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# Formative Research Report: EDEAN

## (Karamoja, Uganda)

Georgetown University's Institute for Reproductive Health | Save the Children

Fertility Awareness for Community Transformation

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# LIST OF ACRONYMS AND KEY PHRASES

| | |
|---|---|
| ABEK | Alternative Basic Education for Karamoja |
| CPR | Contraceptive Prevalence Rate |
| DHS | Demographic and Health Survey |
| ECCD | Early Childhood Care and Development |
| FACT | Fertility Awareness for Community Transformation |
| FAM | Fertility Awareness Methods |
| FCHV | Female Community Health Volunteers |
| FGD | Focus Group Discussion |
| FP | Family Planning |
| ICRW | International Center for Research on Women |
| IRB | Institutional Review Board |
| IRH | Institute for Reproductive Health, Georgetown University |
| SC | Save the Children |
| SCI | Save the Children International |
| TASO | The AIDS Support Organization |
| TFR | Total Fertility Rate |
| UNCST | Uganda National Council for Science and Technology |
| US | United States of America |
| USAID | United States Agency for International Development |
| VHT | Village Health Team |
| WHO | World Health Organization |

# EXECUTIVE SUMMARY

As a part of the "Fertility Awareness for Community Transformation (FACT) Project," the *Community Mobilization through Existing Networks* solution in Uganda aims to increase fertility awareness to improve family planning (FP) use. The solution will provide actionable information about fertility throughout the life course as well as information about FP methods to help facilitate changes in knowledge, attitudes, and behavior that lead to increased FP use. The project will be designed and evaluated in the Karamoja region of Uganda. It will be implemented through Early Childhood Care and Development (ECCD) Centers. Karamojong community members selected the name "Emorikinos Daadang Etogogogitoth Alatanakithi Ngidwe (EDEAN)" meaning "Let's Come Together and Strengthen Child Spacing" to emphasize the importance of bringing men and women together in this effort.

To inform solution development, formative research was conducted over a two month period in two Nandunget and Ngoleriet sub-counties of the Karamoja sub-region. The qualitative research included 20 focus group discussions and 12 in-depth interviews with ECCD members, ECCD Facilitators, Community Leaders, and FP Providers. Data was analyzed using matrices to organize findings and identify main themes.

The Karamojong are cluster of societies settled in the Northeast of Uganda. Though known as an ago-pastoralist society, they are currently undergoing rapid changes. Some of these changes can be attributed to environmental and political forces that have constrained nomadic life and shifted social roles. With these adjustments, the Karamojong are increasingly open to innovation, describing a number of new experiences that have improved the health and wellbeing of their communities—in education, technology, gender roles, and health that were said to be motivated by information and messages from a variety of actors, from the government to non-governmental organizations, to members of their communities.

Despite new health innovations, knowledge related to fertility and FP is low. With regard to fertility, participants, especially men, had little knowledge and many misconceptions about menstruation, fertile periods, vaginal secretions, and ultimately the likelihood of pregnancy. This contributes to unplanned pregnancies that are very damaging for women on both an individual and social level. At the same time, these pregnancies are perceived as personally and socially beneficial for men.

Participants were accepting of FP, linking child-spacing to the health of children that are very valued in Karamojong culture. Some acceptability is linked with a common traditional practice of extended post-partum abstinence that is facilitated by men leaving to herd cattle for long periods of time. More recently, this practice is less effective because men stay in the manyattas (homestead) making abstinence a challenge. Other barriers to FP use were linked with specific demographic groups, including polygamous families and youth.

Participants were increasingly familiar with modern methods of FP. Implanon® implants and Depo-Provera ® were the most commonly used, although use is very low. Many women found these methods desirable, but most knew little about how the methods work and many held mistaken beliefs. Further, they voiced strong concerns about side effects. Even so, some older women use FP methods with positive results that are observed among the community. Younger women did not tend to speak of using FP, but did speak of benefits they had witnessed. Low knowledge among men was identified as important factor in men's resistance to FP.

With regard to natural FP methods, these were seen as acceptable, and participants had some exposure to the Standard Days Method® (SDM) and Lactational Ammenorrhea Method (LAM). For instance, several participants were aware of MoonBeads, or local variations using rocks or loose beads to count days in a woman's cycle. Many spoke of "danger days," or days when a woman is likely to get pregnant, though, as noted, the actual fertile period was not well understood. Moreover, many participants were familiar with breastfeeding as a method of FP, but most did not understand the LAM criteria. Among many, continuous breastfeeding was seen as the mechanism of pregnancy prevention, and participants did not report using all three criteria. Because of this, unexpected post-partum pregnancies while breastfeeding were described, leading many to distrust breastfeeding as a method.

Condoms were highlighted by men, but few participants used them for FP. Condoms were associated with urban areas and linked with sex work. Women held strong reservations and reported fear of using condoms. Participants had some familiarity with sexually transmitted infections (STI) symptoms, as well as misconceptions, but were familiar with accessing treatments. Issues of access to FP methods were not widely reported, though this may be attributed to low use. FP Providers spoke of many barriers, including staffing, funding, and stock-outs. They also expressed reservations about providing services to women without a husband's consent because of the possibility of violence. Moreover, they spoke of challenges to reaching remote areas and in engaging men.

Communication about FP was said to occur throughout the community, especially among peer groups. Among couples, communication was rare, as FP was said to be viewed as a woman's issue; low knowledge among men was also said to be a barrier to couple communication. Men were identified as the primary decision-makers, and women were said to potentially face violence when bringing up the matter. Further, decisions are heavily influenced by mothers-in-law and clansmen, who tend to oppose FP use. Some women were said to have little control in FP decision-making, and therefore to covertly seek FP methods, at great personal risk.

Despite these challenges, participants were very interested in learning more about fertility and FP and their desires were supported by ECCD and Community Leaders. Participants spoke of a variety of method of diffusing information, to reach the entire community.

Through EDEAN, young women and men (15-24 years) will participate in a series of single-sex and mixed-sex peer group sessions at which they will discuss fertility awareness topics. Following the

discussions, the participants will engage in forum theatre performances of scenarios in which they apply fertility awareness information to their lives. Subsequently, groups will hold community-wide forum theatre performances to encourage dialogue and sharing of fertility awareness information throughout the community. To further encourage diffusion of fertility awareness information, participants in peer group meetings will receive an educational tool with fertility awareness information that they can share with others, and local artists will be encouraged to write songs that discuss fertility awareness themes, some of which will be aired on the radio.

Through engaging women, men, and communities in fertility awareness activities, EDEAN will work to change gender and other social norms that pose barriers to fertility awareness and FP. By creating public forums in which community members can role play situations which involve fertility awareness, the solution aims to encourage behavior change among women and men through identifying, portraying, developing, and practicing new approaches for addressing their fertility awareness needs.

# INTRODUCTION

Georgetown's Institute for Reproductive Health (IRH) has received funding from the United States Agency for International Development (USAID) to implement the project, "Fertility Awareness for Community Transformation (FACT) Project" (Cooperative Agreement No. OAA-A-13-00083). FACT is a five-year United States Agency for International Development (USAID)-funded project implemented by IRH in partnership with the International Center for Research on Women (ICRW), Population Media Center (PMC), and Save the Children (SC).

FACT aims to foster an environment where women and men can take actions to protect their reproductive health throughout the life-course. As a research, intervention, and technical assistance project, FACT is testing solutions for increasing fertility awareness and expanding access to Fertility Awareness Methods (FAM) at the community level, with the goal of reducing unintended pregnancies and improving reproductive health outcomes. IRH and its partners employ a systematic approach to testing these hypotheses through developing and assessing innovative solutions to improve fertility awareness and expand availability of FAM.

The "*Emorikinos Daadang Etogogogitoth Alatanakithi Ngidwe* (EDEAN)" solution will be developed and tested in the Karamoja sub-region of Uganda. The name means "Let's Come Together and Strengthen Child Spacing", and was selected by Karamojng community members to emphasize the importance of bringing men and women together in this effort. This solution focuses on increasing fertility awareness through community and behavior change approaches that respond to women's expressed needs and concerns regarding family planning (FP) use, and address barriers to and facilitators of FP adoption. The goal is to develop an intervention that engages individuals and groups in learning fertility awareness fundamentals and encourages stakeholders to apply this information to their own lives. It will be introduced through existing community groups, and designed to further diffuse through social networks to reach a fertility-awareness "tipping point" in the community.

**Fertility Awareness**

Fertility Awareness is actionable information about fertility throughout the life course and the ability to apply this knowledge to one's own circumstances and needs. It includes basic information about the menstrual cycle, when and how pregnancy occurs, the likelihood of pregnancy from unprotected intercourse at different times during the cycle and at different life stages, and the role of male fertility. Fertility awareness also can include information on how specific FP methods work, how they affect fertility, and how to use them; and it can create the basis for understanding communication about and correctly using FP.

This solution will be implemented through Early Childhood Care and Development (ECCD), a Save the Children International (SCI) program that aims to increase access to quality early childhood care and development programs. There are a total of 520 group members, in 52 groups (in 52 parishes). ECCD collaborates with Alternative Basic Education for Karamoja (ABEK) through which

FACT can also reach the target group. Group members are women and men who are parents of young children, age 3-5 years for ECCD and 6-18 years for ABEK. Groups are provided with capacity building and training on parenting skills and health topics, and conduct events in the community to share what they learned with other parents.

IRH and SC conducted formative research to explore new behaviors and diffusion of information, the acceptability of various FP methods, fertility awareness and cultural factors that affect knowledge and perceptions of fertility, knowledge, attitudes and behaviors related to use FP methods, as well as couple communication around FP. The research also investigated interest and considerations related to learning about fertility awareness. In the next phase of the project, findings from this research will be used to inform the development strategies for addressing critical aspects of delivering fertility and FP information through a simple, effective and easily diffusible intervention designed to be culturally appropriate, acceptable, and engaging.

# STUDY CONTEXT

The Karamojong comprise a cluster of agro-pastoralist societies in the far north eastern part of Uganda that include three ethnicities: Karimojong, the Jie, and the Dodoth. The Karimojong are the largest group and live in the southern part of the Karamoja region. They include the Bokora that largely reside in the Napak District, Matheniko in the Moroto District, and Pian in the Nakapiripirit District. The Jie reside in the Kotido District and the Dodoth in the Kaabong District. Each of these groups share the same descent and speak dialects of the Nga'Karamojong language (Gray et al, 2003).

Historically, the Karamojong have identified as a nomadic cattle herding community. Cattle are central to the Karamojong identity—a source of food and economic security. Often women were said to reside in the manyatta (homestead), raising and feeding families. Most men grazed cattle in the kraal (extensive grazing territories).

**Figure 1** | Map of Karamoja Sub-Region|
[Photo Credit: Gray 2002]

As the rest of Uganda modernized, the Karamojong were said to resist cultural changes. An often referenced statement by Prime Minister Apolo Milton Obote in the Uganda Gazette in 1963, "we shall not wait for Karamoja to develop," underscores the impression of the Karamojong as lagging behind and holding the country back (Daily Monitor, 2012). Relatedly, the Karamojong have long faced increasingly difficult challenges to their way of life including political and economic pressure to sendantize and modernize.

Currently, Karamoja's communities are adjusting from a disarmament campaign that has been said to have increased security in the region but had a substantial effect on livelihood, gender roles, and responsibilities in the community. Simultaneously, the region has faced climate change,

including a severe and prolonged drought that has further exacerbated food scarcity (Stites and Akabwai, 2009; Huisman 2011).

HIV/AIDS is also impacting the region. While the prevalence of HIV in Karamoja is currently much lower than the national rate (7.3%), Karamoja has experienced an uptick over the last decade, increasing from 3.5% to 5.3% (Uganda Ministry of Health and IFC International, 2012; SUSTAIN, 2014). Violence is also another major factor in Karamoja, with 72% of men and 47% of women reporting experiencing violence after the age of 15 years (UDHS, 2011). These high levels of violence, particularly for men, may be attributed to cattle raiding practices and disarmament (Stites and Akabwai, 2009; Huisman 2011).

Currently, Karamoja is known to be the poorest sub-region in Uganda, and has the lowest human and economic development indicators in Uganda (Development Research Center and Training, 2008). The Total Fertility Rate (TFR) of 6.4 is slightly higher in Karamoja, compared to the national rate of 6.2 (Uganda Bureau of Statistics & ICF International Inc. 2012). Compared to other regions in Uganda, polygamy is most common in the Karamoja region, with 27% of Karamojong men reporting more than one wife (Uganda Bureau of Statistics & ICF International Inc. 2012).
In Karamoja, women desire large families, with an average of 5.8 children. The median age at first birth is 19.2 years, and about 30% of women age 15-19 have begun childbearing (Uganda Bureau of Statistics & ICF International Inc. 2012). Use of modern FP is extremely low in Karamoja, even compared to the rest of the country, wherein 26% are said to use a modern method of FP. Only 7.4% of married women in Karamoja do so. Yet the region's rate of unmet need for FP is lower than the national rate. Only 21% of married Karamojong women are said to have an unmet need for FP, compared to the national rate of 34% (Uganda Bureau of Statistics & ICF International Inc. 2012). Women do not seem to be receiving FP information at key points in the health system. Among women not using contraception, nearly 70% did not discuss FP either with a fieldworker or at a health facility in the past year (Uganda Bureau of Statistics & ICF International Inc. 2012). Among those who gave birth at a health facility in the previous 5 years, less than 20% received counseling on FP before being discharged.

