORT and Zinc:

7. *How much do you agree or disagree with the following statement:* Zinc given along with ORS/ORT is the most effective treatment for diarrhea in children.
8. What are the benefits of giving zinc along with ORS/ORT to treat diarrhea in children under 5 years?

Sexual Protection Self Efficacy (page 53)

Items: 4 for females and males

1. You feel confident you can talk to your partner about having other sex partners in addition to you.
2. You feel confident you can talk to your partner about practicing protected sex (using a condom).
3. You feel you can have a sexual relationship with only one person at a time.
4. You feel confident that you can abstain from sex even if you are away from your partner for a long time and want to have sex.

HIV Risk Perception and Prevention Knowledge (page 60)

Items: 3 for females and males

Below are the items included in what we called HIV Prevention Knowledge .

1. Having more than one sex partner in a short span of time increases one's risk for HIV
2. Someone who has only one sexual partner can still be at risk for HIV if her/his partner has other sexual partners
3. A pregnant woman with HIV will definitely transmit it to her baby

Social Norms about CP (page 62)

Items: 3 for females and males

1. Your friends think it is okay to have more than one sexual partner.*
2. Your friends would be angry if they knew you cheated on your main sexual partner.
3. Your friends are all faithful to their sexual partners.

**reversed*

Male Circumcision

Knowledge (page 67)

Items: 5 for females and males

1. Men who are circumcised are less likely to contract HIV.
2. A woman cannot get HIV from a circumcised man.
3. Men who are circumcised are equally likely to contract sexually transmitted infections as men who are NOT circumcised.
4. Adult men should not have sex for 6 weeks after circumcision so that the wound can heal properly.
5. A man who is circumcised does not have to use other safer sex methods.

Attitudes towards Circumcision (page 69)

Items: 4 for females, 5 for males

For females:
1. It is a good idea for babies to be circumcised shortly after birth.
2. A circumcised penis is more attractive for a woman.
3. A circumcised penis is more pleasurable for the man.
4. A circumcised penis is more pleasurable for the woman.

For males:
1. It is a good idea for babies to be circumcised shortly after birth.
2. A circumcised penis is more attractive for a woman.
3. A circumcised penis is more pleasurable for the man.
4. A circumcised penis is more pleasurable for the woman.
5. A circumcised penis is easier to keep clean.

Infection Prevention and Control Knowledge (page 73)

Items: 5 for females and males

1. Washing hands prevents infection.
2. Healthcare providers do not have to wash hands between each patient. *
3. It is important to have injections at every healthcare facility visit. *
4. Injections cure illness quicker than other remedies. *
5. It is possible to get infections in a health facility while seeking treatment for another illness.

**reversed*