# RESEARCH OBJECTIVES AND METHODS

## Research Objectives

The primary objective of this study was to collect information needed to design the *Community Mobilization through Existing Networks* solution that will be implemented in the Karamoja sub-region of Uganda as part of the FACT Project. The research explores awareness of fertility, FP, and menstrual hygiene, as well as cultural factors and gender norms that affect motivation to use FP. In addition, the research assesses the manner in which information is received and diffused among social networks. The results will be used to determine an appropriate medium and inform the design of a solution that creates fertility awareness in a culturally meaningful and engaging way.

Formative research will investigate two main areas to inform the development of the solution. These areas include fertility awareness and FP:

Fertility Awareness

- What do women and men know about fertility (e.g., risk of pregnancy, observable signs of fertility)?
- What do women and men know about the menstrual cycle and hygiene?
- What are cultural beliefs and practices around fertility and menstruation?

FP

- How do women and men learn about FP and sexual and reproductive health (e.g., print, electronic media, billboards, mobile phones, other sources)?
- Who do women and men turn to for information about sexual and reproductive health and FP? How do new ideas about innovations spread through social networks in the community? What social norms govern communication on these topics (e.g. gender or age barriers)?
- What do women and men know about FP methods?
- To what extent is FP use acceptable among women and men?
- What are the barriers and facilitators of FP use among women and men?
- What social/cultural (e.g., gender norms) and environmental factors (e.g., access) influence FP use and unmet need? How do they influence them?
- How do women and men communicate about FP (e.g., number of children, timing of sex, condom use, and abstinence)? How frequently do they communicate? What is acceptable to discuss and what is not?

## Methods

Formative research involved focus group discussions (FGDs) and in-depth interviews conducted with members of community groups affiliated with SCI, as well as community leaders and FP providers in Nadunget and Ngoleriet sub-counties of the Karamoja sub-region in Northeastern Uganda. FGDs and In-depth interviews were conducted by moderators of the same sex as the participants.

FGDs explored FP needs, reasons for unmet need, gender and other norms related to FP use, barriers to contraceptive uptake, and interest in learning about fertility awareness or using FAM. A total of 20 FGDs were conducted with members of community groups associated with each platform, with 8 participants per group, for a total of 160 FGD participants (See *Table 1*). Ten FGDs were held in each district. FGDs were constructed to maximize diversity between groups for comparative purposes, with separate groups for older females, younger females, older males, and younger males. SCI recruited ECCD group members of reproductive age, defined as 18 – 45 years for women and 18-50 years for men, to participate. Youth aged 15-17 years who were members of participating community groups and are married and/or parents (therefore considered emancipated adults) were also included.

**Table 1: Distribution of Focus Group Discussions**

| FOCUS GROUP DISCUSSIONS | KARAMOJA SUB REGION | KARAMOJA SUB REGION |
| --- | --- | --- |
| | Nadunget | Nadunget |
| | Number of Groups: | |
| Older women (25-45) | 3 | 3 |
| Younger women (age 18-24, or emancipated adults (married or mothers) age 15-17) | 3 | 3 |
| Older men (25-50) | 2 | 2 |
| Younger men (age 18-24, or emancipated adults (married) age 15-17) | 2 | 2 |
| TOTAL | 10 | 10 |

In-depth interviews were intended to gauge interest in and assess the feasibility of offering fertility awareness through existing groups, as well as the type of training, support, and supervision facilitators that would be needed to implement the solution.

A total of 12 in-depth interviews were conducted in the two districts (see *Table 2*). The interviews were held with ECCD Group Facilitators, Community Leaders (e.g., clan leaders, local council chairpersons, religious leaders), and FP Providers. FP Providers included staff from two public health facilities and two from private health facilities, given that there are a large number of private health facilities in Karamoja, drawn to the region to fill gaps in health services. SCI identified and recruited individuals in each of these categories who were over the age of 18 to participate in the In-depth Interviews.

**Table 2: Distribution of In-Depth Interviews**

| IN-DEPTH INTERVIEWS | KARAMOJA SUB REGION | KARAMOJA SUB REGION |
|---|---|---|
| | Nadunget | Nadunget |
| | Number of Groups: | |
| ECCD Facilitators | 2 | 2 |
| Community Leaders | 2 | 2 |
| FP providers | 2 | 2 |
| TOTAL | 6 | 6 |

Participants were recruited with assistance from SCI. When participants arrived for FGDs or in-depth interviews, they were given an overview of the study and then consented privately. The consent process included a consent form and script that was read aloud by an interviewer. Given known levels of literacy, participants completed the consent form in front of a witness who was fluent in the local language, literate, and not affiliated with the study or with SCI. Each witness was informed of the confidential nature of the study and agreed to not share names of or information about any study participants with anyone else. The consent script detailed the study information and participants rights (including the voluntary nature of the study). Both participants and witnesses were required to sign the consent form. All research activities were held in locations central to the parishes from which participants are drawn. FGDs lasted about two hours and were held in private areas where the conversation could not be overheard. In-depth interviews lasted about one hour and were conducted in private locations convenient to participants.

After data collection was complete, research team members in the U.S. and Uganda collaborated to analyze the FGD and in-depth interview transcripts. Matrices were developed to organize findings and identify main themes. Team members read each transcript, recorded findings by theme, and wrote summaries of findings under each theme. The summaries were compiled into a database, and researchers subsequently analyzed the findings across focus groups and interviews to identify overarching results.

Later, researchers from Uganda and Washington, DC held events with various stakeholders (i.e., formative research participants, FP providers, district and sub-county leaders, and local NGO representatives) as a form of post-research member checking to increase the credibility and validity of findings (Creswell 1994).

The study protocol and research instruments were approved by the Georgetown University's Institutional Review Board (IRB) in Washington, DC. The protocol and instruments were also

approved by Ugandan review boards of The AIDS Support Organization (TASO) and the Uganda National Council for Science and Technology (UNCST).

# RESULTS

During the course of the FGDs and interviews, participants including younger and older men and women affiliated with ECCD or ABEK, Community Leaders, ECCD Facilitators, and FP Providers, spoke of new behaviors that have recently been adopted in the community, including use of modern FP. Participants also spoke of various aspects related to fertility and FP methods, as well as communication about FP. Finally, participants' interest and opinions on delivery of fertility awareness information through the ECCD platform was discussed and suggestions for innovative methods for diffusing information about FP throughout the community were made.

## New Behaviors and Innovations

The Karamojong are currently experiencing rapid changes after centuries of tribal living, related to food scarcity crises from an extended drought in the region, cattle raids, government-led disarmament campaigns, and an increased prevalence of HIV. At this time, the region is said to be becoming increasingly secure, though cattle raiding, food scarcity, and HIV are issues for the communities living in the region.

> "The challenges that our community faces, you know the problem of Karamoja here, there is a lot of famine, a lot of insecurity. People, they go and fighting, fighting…and a lot of revenge…because there is too much cattle rustling. People here will get the other people's cattle." (Community Leader)

> "These days, raids have reduced and even guns have reduced in the hands of the civilians. The government disarmed most of the guns which were in the hands of the civilians and at least now there's peace in our communities as compared to those days." (ECCD Facilitator)

In response to the drought, disarmament, and increasingly sedentary roles among men, changes are evident in many facets of life among the Karamojong. When asked about things that people in their community do today that they did not do five to ten years ago, many participants often shared a myriad of experiences that were said to be readily adopted in the community in many aspects of life: in education, technology, gender roles and responsibilities, and in health. Often participants described many different experiences simultaneously.

> "Like now, people used to not to come to the Health Centre's to deliver, but now they are doing it. There are very few who deliver from home most of them come to the Health Centre. We have an ambulance and we also have the VHTs (Village Health Teams). We tell them that any pregnant mother should be referred to the Health Centre immediately and can be accompanied by the VHT. And then also, when they get pregnant, they go for this antenatal clinic. They accept to go with their husbands now for test for HIV and they also give them some conditions that if you don't—because there's some food that they give them when they come for the first visit to the Health Centre—so when you come with the husband, at least you get some higher kilos of *posho* or *soya*. So it has really encouraged

> most of them to come with their husband to come for testing on the first day of the visit, and those are things which they used not to do." (Community Leader)
>
> "People used to live in dirty places, but now at least now they have learnt to bathe. They are cleaning their utensils. They are also being told to build latrines. Clearing bushes, slashing the compound…They do go for HIV testing and use of family planning." (ECCD Facilitator)
>
> "Also these days there so many new things that have come that are going to help a lot of people. They have also brought a village ambulance, there is soya for the malnourished. All this from the government's thoughts to help the people. From immunization, people did not know. But from the government, now we know." (Older Woman)

**Education**

Older participants spoke of changes in educational opportunity. Formal education was not common among the Karamojong until recently. Participants spoke of the efforts to send children to school and the prospects for individual and community advancement. It was noted that the government was responsible for facilitating access through free education.

> "People now went to school. This is all because of the government. Because, those days people were backward. Karamoja went on in backwardness, but when their children grew up they decided to take them to schools and so they went on learning slowly. Like some of us whom they told to be teachers for children in these villages. Sometimes when we go for meetings, they teach us certain things and we also tell the other women what we were taught." (Older Woman)
>
> "When you educate your child and he or she becomes wise and he goes to the next class, Primary 2, 3, 4, 5, 6, and 7. When you educate your child…that child will drive a car home, even a motorcycle. Look at this child, he is having a bad (dirty) face, but you keep washing it. But when this child goes up to there, you will not believe that this was the child who used to wear rags, and realize all your problems are settled." (Older Woman)
>
> "Our children are now studying for free. We don't pay any school fees, everything from school. And these days there's even ABEK from Save the Children. All these things were not there some years back. I appreciate the Museveni's government very much." (Older Man)

The value of educating children was said to extend beyond the advancement of the child, to benefit the broader community. In describing this, one older man noted that educated children bring new information from schools to share with the community. According to this man, "Some of the [new] things we learnt from our children who are studying. Whatever they have been told from school, they also come back home and tell us what they have been told from school."

## Technology

Participants also spoke of advances in technology, particularly mobile phones. Unlike many changes that seemed to effect both women and men, access to mobile phones seemed limited to men. For example, while several men discussed a proliferation in access to mobile phones, women only mentioned phones as possible medium for disseminating information, even if indirectly.

> "These days the world has changed. People now have mobile phones which they use for communicating with the relatives and friends, unlike those days the phones were very expensive. It was only the rich people who could afford to own a phone." (Older Man)

> "These days some people have mobile phones they use for communicating with their relatives and friends. They can even receive or send money using the phone. Those things were not there those days. Owning a phone was only for the rich people and if you have had one, you would be the most respected person in the village. But now young boys and girls also have them. In fact, they are even cheap because I hear even with thirty thousand shillings you can get a phone." (Young Man)

> "They can use the mobile phones to send people messages about what they want to pass on and those people who have phones can also tell those who don't have it." (Younger Woman)

## Gender Roles

Both men and women spoke of changes in gender roles and responsibilities. Several men described advancement that tended to benefit women. An ECCD Facilitator mentioned that forced marriage is becoming less acceptable. A young man spoke broadly of women's changing roles in the household and in careers.

> "Now before there is this one of forcing marriage. If you get a girl, you can catch her, you can just get her. So now they have changed. They say it is bad." (ECCD Facilitator)

> "Nowadays women have also become heads of households and they now share responsibilities equally with men. There's no saying that this is a woman. Women have started taking up big offices these days." (Younger Man)

Women, however, did not speak of social advancement. Instead, they focused on changes in men's roles from a more nomadic to a sedentary life. While men no longer roam with cattle as they have historically, women are said to still have the same responsibilities of in gathering food and caring for children. One woman noted that the increased burden of providing food for children, in light of the famine and without support from men. According to her, this has led women to become increasingly "tough" on their husbands.

> "Our men do not help us in looking after the children, they only know to eat, wake up, and go loiter in the trading centres. That's all they know. But buying food or digging (cultivating food), they do not know that. It's us women who struggle on our own to make sure our children have eaten. So that has made us be tough on men." (Younger Woman)

**Health**

Health-related changes were a main focus across all groups. Many participants described a shift away from traditional health practices (e.g., traditional healers, herbal remedies), to using modern medical facilities and hospitals for treatment of health problems. For instance, participants spoke of malaria prevention (e.g., using mosquito nets) and receiving modern treatment in health facilities. It was noted that women are increasingly receiving antenatal care (ANC), giving birth in hospitals, and taking children for immunizations. Participants also spoke of HIV testing (part of ANC) and treatment for those living with HIV/AIDS. Modern FP methods were also said to be more frequently adopted. In describing the changes, participants emphasized the immediately observable benefits to health though using the new services.

> "The existence of diseases like malaria made us also to learn that if you go to the hospital for treatment of any disease in the hospital, you will get cured. So now we know that the hospital is where they treat diseases, people stopped going for native doctors which they were relying on." (Younger Woman)

> "The new things people are doing these days is that now days when the woman gets pregnant, these days they go to the hospital for antenatal together with their husbands. And if she goes alone to the hospital, she will not be attended to unless if she goes with the husband and it's from there they test the two for HIV." (Older Man)

> "You know when you give birth from the Health Centre and the child grows up, at least you get encouraged to deliver from the hospitals and other women also will learn from there because they see you children growing up well, so healthy." (Younger Woman)

> "So now conditions have made people start producing few children. Women started going for family planning. We have about four women in this village, if I can remember, who use injections so that they cannot get pregnant." (Younger Man)

Participants also discussed improvements in hygiene and sanitation. Participants spoke of adopting new and more hygienic behaviors, with immediate benefits. Participants also spoke to a lesser extent of new latrines and a reduction of open-defecation.

> "Now what we are looking at, those days our children used to not be clean. But now they are, and us too. We are no longer smelling and now you cannot find someone suffering from scabies and our children are no longer getting sick." (Older Woman)

> "What has impressed me now, there is a lot cleanliness in people's homes, yet it used not to exist. They have even put it that it is important to construct latrines too." (Older Woman)

> "People are now bathing and washing their clothes. You find even the homes are very clean these days, but before when you'd visit the manyatta, like that one, you will not like it. Open defecation everywhere, the whole place smelling and full of flies." (Younger Man)

**Learning New Information**

When asked where and how people learn new information, most participants voiced that people of both sexes and age groups are exposed to government mass communication campaigns on health-related prevention and treatment efforts, as well as sanitation-related topics. They also receive health information and referrals directly from VHTs and health facility staff, and additional information from a variety of NGOs and INGOs.

Participants spoke of enjoying efforts that build upon their language and traditions. For instance, one older woman described a song about FP that was learned throughout the community, saying "Also another (way to learn) is from songs. We have some songs we sang about family planning encouraging women to space their children."

Participants also spoke of learning through observation and interpersonal communication. One older man described, "Here in the village, we mostly learn from our friends. When you see a friend has done something and is doing well, others will also copy." Both men and women spoke of norms of sharing beneficial information with one another. Some described how information was brought from outside the region by those who had traveled. One oft-repeated phrase among men was that while people may not be able to share food, they will readily share information.

> "We learnt from people who have travelled outside Karamoja and have been exposed to some of those things, they also come back tell us from the village and we also copy from them." (Younger Man)

> "We all learn from the hospital, when we go with them and also word of mouth fellow men tell their fellows what they have seen new and the same to women but when they meet and home with their women they also tell them the same thing." (Older Woman)

> "Here in this community, we get to know the new things from friends. When a friend hears of any new information, they tell others also. People in this community are so cooperative. They can deny you food but not the information." (Younger Man)

Within the community, it was noted that women, especially, tend to deliver new and important information. For instance, on older man noted, "We men also learn from our wives. When they go to the hospital, the first thing they come and tell us, their husbands, is what happened from

wherever they went." While both men and women were said to share the responsibility, men highlighted women's role in delivering information.

> "We (men and women) learn in the same way, we both learn from each other. Whatever women learn from anywhere, they tell us, their husbands, and we also tell them of what is new that we the husbands have learnt." (Younger Man)

**Motivators and Barriers to Adoption of New Behaviors**

In addition to describing new innovations and experiences, participants also discussed factors that motivate adoption of new behaviors, as well as barriers to change. While participants spoke of factors that encourage people to adopt new behaviors at multiple levels (See Figure 2), they tended to describe barriers to change at an individual level. Often those that were resistant to change, were described very negatively.

***Motivators***

Environmental factors, such as climate change that precipitated food scarcity, were described as a main impetus for adoption of new behaviors such as child-spacing and limiting family size. Increased information and access to services, resources and incentives (e.g., mosquito nets, birth kits, food) from the government, NGOs, and INGOs were also a motivator. Here one younger woman described how "mama kits" that women receive during antenatal and hospital delivery have influenced women in her community, saying "Another is that the government has started motivating us, especially when you go hospital for delivery. You find out that they give bags that contain bed sheets, towel and soap. That why we have started to learn these new things."

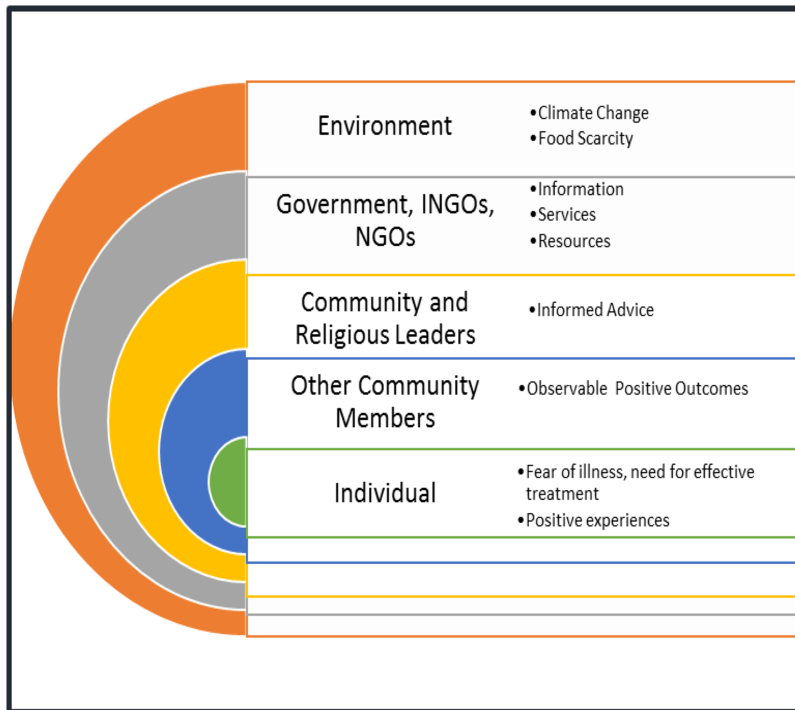


**Figure 2 |** Motivations for New Behaviors **|**

At a social and community-level endorsement from community leaders and religious leaders were described to encourage people to take action to try new things, such as using modern medicine and health facilities. As noted, participants also mentioned the ability to observe positive outcomes of new behaviors among other members of the community as a catalyst for change. According to one older woman, "Another reason why we been encouraged, is we have

seen the difference between what we used to be." Individual factors, fear of illnesses and need for effective treatment of infections and diseases, such as HIV, yellow fever, and malaria were also described. Many participants also noted that positive outcomes from adopting new behaviors tend to reinforce use (e.g., attending ANC and delivering in hospitals, HIV and malaria treatment, improved hygiene leading to decreases in disease and illness).

> "You know, the way the diseases like AIDs and Malaria were killing people, it was very fast. This made people to start going for the HIV test so that when you find out that you are HIV positive, you are enrolled for ARVs so as to live longer." (Younger Man)

> "We love our lives, so we don't want to die of diseases like HIV. So we go for test early, so as to know our status and plan well." (Younger Man)

***Barriers***

When asked about those that resist change in the community, many participants reiterated that people were trying new things throughout the community. Some declared that everyone is open-minded and accepting of the changes. One older woman noted, "There is no one who has not chosen to accept the new things. We have all accepted this." An ECCD Facilitator reiterated a similar perspective that everyone is adopting new behaviors, for the benefit of the community, saying "There are no people who have refused to do these things. Every new thing is meant to change the lives of the people for the better."

In contrast to the common descriptions of the community readily embracing change, some Community Leaders described the stereotypical cultural resistance among Karamojong communities. Some described the communities as stubborn and slow to learn. For example, one Community Leader noted a frustration with people attending meetings in his community.

> "I have a very big problem of dealing with this stubborn community. Some people take so long to understand—mostly men. Even if you come up with a good idea, like some community work, very few people always turn up." (Community Leader)

When community members described factors that cause people to resist change, most participants spoke at an individual level of factors such as fear and stigma, lack of information due to weak social bonds, and a reliance on traditional practices. Fear and stigma were said to be a substantial barrier to change among men, particularly health-related behaviors such as HIV testing and treatment. Others spoke of problems with receiving information and described weak social bonds that inhibit information exchange. One Community Leader emphasized a reliance on traditional practices, such as using traditional healers.

> "Sometimes we blame these people, that they don't want change. I would think probably they lack information about some things. They even fear to go to the friend to ask about

something, because they only stay in their homes, not even taking a walk to town to see how new things are done." (Younger Man)

"I think it's the ignorance, they don't know anything new and they are not willing to learn. Such people don't have even friends who can give them good advice." (Older Man)

"There some people who, when they were brought up, they have never accepted any change…Like now, when a child is sick at home, they don't just rush. In some villages or in some families, they first want to go for this *Ajulo*—that's witch doctors. Then the witch doctor will say bring this color of a goat or chicken they take the child there first, before they take [the child] to the Health Centre for treatment. And when they see that things are not well, that's when they will tell the VHT." (Community Leader)

Many characterized those resistant to change very negatively, using words like *stubborn*, *ignorant*, and *backward*. While some participants noted that a contingent that refuses progress is common in every society, participants also voiced concerns of the damaging impact on the community as a whole. As one younger woman noted, there are always people that choose not to accept change, stating "You know, like every society, there are those people who will never accept change and other are just rigid and backward, there are the ones still making Karamoja lag behind."

Overall participants described their culture as one that is in flux, from traditional beliefs and practices to adoption of modern innovations and advancements that were proven to have positive benefits throughout the community. They depicted their communities as open-minded and engaged in trying new innovations and adopting behaviors, particularly in light of food scarcity, changes in livelihoods, and exposure to HIV. They also emphasized the manner in which social connections and communication are important to the health of the community. The benefits of new health-related innovations were emphasized, and motivations that range from environmental to individual levels were described. Although participants downplayed resistance to change within their community, they describe frustration with those that refuse to adopt new behaviors, particularly because of the negative effect on the entire community.

## Fertility Awareness

In assessing basic fertility awareness, participants were asked about knowledge, attitudes, and practices related menarche and menstruation, pregnancy and conception, and vaginal secretions. Participants described individual knowledge and broader cultural factors that shape fertility awareness.

### Menstruation

When discussing menstruation, participants spoke of names used to describe a woman's monthly cycle that tended to vary among age groups. They shared knowledge related to premenstrual

symptoms and onset and frequency of menstrual periods. Participants also described cultural perspectives related to menarche and menstruation.

### *Names for Menstrual Period*

When asked about names for the menstrual period, a variety were mentioned across groups. Younger and formally educated people were said to call it a "period." Some participants described names associated with the lunar cycle (e.g., "time of the moon"). Older women noted a few additional names that seem rooted in the culture. Certain names, such as "fear of cows" and "I am sitting" indicate some limitations menstruating women have previously and may continue to face, which are described below.

### *Limitations during Menstruation*

Both women and men noted restrictions on daily activities for menstruating women. During menstruation women are not supposed to clean a child's nose, not allowed to cook or serve food, and are not supposed to appear in public gathering. There are also a variety of limitations surrounding interacting with cows, a central part of Karamojong life. Menstruating women are not supposed to touch cows, milk cows, or follow the same pathway as cows, as it is believed this could cause the cows to go blind.

> "And another one will say that 'am fearing cows.' Why they say this is because when you are in your period you cannot touch anything of a cow, because culture does not allow one to go near a cow when they are in their periods." (Older Woman)

> "Additionally, she cannot share the same road with cows because it will affect the cows' eyes, and the cows will start being sickly from the eyes. If she passes where the cows have passed, it is like she is committing adultery. Three days after the end of her period she can enter into the kraal." (Older man)

### *Pre-Menstrual Symptoms*

All groups seem to have a basic understanding of premenstrual symptoms, such as menstrual pain and cramping and breast tenderness. Women based this on their own experiences, and men noted learning about this through observing their wives experiences. Several women, both younger and older, noted a phenomenon of hands turning red, as a pre-menstrual symptom.

> "I realized my hands changing and yet usually my hands are dark and they become red, so that is the indication that they (menstruation) are about to come." (Older Woman)

### *Onset and Frequency of Menstrual Period*

When asked about the onset and frequency of menstrual periods, a high degree of variability was described among all participants. Ages of onset ranged widely across groups, though most fell

within a range of 10 to 18 years. One young woman indicated a challenge to determining onset, noting that conceptualizing menstruation in terms of numerical age is something learned in school: "You cannot know what ages someone starts it (menstrual period) at. Only when you have gone to school, that is when you can know the ages." In terms of frequency of menstrual periods, many participants described periods coming at least twice a month. Some women reported as much as four times a month.

> "It (menstrual period) happens twice in a month and some women get it only once in every month." (Younger Woman)

> "Among others once a month, some people even have it three times or even four. Among people, it is not the same." (Older Woman)

Some of the variability mentioned may be because tracking periods is not common among women. As one young woman expressed, "We do not keep track, we just wait until they come. We even do not know when they will come, we just wait for them to come." Some variability may be attributed to methods of tracking periods using the lunar cycle, as many women described. According to one older woman, "Like me, it starts when the moon is in the middle there, and others when the moon is dying or ending." Though not mentioned by participants, some variability may also be due to confusion around distinguishing spotting and menses at different stages of life (e.g. after first menses, after giving birth, during pre-menopause).

Although not common, there was also an association among frequency of menstrual period and fertility. More frequent periods were said to be related to higher levels of fertility. As one older man described, "Some women get it once in a month and others twice in a month. They are not always the same. It depends on how fertile the woman is."

***Menstrual hygiene***

When asked what resources exist for menstrual hygiene, women reported that cotton and clean cloths are commonly used for padding. Women get cotton from the health facilities and once it is finished, they use cloths. Pads are only used by those who can afford them, and cost is an issue for many. Women were also said to smear cow's ghee during the time of menstruation to clear away the bad smell. These are menstrual hygiene practices that recently emerged. Previously, women sat on heaps of soil, let the blood flow into the ground, and then covered the spot with soil.

> "Gone are the days when we used to sit down on the ground where there's soil heaped and blood flows down and that spot you cover it with soil. It stopped. We now have knowledge of using pads and cotton." (Older Woman)

***Cultural Beliefs about Menstruation***

From a cultural perspective, it was noted that menarche is recognized as a sign of fertility and maturity. Because of this, it was said to be viewed throughout the community as a positive

transition into womanhood. After menarche, a women can begin preparing for marriage and eventual childbirth.

> "Here in this community, menstruation is something very normal and the community is happy with it because it's a sign that the lady is productive, she can bear children. The community respects such a lady because any time she can become a mother in the community." (Younger Man)
>
> "The community is so happy when the girl starts menstruation, because it's a sign to show that the lady is fertile and she can bear children. They start looking for a man to marry her, they know to expect cows anytime." (Younger Woman)
>
> "Here in this community when a girl starts menstruation, she is seen as mature. She can even get married and produce children, In fact, that's the time when the parents will want to see her mixing up with boys so that she can chose one boy and get married." (Younger Man)

Compared to women, men indicated less knowledge about menstruation. This was because menstruation was said to be a women's issue. As one older man noted, "Even the community does not know, apart from women who know because it's their condition. So they know it better. But with men, very few know about it." Moreover, some men expressed discomfort, mentioning that menstruation is not something men were supposed to know of, especially outside of their wife's experiences. A younger man indicated that it would be shameful for him to know of such things, saying "My brother, some of those things we leave them for women to handle. It's shameful for me to know whether my daughter or sister is on periods or not."

### Vaginal Secretions

As vaginal secretions are an indicator of fertility, women and men were asked about their knowledge related to the secretions. They were also asked about practices related to vaginal hygiene. In addition, participants were asked about knowledge related to sexually transmitted infections (STIs), and treatment-seeking behaviors.

#### *Knowledge*

Women, both older and younger, associated vaginal secretions with fertility to a limited extent. For instance, one older woman noted, "When a woman has this kind of thing, it shows that she is fertile she can be able to produce." Some women mentioned a belief that as women age they become drier, indicating infertility. According to an older woman, "[It is] only an old woman that is dry down there, but those ones who are still producing are always wet. And when you meet with a man, then you are still wet."

Mostly, secretions were not discussed in connection with fertility. Instead most participants associated vaginal secretions with sexual urges and menstruation. As one younger woman described, "They (secretions) come rarely, only the times of periods and when you sleep with a man."

When asked about practices for cleaning and drying the vaginal area, women did not report using methods or herbs to clean or dry the vaginal area; only bathing and washing outside for hygiene and to avoid odor. As for monitoring vaginal secretions, none of the participants discussed this, but a FP Provider noted that the Karamojong hold very negative attitudes towards the practice, even associating it with witchcraft.

> "This one of cervical mucus changes (laughing)…actually they see it as, how do they call it…*something never to be even practiced*…There attitudes, actually the way they perceive it is really difficult. Actually in Nga'Karamojong they say *akapilang,* which means "a witch." Why are you touching those things (laughing)?" (FP Provider)

Although men generally demonstrated some basic knowledge of menstrual and vaginal hygiene, they were less knowledgeable and very uncomfortable with these questions. For example, one young man stated that discussions about vaginal secretions were viewed as extremely vulgar: "I suggest that we skip that question because it's so vulgar."

**Sexually Transmitted Infections (STIs)**

All participants seemed to understand basic symptoms of sexually transmitted infections (STIs), though some tended to link STIs with other types of infection (e.g., yeast infection, UTI). Most also understood that STIs are caused through sex with an infected person. However, many participants, across all groups, indicated misconceptions. A common belief was that STIs are transmitted by touching the urine of an infected person on a toilet or on the ground. Such associations, may be related to concerns about using latrines, which were described as a new innovation in the region.

> "Also from toilet, when you go on foot you can get these diseases from the urine of a person who is sick." (Younger Woman)

> "Some organizations have tried to come and encourage them to dig some toilets. They can dig, but the Karamojong fears to go there, especially women. They say, "Oh! You see that hole there? If you go there, you will not produce." (Community Leader)

STIs were also associated with many behaviors that were seen negatively within the community, including poor hygiene, promiscuity, and sex work. They were said to be particularly common in "town," the more urban area. As one young woman described a higher prevalence of STIs in town, comparted to her village, "Not here, maybe in town there. But here, not many have them."

All groups mentioned that women and couples get tested and treated for free at health facilities, and sometimes they require treatment in the hospital. Generally, participants did not report challenges or difficulties in seeking or receiving treatment, though it was noted that, at times, individuals were unaware until the infections were significantly advanced. It was also reported that some men face challenges bringing all of their wives with them for treatment.

> "Some of them go but some when they have not realized that they are the ones who are sick they will never go to the hospital and some of them are concerned they tell their wife's to go with them to the hospital." (Younger Woman)

> "You know when these people realize that they have infections, their husbands take them to the hospitals so that they can be treated." (Older Woman)

> "As long as partners realize they are suffering from these diseases, they usually go the hospital the check them and they also give treatment. But some will not accept to go the hospital, sometimes in the hospital they ask them to go with all their women." (Older Woman)

**Pregnancy and Conception**

Participants were asked about pregnancy and conception as a means of assessing knowledge about fertility. Participants also described methods of learning about fertility and knowledge related to how and when pregnancies occur. In doing so, many described challenges in planning pregnancies, some that are rooted in gender roles and cultural expectations.

***Knowledge***

When discussing how people learn about pregnancy and conception, it was evident that many women and men are not formally exposed to information on pregnancy. All groups tended to stress that they learned mainly from personal experience after getting married, though some reported learning from peers. This was said to make planning pregnancy a challenge.

> "We learnt through our own experience. These things you don't need to wait for someone else to teach you. You keep on trying on your own until when you will learn. So we are married women and we always sleep with our husbands and we learn from there." (Younger Woman)

> "You know, when I had just married I thought within the first month I would make my wife pregnant, but nothing. I learnt a lesson, it's not just a matter of playing sex but it's about the timing." (Older Man)

As one older woman described, some women do not realize they are pregnant until they see physical changes. According to this woman, "She sleeps with her husband and they realize that she is pregnant. Sometimes she does not know until when the stomach grows up."

To a lesser extent women were said to learn from VHTs, nurses, and the radio. Learning from health facilities was said to result in more comprehensive knowledge. Older women mentioned parents as a source of information. Men were said to learn about pregnancy primarily from wives. Men were also said to learn from hospital nurses (e.g., when accompanying wife for ANC), from VHTs, community leaders, and schools.

In all likelihood, because of a lack of formal education on fertility, few held comprehensive knowledge about when pregnancy is likely, and many reported misconceptions. For instance, one young woman associated likelihood of pregnancy with blood compatibility of couples. She noted, "Me, I learnt from a friend who has always told me her experiences about this (pregnancy). And some people, if the blood of the man does not match that of the woman, she will not conceive. This is science."

Other factors that influence the ability to know when pregnancy is possible include misconceptions about the fertile period, and that pregnancy and FP are women's issues. Among both women and men, a common belief that a woman's fertile period occurs just after menstruation has ended was frequently reported. As with menstruation, some men felt that it was not important for men to know about pregnancy or FP.

> "You sleep with a man when you are about to start your periods or immediately after you have finished them, if you 'play sex' with the man, just know you are going to get pregnant. For me I tried, I am talking like that because it's what happened to me." (Younger Woman)

> "You know those issues of pregnancy and family planning are for women. We don't spend time talking, what does not concern us men. But women talk to their fellow women but not men." (Younger Man)

Although participants tended to have low knowledge and hold misconceptions related to probability of pregnancy during the cycle, most held a general awareness of female and male fertility. Many participants reported that men are always fertile and that women have variable fertility. Below, two participants use the term "seasonal" to describe women's fertility.

> "The man, any time he can make the woman pregnant. He's not seasonal like women." (Younger Man)

> "The man's fertility cannot be affected at all because, the man is fertile at all times. They are not like women who are seasonal. Any time the man can make you pregnant." (Young Woman)

There was no consensus between or among groups on when a woman is able to get pregnant. As noted previously, many believed a woman is most likely to get pregnant shortly after a menstrual cycle has ended. Men, especially, felt that a woman could get pregnant at any time during her cycle and some attributed this to the will of God.

> "Am telling you my brother, if a woman is to be conceiving any time she has sex, there would be very many children, but because God has made things to happen automatically, a woman can get pregnant at a time when God has decided to bless her." (Older Man)

Among women, some also indicated a belief that unpredictable cycles can increase chances of unexpected pregnancy. As one younger woman noted, "Some people's periods are unpredictable, those are the kinds of people who when they sleep with a man they easily get pregnant."

***Unexpected Pregnancies***

These difficulties in predicting pregnancy increase the likelihood of unintended pregnancies. Several women described their own experiences with unexpected pregnancies. Some women described getting pregnant after only having sexual intercourse once. One woman shared her experience of getting pregnant before marriage.

> "You know, before I got married to my husband now, I slept with him just once—when we were young girls and boys—but I got pregnant and my parents had forced him to marry me. That's how I got my first son and how I got married. But now we have two children so far." (Younger Woman)

Other participants described pregnancies that occurred before menses had returned after birth of the previous child. In Nga'karamojong, these children were referred to as *Ikungut*.

> "There another child that you get even without your periods, and you cannot know whether you are pregnant or not unless you see the stomach growing and the movement in the stomach. Then you wonder what could be happening to you? What could have happened to this stomach of mine? …Of course, in this time you know that you cannot get pregnant because the periods have not yet come, but you realize that you are pregnant all of the sudden. That is what they call in Nga'karamojong, I*kungut*, meaning a child you get without bleeding or menstruation." (Younger Woman)

> "My friend…the woman can get pregnant after birth even after just 3 months. I am talking out of experience. I slept with my wife after 3 months after she had given birth and she conceived. My friend, I was about to run mad, because I began imagining how would I look after this young baby? But I with my wife had to accept the responsibility." (Younger Man)

The experiences among men and women facing unexpected difference were nearly opposite (see Figure 3). Overall, many women described that the felt little control in planning their pregnancies, regardless of their desires or health. Several women described the hardship, faced by women experiencing unexpected pregnancies, compared to men. Below, two young women share their perspectives on stresses of unexpected pregnancies among women, and contrast the benefits for men.

> "You know, some pregnancies usually take some people bad it makes you feel vomiting and [sometimes] you smell. Something the heart has refused. Now in this state, you are not ready for it. It really makes her feel so bad and in discomfort and so bad so bad due to those irritating feelings. But the man he will feel good to know that he is a man enough to impregnate a woman who has not been menstruating and of course his family will be happy too." (Younger Woman)

> "The woman gets so stressed and scared because getting unexpected pregnancy is something very bad more so when the baby you already have is still young. You get worried because the young baby will be sickly and the mother who is now pregnant will have a poor health. But for a man, he will not have any effect, you find there are even happy with it because for them they want many children." (Younger Woman)

In comparison, men focused on the benefits of unexpected pregnancies. They tended to describe unintended pregnancies in terms of fulfilling cultural expectations and increasing stability and status among members of their clan. In speaking of a man facing a poorly spaced pregnancy, one younger man described, "He would be very happy because he would have achieved his goal and would have also pleased his clan members and brothers." Another young man described how men are rewarded for unexpected pregnancies.

"[He that refuses family planning] is a true Karamojong, because he does not want to listen to the wife and he has a strong bond with his clan. When it comes to paying bride-price, the clan members will help him to contribute some cows." (Younger Man)

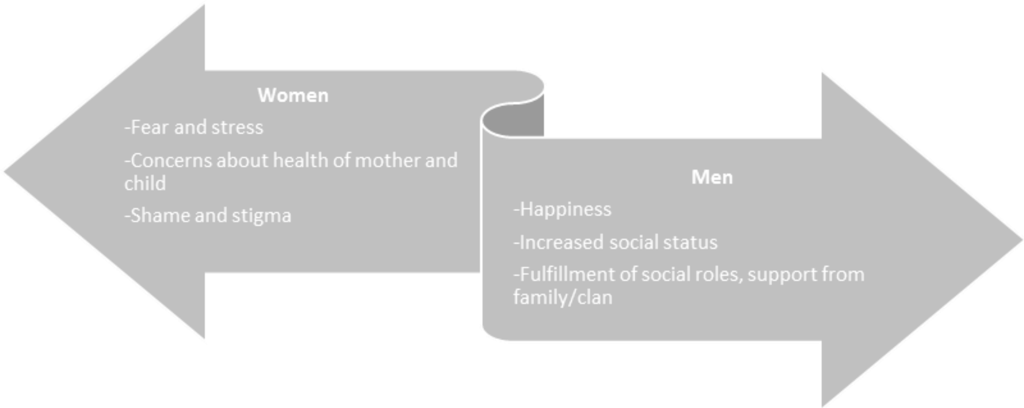


**Figure 3** | Experiences of Women and Men |

Both older and younger women also noted additional challenges, in the social repercussions that women face when experiencing unexpected pregnancies and/or not adequately spacing children. Unlike men, these women were said to be heavily shamed and stigmatized. This was acknowledged by both men and women.

> "[He] would be a very proud man that he has achieved his goal, but [his wife] would be ashamed—yet people know that her child is still young! And how did she allow (herself) to get pregnant when the other child is still young? Other people would be looking at her as a shameful woman." (Younger Woman)

> "What people do these days is neighbors become very concerned. They advise their fellow neighbors to start spacing their children. They will always ask a woman why she is allowing this kind of thing to happen in her family. They put to the woman: why is she allowing this kind of thing to continue happening in her family? They put to that woman: if she can be able to take care of two young children at once, because if is upon her to do this. That is why family planning is good when one [child] is still young." (Older Woman)

Overall, women described many barriers to fulfilling their own pregnancy desires. Some were attributed to women and men's respective cultural roles. Other's described the repercussions of refusing sex. When describing gender roles and expectations related to pregnancy, a married woman's primary role in the family was to produce children. One older woman explained that decisions about pregnancy are, "for a man, because he married you to give him children, not you telling him on how he should produce."

Among men, impregnating a woman is part of establishing masculinity and fulfilling their role of impregnating women. So much so that they fear that they do not "function" properly if sexual intercourse does not result in pregnancy. According to a younger woman, "You know, our men here think that every time he goes with a woman she has to get pregnant. Which is not the case (laughing). This really makes them feel as if they do not function at times."

Other women spoke of repercussions of refusing sexual intercourse or avoiding pregnancy. Specifically, participants described that doing so could result in conflict and violence. As one older woman described, a woman wanting to space children could be accused of cheating and could be beaten by her husband:

> "Even worse he will ask you whether you have gotten another man, [saying] that is why you do not what to sleep with him. And most times they think that you have gotten another man and they end up beating you up and when you try to explain that the child is still young they will say you are trying to refuse or divorce indirectly." (Older Woman)

Participants also described that men can easily leave one woman for another, given that polygamy is acceptable. As one young man noted, if a couple disagrees on fertility desires, the man could, "sit down with his wife sort out the issues of getting more (children) or he marries another woman."

Overall, participants indicated very basic knowledge related to fertility awareness, in terms of menstruation, vaginal secretions, and pregnancy and conception. Participants also held misconceptions about each aspect, which impede ability to accurately assess the likelihood of pregnancy. Although participants had a basic understanding of menstruation, and menarche was seen positively throughout the community, participants held misconceptions about the fertile period and also described challenges to tracking menstrual cycles. With regard to vaginal secretions, knowledge was particularly low and several men held very negative attitudes towards toward the subject. Participants seemed more informed about STI symptoms and although they held misconceptions, few reported barriers to accessing treatment. Overall, participants had low knowledge related to pregnancy and conception and described many barriers that women face related to fulfilling their own fertility desires. Unexpected pregnancies were reported and said to have a strong, negative impact on women, yet a positive impact on men. Men tended to have lower levels of knowledge of each aspect of fertility awareness, mainly as it was seen as a women's issue.

## FP

When asked about FP, most participants associated it with child-spacing. As one young woman responded: "It's for spacing children." Participants described the increasing acceptability of FP methods, as well as barriers to use. They also spoke of the knowledge and attitudes towards specific methods, including hormonal methods, and natural methods, and condoms.

### Acceptability

In discussing FP, participants spoke at length of the manner in which food scarcity and economic conditions have necessitated child-spacing and smaller families, increasing the acceptability of modern methods. To some extent, the acceptability of FP was associated with exposure to formal education and urban culture. However, women and men highlighted the importance of spacing children and limiting family size for health of the mother and children.

> "The difficult situation made some women to start using family planning methods, because now children are a big problem and also there's no food for them to eat. People also wanted to catch-up with the modern way of living, like those in town. These encourage most people to go and study in town-schools and they copy all the town behavior. But some of them just make up their minds and start doing things on their own." (Community Leader)

"There were cows and there was also food, this will feed this child and then you have the other one. But now there are no cows. If you do not space your children you realize that the other is dying because of lack of proper care." (Older Woman)

"Madam, another thing is that today we do not have food to feed a lot of children here. Hunger and famine, we cannot afford, so we decided that family planning is better for us, so that we can produce what we can handle." (Older Woman)

In Karamojong culture both boys and girls are valued in their community. Many participants expressed a strong desire for healthy children and families. Many also emphasized the health benefits of child-spacing. Participants reiterated a social pressure for women to space births and adequately provide for children.

"When you look at another woman carrying a child which is malnourished, from here you say, "I do not want my child to look like that. Maybe I should leave my child until next year before I get another one. That is why, because of this hunger…that is why we say that let the child first grow, then you can get another one."(Older woman)

"What people do these days is neighbors have become concerned. They are advising their fellows to start spacing their children. They will always ask a woman why she is allowing this kind of thing to continue happening in their families." (Younger Woman)

In part, high acceptability of FP may also be associated with traditional child-spacing practices. When discussing FP methods, all participants noted that extended post-partum abstinence is culturally acceptable. It is seen as effective (when abstinence is feasible), easy to use, and does not have side effects. Historically, men were said to go to the kraal for 2 or 3 years to allow for child-spacing. More recently, women have taken to staying with their mothers-in-laws to an effort to abstain.

"[You] will never get a man going with a woman when the child is still is about six months. During those days, a man has even to stay away from home for even three years in the kraal. When the child is still young, he will just come and visit. And he sleeps in a far place…The man does not sleep with his wife until when the child is mature enough. That's why they have many women. When this one gives birth, he will concentrate on the other one until this child is two years or three years, then she can now conceive. And, you know, the woman also uses some psychology of pulling the husband by making some local brew and inviting him and then from there she can sleep with him and conceive." (Community Leader)

"For us here in Karamoja we abstain, no sex until when the children have grown and in those days when cows were there, men used to go for grazing until when the child has grown up to the age of two years that's when he come back home." (Younger Man)

> "The most common method most of us use with our husbands is just abstaining from sex until when the children is about 2 or 3 years old. In most cases we go and start sleeping with our mothers-in-law to avoid temptation of having sex with the man." (Younger Woman)

**Barriers to FP**

Several barriers to FP were noted across participants and rooted in cultural values and changes. Namely, women indicated that abstinence is becoming more challenging, as men are becoming more sedentary. A strong desire for large families was also noted, especially among men. Certain groups were also said to be challenging to reach given the values of polygamous families and circumstances for younger married couples. Finally, a general resistance among men was described that was tied to their social roles and low knowledge of FP.

***Changes in Livelihood***

While the traditional FP practice is still popular, many women noted that it is difficult to avoid sex with husbands. As noted elsewhere, in the past, men traveled more with cattle. Now men are not going to the kraal and therefore it is more difficult to remain abstinent. As one young women noted, "It is very ineffective, staying at home without sleeping with a man." It was said to be particularly difficult if a woman is unable to leave her home and stay with her mother/mother-in-law, as several women noted:

> "Abstinence is what we use here, but it has errors—mostly if the man cannot be patient. But what we do, if the man is not patient, is to go and start living with the mother." (Younger Woman)

> "You cannot keep chasing away the man. It (extended post-partum abstinence) can only work for eight months, then he will start sleeping with you. But some people go until one year, depending on the way they handle their husbands." (Older Woman)

In contrast, men described it as less of a problem. As one ECCD Facilitator described, though it can be challenging for men that do not go to the kraal, women can reside with their own mothers-in-law or own family after giving birth:

> "Abstaining is very perfect, unless you don't go to the kraal and you remain home with the woman. You can easily get tempted to having sexual intercourse with your wife, but you can also send the wife to sleep with the mother-in-law or she goes to her parents until when the baby is now big." (ECCD Facilitator)

Many male participants emphasized character and discipline in describing their ability to remain abstinent and using the traditional FP practice. One younger man noted, "It's about self-discipline." Similarly, an older man described sexual discipline: "For us here we have our own family planning of not having sex at all until the baby is grown. We have sexual discipline."

Despite some of the challenges to using the traditional FP practice, many still prefer this method to modern FP. Among some, modern methods of FP were described as something used among outsiders. One younger woman described modern methods as a "*government thing*", saying, "Madam, for us here we do not go for those government things for it is better to stay away from a man until you child grows or if you are lucky not to have your periods for some time then you stay without it."

***Desire for Large Families***

Many participants, particularly men, expressed a desire for large families. Within the community, children of both sexes are seen as a source of wealth and security. Girls were said to bring cows as part of a bride-price, whereas boys help protect the family and also have historically brought in more cows through cattle raiding.

> "Here in Karamoja, having many children is a source of wealth mostly for girls, because when they get married, they bring in more cows inform of bride-price and boys is a source of security for the family. No enemy can temper with such a home." (Older Man)
>
> "Men say it is good when children are many and too many wives too. Those days, they said that children and women are a prestige when you a lot you get a lot of cows and you become rich. When it is girls they say they will bring a lot of cows but when it a boy they say they will go for raids and bring more cows." (ECCD Facilitator)

This desire for large families was also said to be reinforced by pressure from the family and clan to produce many children. After hearing the story about a man that distrusts modern FP, one older man noted that the character's decisions are influenced by family and the clan, saying, "Actually Peter's brother and clan is another problem. I know they will not support the idea of using family planning since they are eager waiting for another child."

***Polygamous Unions***

Polygamous families, were described by all groups of participants as less likely to use FP methods. This was said to be the nature of polygamy, and inherent that both men and women in polygamous unions desire large families. Participants also mentioned that it is common for men to move from house to house impregnating women and several mentioned that women in polygamous unions carry the responsibilities of raising and caring for children.

> "Yes there's a difference, homes with many wives don't have time to discuss about family planning and pregnancy because the reason why the man marries many women is to get many children so now talking about family planning is a wastage of time." (Older Man).
>
> "Those ones, they don't want even to know because there are many women, when like the first wife gets pregnant, the man shifts to the second wife, he moves all round. By the time

> he comes back to the first wife, the baby would be even two years old. And now here women are competing to produce because this one is seeing her co-wife having five children. Others will also want to produce the same number of children, so there's no time of discussing about pregnancy and family planning. But in families with one woman, the man has time to discuss with his wife mostly during bed time, that's when secrets are shared freely." (Younger Man)

> "Families with many wives have nothing to do with such (family planning), because the reason why the man marries many wives is because he wants many children. So this idea of talking about family planning or pregnancy is out of their minds. Maybe their wives, the wise ones, can escape and go for family planning when the man is not aware. Otherwise she will carry the burden of looking after her children alone. Men with many wives just act as supervisors in those homes. They don't support the family in any way. Every woman struggles on her own with her children." (Older Man)

***Younger Couples***

Many participants also noted that younger people will be difficult to reach with FP messaging. Youth, particularly those who are newly married, were said to be focused on demonstrating fertility through pregnancy. One young man described this barrier, saying "Young people don't have time to discuss about family planning and pregnancy, they say it's not yet their turn to talk about pregnancy, because they want also to produce to fulfill what God said: go and fulfill the world." Older participants reaffirmed this, saying that young people view FP methods as being for older couples that are ready to stop producing children. According to one older man, "The young group fear talking about pregnancy and family planning. They say it's not yet their time to discuss about such. They say it's for old people because the old people are already tired of producing children."

***Resistance Among Men***

As noted, producing many children was said to be tied to male identity, contributing to distrust in modern FP methods. As one ECCD Facilitator noted, "Men don't use family planning, it's for women only. Even me, I cannot accept it…Still men want to produce many children, so that they are respected in the community." Generally, young men tended to indicate more support for FP, compared to older men.

Gender roles were said to contribute to resistance among men, as many men were said to view FP as a women's issue. Another ECCD Facilitator described the need to reach men with FP information, saying, "Men don't know those things of family planning. They think it's only for women. They even don't know that men also have family planning methods, maybe if you people come and sensitize them."

At the same time, women and men of all ages held similar attitudes towards men that support and do not support their wives in FP (See Figure 4). Specifically, men that support their wives' FP desires

were said to be caring and understanding, and wise. Men that do not support their wives were described as ignorant, stubborn, useless, and unable to be a good provider for his family.

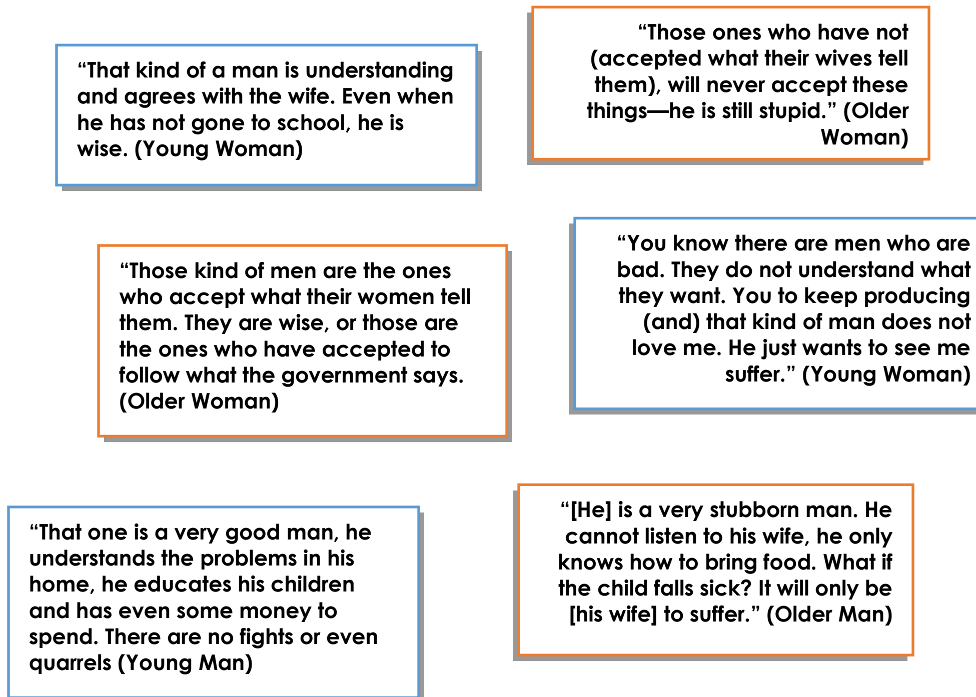


**Figure 4** | Men that Support and Do Not Support Wives' FP Desires |

These findings indicate acceptability of FP, given contextual factors and existing FP practices. Several barriers to FP use, in general, were noted although certain barriers, such as changes in livelihood that make it difficult to continue using the traditional practice of postpartum abstinence may offer opportunities to introduce modern FP methods. In doing so it would be important to maintain sensitivity and respect for the traditional practice. Other barriers among specific groups such a polygamous families, youth, and men, indicate a need for targeted approaches and engagement strategies improve knowledge and attitudes about FP use.

## Modern FP Methods

Among women that are interested in or use modern methods of FP, long lasting, inexpensive, easy to use methods are desired. FP Providers noted that methods that do not require regular health facility visits are ideal for that reason. Implanon® implants and Depo-Provera ® are said to be the most popular methods. Natural FP methods, such as the Standard Days Method® seemed less well known, and participants reported mixed beliefs and attitudes about Lactational Amenorrhea Method (LAM). Condoms appear to be less commonly used except in "the town". Other methods, such as hormonal pills and IUDs, were not commonly used, and permanent methods were seen as unacceptable.

> "Here they like Implanon, implant yes. It is what they like most, followed by Depo-Provera, that is injecta plan…They prefer implant because, according to them, they say you do not

keep on coming to the health center. You only come like in a year to facility. You come to see the midwives in-case of any problem and they also say it is comfortable. Most of them say it does not [cause] pain and they like it because it makes them comfortable." (FP Provider)

"Condoms, both male and female, they always say that it is difficult to use and their partners do not like it…Even pills a few of them take. Even IUD, I think we have never got even a client, it was only one client. Things like vasectomy and tubal ligation, they do not like, they will never. They are not interested." (FP Provider)

**Hormonal Methods**

Although use of hormonal FP methods is uncommon, they were said to be becoming more acceptable. One Community Leader described the shift to having smaller families. In discussing hormonal methods, participants echoed the benefits of FP for the health of children.

"These days at least some women have started having family planning methods, like the one they inject (implant) for three years or five years. All this was not there those early days. People could just produce children, no timing. The more children you had the more respect you earned, and boys were a source of security. But now people have been producing one or two children only." (Community Leader)

"It is good to space children, because when you over-produce you will be taking this child to be enrolled on the section of the malnourished children. So it is good to go to the hospital and you get [family] planning…They say there is that one which they just inject, and that one which they sow in the hand (implant), and that one which they swallow (pills). So that when your child is still young, you go and get this medicine, because when the child is still young it is likely to fall sick any time, because the child has not breastfeed enough and the child has not gotten tired of the milk enough." (Younger Woman)

"I am grateful to government, in a way that it has brought that medicine that they inject those people who are over producing. When they inject a person with this injection…it takes even 4 years, even 3 years. That is why I am grateful to the government that it has saved us, in the way of this hunger. When someone decides to over produce, when this one is still like this (small) and she is carrying another one, and when they all fall sick, she fails to know whom she should assist first. That is the problem. Now when simple malaria comes, the child can die because they will say that the child was sick, yet not just because that child did not have another breast feeding, and the mother is pregnant again. That is why am grateful to the government." (Younger Woman)

Participants spoke of beginning to observe the benefits of new methods of FP among early adopters. Younger women emphasized this, as most did not report using these methods. According to one younger woman noted, "Injection really works, because I saw from my

neighbor's wife who had used it before." Another young woman reported, "That one (Depo-Provera) is the best method, some women in this village are even using and none of them has got pregnant yet and they are not complaining."

Older women were more likely to describe using hormonal methods. Many of those that had used these methods reported success. Men also shared the experiences of their wives or others in the community, mostly describing positive results of use.

> "Me, madam, I went to the hospital and the nurses were telling me about this. They told that it is a matter of putting an injection and you not have to do anything after that. You can live normally without anything and I proved it myself." (Older Woman)
>
> "Okay, with this method I have seen my friend's wife using it and it really worked well for them and their child has grown up. He is now a very big boy and they are not getting another." (Older Man)
>
> "My wife is using this method (injection) because things had gotten out of hand in my family. We had five children within a short time. When we went to the health centre here at the sub-county, the nurse advised us to join family planning. So I had to let my wife go for it. Up to now we are okay, it's now three years since she last joined." (Younger Man)

In general, both older and younger men acknowledged the benefits of hormonal contraceptives. In addition to being effective and easy to use, younger men also emphasized the benefits of not worrying about unintended pregnancies: "You know, with injectable you just go to the hospital once—the day of putting it [in]. And you don't bother yourself [with] being very careful, you just inject and you enjoy sex."

***Barriers to Hormonal Methods***

Despite the reported acceptability of hormonal methods, several barriers to use were evident. Participants reported low knowledge and misconceptions about the methods, as well as strong concerns about side effects. Both men and women also described women's covert use of hormonal methods, which puts them at risk for conflict and violence upon their husbands' discovery.

Several participants reported having no knowledge of how methods work and a need for more information and education. As one younger woman described, having more information would help increase use: "Wait, another thing is when you have all the knowledge about how each method works. That would make it easy. But we do not know this…The nurses are the ones who know their thing." Both older and younger women reported that a lack of experience using methods also posed a barrier to use. As one younger woman described, "About implant, we do not know because we only hear from people, but we have never used it ourselves."

Both community members and FP Providers noted an additional challenge with expiration. According to a young man, Depo-Provera is easy to use and has benefits, but forgetting or misunderstanding the expiration date can lead to unintended pregnancies. One FP Provider described challenges around expirations and the case of a woman that had relied on an implant for over five years.

> "This method is very easy because it will not need you to always visit the health centre, they just inject once and you stay, enjoy sex. But you can't forget on when it's supposed to expire. If you forget, you will get pregnant." (Younger Man)

> "I received one (case), I inserted Implanon in 2008. She removed it just last week (in 2014). She thought that the family planning is still working, but it had already expired. We had to inform her then. Last year also we removed three that had already expired." (FP Provider)

Participants, particularly men, also seemed to frequently confuse implants and injections. Some referred to injections that are implanted, others attributed longer durations to injectables that are associated with implants.

A major barrier to hormonal method use, reported by all groups except younger women, is side effects. Older men, in particular, voiced strong concerns about side effects. Side effects are said to include over bleeding, deformity, weight loss (associated with HIV), weight gain, and death. One younger woman described a misconception that hormonal methods cause sterility, saying "Our people are not in good terms with this thing (FP). They say that a woman who gets family planning is that one who is stupid and wants to waste herself because if you get this medicine you will never give birth again."

> "The problem is some people have got a bad perception about family planning, others have never tried to use but they just hear from people about how bad it is and they forget the good part about them, they say that if you use family planning, you will not be able to conceive again or you will give birth to a baby who will have abnormalities like the big head or the eyes will not be straight." (Younger Woman)

> "Madam, injections are very effective. Only there is a lot bleeding. A woman bleeds for a long time and they lack strength. Some of us fear it. For me, I cannot use that. When I came to know about this, they brought some woman, she was over-bleeding….then she died bleeding, because they cannot rescue her. It is very difficult to use these medicines and they should get a solution for this.  Natural family planning, like abstinence." (Older Woman)

> "Those women (that use FP) are there. You know some of them fear going for family planning maybe because of what they have heard about it—that you cannot be able to produce again if you join family planning or you will lose a lot of weight like someone suffering from HIV. So that fear makes them not to go for it." (ECCD Facilitator)

One FP Provider described some of the challenges related to misperceptions about side effects and successful strategies to increase use. In this case, detailed information about the benefits of FP and how methods work was said to lead to uptake of FP.

> "In the community, these women have difficulty because these women could come and tell us that people are saying that this family planning leads to death. It will lead to over bleeding and you will never get another baby or deliver a child who has no head. But we kept on telling them that family planning is not what people think, it is different thing all together…But some of them think that when you join family planning you will not conceive for the rest of your life. So the perceptions of the community are not good…But we ask them to come with their partners. We talk to them, so that they understand why family planning is given, and how it would help the person to take care of their family well enough and also get the number of children he wants. They understand and they come themselves to get these methods and from that time we kept on having many women who visit and joined to use family planning." (FP Provider)

Women also described the advantages of methods that are concealable as a facilitator of use. As one younger woman noted, "The woman will go for it and you, a man, cannot even recognize because there will be nothing to show that the woman has got an injection on her hand!" Another older woman described her methods of secret use.

> "I go and get the injection, when he is not aware, but pretend like nothing happened and I tell the nurses to keep it as a secret so that we keep on sleeping [together]. Then, when he asks, 'But she has not gotten pregnant?' You say you don't know, God may." (Older Woman)

Both older and younger men were aware of the phenomenon of covert use. They noted that they were often unaware or unable to confirm. Men described not knowing about the covert use for long periods of time until side effects were evident or until they realized that having sex was not resulting in pregnancy.

> "I hear women talking about injection, that it's good. You don't have swallow the tablets all the time, like you are taking ARVs. Injections, you get ones for like three months or even three years, and in most cases, for men, we cannot realize that the woman has received a family planning method." (Younger Man)

> "To me, I can say that this method is very easy to use because they just inject you on the hand and nobody can even know. Actually for us men, unless if the woman tell you as her husband, we cannot know unless side effects like over bleeding or losing weight start. That's when the man can suspect but of course he cannot be sure." (Older Man)

> "You know when she starts her issues of family planning and you, the husband, tries to stop her, she will escape for injection in the hospital without even our consent, as their husbands.

> For us men, here you play sex (have sex) with the woman for long, but no results. You will only understand later, maybe from a rumor, that she went for injection." (Older Man)

Although at times this was described as a facilitator of use, the consequences of covert use among women are a major barrier to use. Many women expressed a reluctance to use hormonal methods, because of fear of violence from a husband finding out. This was said to be especially true for implants, because of the visibility of implant scars.

> "But the problem (with an implant) is that, they have to cut your hand and you know our husbands are not simple. You may find I escaped to the hospital to be inserted with implant, but now when they cut my hand, the man can easily know and chaos will start in the house." (Younger Woman)

> "Like when you get that medicine, when he (husband) does not know. Then you stay when you have not got another child, despite his attempt. He can even beat you up because you took this without his consent. His reason will be, "Why has this child reached this age without you getting another child?" You know sometimes you as a woman, you decide on your own. Because if you don't, you are the one who will be suffering." (Younger Woman)

**Natural FP Methods**

Beyond the traditional practice of extended post-partum abstinence, other natural FP methods were said to be acceptable. Primarily, participants indicated some awareness of calendar methods and the use of MoonBeads (a local brand of CycleBeads). They also spoke of breastfeeding as a method of FP with mixed results.

***Standard Days Method (SDM)***

All groups of participants reported some basic knowledge of calendar methods. Though they did not tend to describe specific methods, many described avoiding sexual intercourse on "danger days" (i.e., unsafe days, where pregnancies is likely). As one younger man noted, "If [a woman] risks having sexual intercourse with the husband, she will automatically get pregnant unless she is not in her danger days."

Among those familiar with the method, many reported difficulty determining which days were 'safe' or 'unsafe.' As one young woman reported, "I learnt from my friends that some days we women are not fertile, she was telling me of the safe days and danger days, but I have forgotten how to count them."

Few participants had heard of SDM or MoonBeads. To some extent, low awareness of the method may be attributed to availability. One FP Provider described her own method of educating women using stones in place of beads. One older woman described counting beads from a bag, saying,

“There is also counting of days when you are your periods. You keep throwing the beads in the bag and when you start the periods you change the colour.”

> “With MoonBeads, actually, the mother who is interested in the calendar method, as long as the mother knows the first day of the month up to the end of the month. What we do we always, is pick the stones according to the number of the days of the month. Just locally, you pick stones either like 30 stones, sometimes one colour or white or brown. But most stones are brown. Then you can pick like a black stone that’s the one we use for her to begin counting the days when she starts her periods. But for them, they tell me that for them, drop it inside of a bag they make it themselves. These they drop one from here. They put there and the day they start to see the period she picks the black one. Then, she it if they have hanged it somewhere, when she sees the periods have stopped is when she keeps and puts in the second bag. After the remaining balance is when they start counting up to the 14th day. Some of them say that these days are safe and they conceive after the 14th day. That is again what happens to some of them. Like if the person has seen periods on the first up to the 4th or may be up to the 7th. You know these people, usually for them the day they see that their periods are about is when they meet with their husbands and that is the day they will conceive. So even me, I changed the counting of the stones. When it reaches the 14th day, that is where now I tell them not to meet with their partners. I tell them to count 5 to 8 days, they should not meet with their partners because they can easily conceive.” (FP Provider)

Another challenge to using SDM and use of MoonBeads was said to be counting the beads. In trying to describe the method, one younger woman explained, “The one they count the beads…I heard them say that every day, as it begins, you count. From there, I do not know how to continue (laughing).” One ECCD Facilitator also noted that in general the Karamojong have difficulty counting and following calendar dates, to some extent he attributed it to excessive alcohol consumption in the communities.

> “It’s not common, very few women tried to use but I think counting became very difficult for them, and you know once you don’t count properly and following the dates, just know you are finished. You will get pregnant and you know here in Karamoja by 2:00pm most people are already drunk so do you think that woman will remember extending the bead to the next level? It needs only people who are ever sober.” (ECCD Facilitator)

***Lactational Amenorrhea Method (LAM)***

While there was some awareness and support for using breastfeeding as a method of FP across groups, participants did not seem to understand the requirements of LAM. Most seemed to believe that breastfeeding alone is sufficient, and this may have led to mixed beliefs of effectiveness.

Some participants were aware that breastfeeding can be used to reduce unintended pregnancies. Breastfeeding was said to have a benefit of being accessible and side effect free. As

one older woman noted, “For me breastfeeding for long is very good, because I do not go through any stress of taking medicine or injection.”

Often, when describing breastfeeding as a method of delaying pregnancy after birth, participants focused on “continuous” breastfeeding, and did not tend to understand the exclusive breastfeeding components, nor the other two requirements for LAM. One older woman reported that continuous breastfeeding is promoted in hospitals to prevent unintended pregnancies, saying “I know that it can effect when you keep on breastfeeding. When you go the hospital, they tell you to keep on breastfeeding. You will not get pregnant as long as you are breastfeeding continuously.”

Others did not directly associate breastfeeding with pregnancy prevention at all. When asked about breastfeeding, many participants expressed that breastfeeding does not affect fertility. As one young woman declared, “Breastfeeding cannot affect a woman’s becoming pregnant. She can still get pregnant whether breastfeeding or not.” One older man noted that likelihood of pregnancy was contingent upon a woman’s menstrual cycle, saying, “There’s no way breastfeeding can affect a woman from getting pregnant, the woman can still get pregnant as long as she is in her danger days.”

Among several women and men, post-partum return of menstruation was associated with a return of fertility. Although accurate, the lack of understanding of all three components of LAM seemed to undermine perceptions of breastfeeding as an effective method. One younger woman described that likelihood of unintended pregnancy shortly after giving birth was variable among women and dependent on her return to menstruation, saying “Breastfeeding cannot affect (post-partum pregnancy). Like some women, when you have started menstruating after three months of delivery, you can still get pregnant—when the other child is still young. But that is depending on the person.”

To some extent, breastfeeding was also related to the traditional practice of postpartum abstinence that is expected to last about two years. When a group was asked whether breastfeeding is effective in preventing pregnancy, one older woman stated, “Yes it does, it's because when I am breastfeeding my husband does not sleep with me until the baby grows.” Other women described abstaining from sex while breastfeeding.

> “Breastfeeding is very effective for those who do not get periods very fast and also you see if you stay with a man in the same house you cannot stay without sleeping with him only when you are at your mother's home.” (Younger Woman)
>
> “For us here when you are still breastfeeding you are not supposed to sleep with your husband. And one time a nurse said that when you breastfeed for long, your chances of getting pregnant are low, as long as your menses have not yet started.” (Older Woman)

Overall, the lack of understanding of the criteria for LAM increases the likelihood of unintended pregnancies among women attempting to use breastfeeding as a FP method. Several participants described their own experiences of breastfeeding and becoming pregnant. One woman described realizing she was pregnant, though she had been breastfeeding and her menses had not returned.

> "I was sleeping with my husband and I knew that at this point without menstruation I cannot get pregnant. I did not expect it, but I found myself pregnant. My tummy was growing and my husband was surprised too. He asked me, 'But you were not on periods, so what really happened?' I told him I did not even know whether I was pregnant with a child or something else. And when I gave birth realized it was a child for real." (Younger Woman)

**Condoms**

Condoms were mentioned by all groups of participants, but not largely discussed as a FP method. Men were more likely to describe condoms as a method that men use, but noted that it was more available and commonly used in urban areas and among those exposed to information about use. One benefit that was noted among men was dual protection from both pregnancy and STIs. As one younger man noted, "We learnt some of these things the hospital, like how to use condoms. They advise you that it can prevent me from impregnating the lady or transmitting any sexually transmitted infection."

Younger women hardly mentioned condoms, and older women indicated a strong reluctance to use them. As one older woman noted, "The condoms are not easy to use. If the government decides to distribute them to us, we fear them." The fear using condoms can be attributed to misconceptions about condoms, such as that condoms cause death.

> "But the problem with the condom, if it enters a woman stomach then the hospital has to be near. And we had a case at the hospital, where another girl has been keeping the condoms in stomach, then it started swelling and she was taken to the other ward for admission." (Older Woman)

> "Karamojongs here are not easy. They even don't want to know about it, mostly men and women say that in case the condom remains inside her vagina, she can easily die so that thing has created fear among them." (ECCD Facilitator)

Condoms were also associated with promiscuity and sex work. As one Community Leader described, sex work is increasing in light of scare resources and condoms are necessary because of the increasing HIV epidemic, therefore condom use is stigmatized because of the association with sex work.

> "Like now, using condoms, you will never get a Karamojong to use a condom…Even women, themselves, they will never want to see their husbands [use one]. Especially deep

> in the villages there. Seeing a woman holding a condom, they will say this one is a *malaya* (sex worker). Then there's no trust in you, so they take themselves always as trusted, but not knowing that the world is changing and because of these food shortages. These girls who go for casual jobs sometimes, people use them. That's how they spread even this HIV. You see, when they go for *legya-legya* (casual jobs) in town, people use them." (Community Leader)

Overall, participants described increasing acceptability of modern FP methods, particularly hormonal methods that they were most familiar with. Even so, barriers such as side effects were described, posing a challenge to hormonal method use. Participants were less familiar with modern natural FP methods such as SDM or LAM and need education on how to use the methods effectively. Condoms are rarely used, despite some knowledge of the benefit of dual protection in preventing unintended pregnancies and STIs.

## Access to FP Services

Overall, when asked about accessibility of FP services, focus group participants did not tend to report difficulty with geographic access, nor problems receiving methods they were interested in. Among the FP Providers interviewed, two were from private clinics that only offer natural FP methods. The other two clinics mentioned offering a range of modern methods and that implants and permanent methods are referred to Marie Stopes Uganda (MSU).

> "Here we have Injectaplan, which is Depo-Provera, we have pills, emergency pills, and also these other oral contraceptive pills. We also have Implanon, there is those. We have others like Copper T, and I think that is all we always give. But others like vasectomy and tubal ligation and even IUD, we always inform the Marie Stopes people to come and do it. Or we also refer them to Moroto Referral Hospital." (FP Provider)

### Facilitators

Women reported accessing FP at public hospitals and health facilities where services and methods are free. Cost appears to be a major factor, and so offering services free of charge was reported among many woman as a facilitator of FP use. For instance, one younger woman noted, "You know family planning methods are free of charge, you don't have to pay any money to get them, and they always encourage people to go for them." Some women reported adequate counseling on methods, helping them to make informed choices and others reported that nurses and health facility staff made them feel welcome.

> "It is not costly, there is no money that they will ask from you. They also throw light on each method so that you can choose which one is okay for you, and it is accessible. The hospitals are available." (Older Woman)

> "Whenever a person goes to the hospital that she wants a family planning method, they first counsel you, they tell you all the available methods, then you chose which one you think

> will be convenient for you. You take your own decision. It makes us very comfortable." (Younger Woman)

> "It is accessible and free. They do not ask for any money, and also the way nurses handle people is good." (Older Woman)

**Barriers**

Barriers to FP services were mainly reported by FP Providers. A main concern was the ability to reach the community with more information on FP. Although all of the health facilities worked with VHTs and most reported that VHTs are able to provide education, referrals, and some methods of FP (e.g., condoms), more FP information is still needed, especially for men, as modern FP method use is still rare. One FP Provider described limited efforts to reach men.

> "Any activity to raise their (men's) awareness? Hmm…we have not done any other activity apart from a time we were trying to mobilize the elders and I think they talked to only these nearby villages on the importance of coming to the facility and also bringing the mother to deliver at the facility and also join family planning in the health center. But we did not go far into the villages to give information on family planning." (FP Provider)

Stock-outs and inadequate staffing were also described by clinics. One public health facility reported that stock-outs pose a challenge, but they are able work with a client for follow-up or refer them to another facility. One private health facility described challenges in staffing and funding.

> "When the stock out is there and the mother has come, we always request a mother to come then next day…or we send one of the nurses to go and pick them [up]. But sometimes we even refer them to Moroto Regional Referral Hospital." (FP Provider)

> "The biggest challenge we have is understaffing and money. Staff are there alright, but now money to support them, because the church actually cannot afford to employ a lot of staff. This health center is supposed to have 19 technical staffs. Out of the 19, we are all supposed to be qualified, but now we are only three out of how many? We are only three who are qualified, so others are support staffs." (FP Provider)

The need for a husband's consent was said to be another barrier to FP provision. Although not a law, it was said that many women need a husband's consent to access FP methods. FP Providers also noted discomfort providing services to women without their husbands' consent due to violence.

> "In a situation where a mother says she has tried to talk to the husband and he opposes the idea—In that case you have to pause a bit and let the mother call the husband. [See] if he

> can come. If he does not come, you tell her to call the next of kin, the person she trust most so that they can talk to the husband. That is what I do." (FP Provider)
>
> "If you suspect it can bring problems to the family…like these permanent methods, it endangers because you might give or perform to a woman, maybe the man is not aware. Then the man will wait for the woman to become pregnant. The backfire comes back to you, the health worker provider. 'Why did you do this?!' And yet, the woman consented to everything… You first refer back the woman or man back to the family to agree, all of them have to agree then you can go ahead." (FP Provider)

Overall, challenges to accessibility were not discussed among participants. However, given the low rates of use of FP methods, it is uncertain if it could become an issue if use within the communities increased. Instead participants emphasized the benefits of free services. FP Providers were more likely to report issues, such as adequate community outreach. Two clinics reported challenges with stock-outs and staffing shortages. Challenges related to providing services to women without a husband's consent were also described.

## FP Communication

Participants spoke of FP communication in terms of community-level discussions and couple communication. Community-level discussions were said to be common, though some participants described it as limited among peer groups. Older participants also described that communication across different age groups was important because of the experience and social roles that older people command (e.g., mother-in-laws). In contrast, while participants describe ideal couple communication, experiences were mixed and many participants reported challenges to couple communication for women.

### Community Level Discussions about FP

Across all groups, it was stated that women and men can talk freely about FP in the community. Some participants described open communication across the community. For instance, one young woman stated, "Yes, it's acceptable. It's something very normal to discuss about FP to anyone, there is no one prohibited from discussing about FP." Women described informing and encouraging their peers to use FP. According to one older man, both younger and older people felt comfortable discussing FP. One Community Leader noted that older people often educate younger people about FP, based on their experience and that it's important to reach youth before the age of 16 years.

> "Not at all, this issue has no restrictions. They talk in the same way regardless of age. These days, young girls and boys talk about family planning and pregnancy in the same way with older people. They no longer even fear to talk about family planning." (Older Man)
>
> "Yes, you can talk to another woman. Like, especially when you find out that they are over-producing. You call her, then you tell her, "Look at your children they are in a bad

> condition. Why don't you go the hospital so that you can get family planning and let these children grow?" And inform her that the government has brought medicine that can help you to space your children a bit. And if she wants to listen, let her listen. If she does not want, let her be, because there are some people if you tell them about this, she will tell you, "Even if I am over-producing, is it at your home where am going to carry these children?" It is up on you." (Younger Woman)

> "Old people teach the young ones. They teach them, they are experienced. But the young ones don't talk about it, they only talk to their boyfriends [about] how they engage themselves. The young ones from 16 and above, that's when you will find now the ladies start to go for dancing and boys also go for dancing. There they start engaging themselves…they are mature now." (Community Leader)

Other participants distinguished that peer communication was acceptable, but communication across sexes and ages was not. In particular, younger women expressed discomfort with discussing FP with mother-in-laws, with one woman saying, "No, there is no way you can tell or talk to your mother-in-law about this (family planning)." In contrast, an older woman described the importance of discussing FP with mothers and mother-in-laws to support younger women's FP desires in the face of husbands that are resistant to FP.

> "It is acceptable for us here to talk about family planning, because you can talk to a friend who is your age. Or marriage, like you to your mother-in-law and your own mother too, especially where your husband is opposing the idea." (Older Woman)

Several participants, men in particular, emphasized that most men are not interested in FP and do not talk about FP with one another, as it is considered a women's issue. According to one young man, "Those things of pregnancy and FP are for women. We don't get time of talking about what does not concern us men. Women talk to their fellow women, but not men."

Women mentioned talking to other women about FP, especially for advice when they cannot talk with husbands. However, an older woman mentioned that it can be risky for women to discuss FP with one another if they are contradicting husband's belief, as it can lead to difficulties.

> "If you go and talk to your friend, the man can take both of you [and do something] bad. You and your friend, he will always think that it is your friend who teaches some of the things…it is better to avoid some of these things, because in the case of any problem, it will be the two of you to be blamed for what you two have failed to do. So it better for things concerning family planning, you talk to your husband first." (Older Woman)

**Couple Communication**

In describing couple communication, both men and women spoke of an ideal situation where couples discuss FP openly and come to a mutual understanding and agreement. One younger man noted, "You know it's good for us discuss issues with our wives, so that we do not have any problem with them in marriage. So when you decide for FP you have to decide together as a family." One older woman described that couple communication works, as long as a couple was in agreement. She also described children's health as being an entry point to discussing FP, as did an ECCD Facilitator.

> "The way we talk is that we sit as husband and wife to discuss about this issue and not in bad way unless we disagree. Before we get down to this, we see how our children are doing. If well, then we decide to get another child, but if the children are getting malnourished every day that determines whether there is need for family planning or anything else." (Older Woman)

> "It is because we learn these days how to space children. Now when you over produce and the same way that they see the condition of their children, they discuss as husband and wife to see a way of how to space. They do bring the situations that exist in their families, so that it creates understanding between the two." (ECCD Facilitator)

Although some couples are able to discuss and come to agreements together on FP, many others struggle. One young man described his own approach of deciding with his wife to use FP, but acknowledged that other men do not listen. Another older man described a similar contrast with some men refusing to discuss FP with their wives.

> "Okay, some women try to talk to their husbands and not all men do not listen. Some men like me are so caring, I do listen to my wife and we even decided that my wife joins family planning. And since she joined, I have never heard her complaining any problem. We have our two children and we are not thinking of getting more now." (Younger Man)

> "You know not all couples freely sit down and talk about pregnancy and family planning. Some men hardly discuss with their wives issues of pregnancy and family planning. They leave issues of family planning for women, they even don't support it. But not all men, some have some idea about it and they allow their wives to go for it." (Older Man)

Across all groups, discussing FP with a partner was described as risky for women, because of a potential for violence. One younger woman mentioned that she is able to discuss FP with her husband, but that other men become violent when women bring up the subject, saying, "We really talk as husband and wife. But other men, when a woman tells them about family planning and why it is important to space children, some of them get annoyed and beat women."

Many men, especially older men, were described as very resistant to discussing FP, yet were also said to be the key decision-maker given their role as the head of household. According to all groups, men are the authority and women have to accept men's FP desires.

> "Men cannot easily just give in. You have to argue a lot before you can come to a decision, and they distrust family planning. They think if you use it, you never get pregnant. A man is a man, so their decisions usually matter a lot to us who are not learnt. What they say, you take it. But sometimes this does not work." (Older Woman)

> "It's supposed the man and his wife alone, but the man's decision is what matters and we are the very ones who have to oppose the decision of the woman, the man is a final decision maker since he is the head of house hold." (Younger Man)

One older man mentioned that agreeing with a woman on FP is considered emasculating. "You know, in this community they say if you accept the woman's decision, that you are stupid. That you are not a man enough."

It was noted that some women will not seek FP services without a husband's permission. Younger women tended to emphasize this. According to one young woman, because of the husband's role as a final decision-maker, "If your husband says no there is no way, you cannot go ahead with him allowing you." Another young woman noted that violating a man's decision can lead to the dissolution of a marriage and leave a woman to care for her children without any support.

> "Any way the man's decision matters most because he's the one who married you the woman and the man right from the old days is the head of the family. For us women we just go by what man has decided because now if you disagree with him, he can easily dissolve the marriage and you leave children with who?" (Younger Woman)

Men are said to be influenced to produce many children by brothers and clansmen, as well as mothers-in-law, as these decisions were said to influence the broader family. As one young woman noted, "It's supposed to be a man and his wife, but men and their relatives like the mother are a big problem, they always resist, they don't support the idea of women using FP so there are the ones who always oppose the idea." According to one Community Leader, the opposition to FP among men and their parents is what leads many women to use FP methods covertly. As one older woman noted, ultimately the responsibility to care for children is a woman's and so sometimes women have to make their own decisions independently, despite the risks.

> "The biggest problem we have here is men and the parents of the husband, men and their mothers, are so resistant to issues of family planning. And you know when the man refuses, it becomes very hard for the woman to make her own decision because it can bring about break up in marriage. But some women have escaped to get family planning method without the consent of their husband, but they make sure they chose a family planning

method which the husband cannot recognize or else things will be so hard at home with the husband." (Community Leader)

"That's right, it's really different in some families. Some men, like mine, when you talk about family planning they become so rude that you cannot say anything… that's why you stand on your own, because he does not help you take care of this children. You have to struggle on your own. And when a child falls sick, you are the very one. What is the use of over-producing?" (Older Woman)

Overall, it appears that peer communication about FP is acceptable, especially among women. Among couples, many participants voiced support for joint decision-making. In reality, men were said to be resistant to discussing FP and agreeing to allow women to use FP methods. Men were ultimately said to be the final decision-makers, and were said to be heavily influenced by clan members and their mothers. It was noted that regardless of a man's decision, some women, particularly older women with more children, would seek FP methods without a husband's support and despite the risks, because they are ultimately responsible for caring for children.

## Learning More About Fertility and FP

To learn more about the opportunity for delivering fertility awareness in Karamoja, participants were asked about their interest in learning more about fertility awareness, as well as for suggestions on how to diffuse information on FP. Overall, participants were highly interested in learning more about fertility awareness and offered advice and considerations for doing so. Participants also noted a variety of channels, locations, and mediums through which to deliver FP information.

### Interest in Learning About Fertility Awareness

Participants shared that they felt their groups would be very interested in participating in an intervention to deliver fertility awareness and emphasized targeting men and those living in rural areas. ECCD Facilitators shared that most of the groups had not received any FP information; therefore there is a need and an opportunity to do so.

Across all groups, suggested FP topics include: FP methods, how to use them, where they can be accessed, side effects and misconceptions, advantages and disadvantages of methods, birth spacing, and natural FP methods. ECCD Leaders and Community Leaders were also supportive.

"Mostly the benefits you get from family planning and also educating them on the methods that are available and also clear the perceptions people have about family planning." (Older Woman)

"In fact, they would be so interested on topics like various family planning methods, demonstrate on how to use each of them, the side effects of each method and the advantages of family planning." (Younger Man)

> "The way am seeing, having group teachings would be very good and then those people who attended the teaching about fertility and family planning can also go out to the community and spread the information but in the teaching, they should include both men and women and even some youths at least there every category will be catered for." (ECCD Facilitator)

> "It will really benefit our groups because we want to have a healthy community and good looking children, we shall appreciate… it will be some good idea, I don't think there's any disadvantage, I will welcome it whole heartedly and very support with my best mostly on mobilization." (Community Leader)

With the exception of older men, participants emphasized that men must be target audiences of FP interventions, as most receive very little information on FP. It was noted that once one man receives information, he is likely to share it with his peers informally. Participants also noted that formal meetings and ceremonies offer opportunities to reach men and women together.

> "But men should also be there, so that they also learn. Most of them are so hard. And the good thing [is], when one man hears something, when they are sitting together under a tree, you find them telling each other: ..'Did you hear what they said today in the meeting?' And those who are not there get to learn from others. One will say, 'That is stupidity.' But another one will say that they are right." (Older Woman)

> "There's what is called *akiriket* where there's a shrine, where they kill bulls but now you will be passing only to the men because women will not be there but when a cow or bull is killed from within the village, that's when you can now pass on the message for both of them but at the shrine there, you will only pass the message to men only." (Community Leader)

> "When it's time for marriages, it's the good place to talk about family planning, because that's the time to talk about the cows and there are two parties, the one of the wife and the man." (Community Leader)

Several participants, including FP Providers, noted that ongoing education is important, as one-time efforts do not tend to be effective. One young woman noted the value of continuous teaching and the benefits of reaching both men and women.

> "It would be good to teach them in a gathering like this, both men and women continuously not that you teach today and then you leave for some good time then you come back again then that would be a waste it is good to teach also at all times that is when they will understand mostly topics about FP. Continuously teaching is good (cross talk) do not teach women alone even men need to be taught." (Younger Woman)

Finally, participants noted that while teaching in groups is acceptable, there is a need to separate by sex and age. As one ECCD Facilitator noted, "I don't think there's any place where talking about FP is not possible. Maybe in mixed groups of people, where you find men, women, young, old. You group them according to age and sex; the discussion will go on very well." One older man noted that teaching younger and older groups together would make it difficult for people to speak freely.

> "When you separate men from women, young from old people like the way you people are doing and you discuss with them they will freely participate without being shy but if you put them all together, they will not talk, mostly women cannot speak out their secretes in their house, they will be she because men are there and even the young people cannot freely speak because their parents or in-laws are there with them." (Older Man)

**Methods for Diffusing FP Information**

Participants were asked to suggest methods for sharing information about FP. Although a central way of diffusing information in Karamoja is through interpersonal communication, many other senders, mediums, and sites were discussed (see Figure 5). Participants also offered a variety of insights and considerations for successful diffusion of information. For instance, radio was a highly recommended medium for dissemination and participants described two programs that were said to be popular among participants and delivered in Nga'karamojong. Even so, it was noted that radios are not easily accessed by women.

> "Ok, we also get new information through Nenah FM and Karamoja FM. Those two radios always have very nice programs, more so in Nga'karamojong. But the problem is, it's mostly our husbands who move with the radios, wherever they are going. And for women who stay home with children, we cannot easily know what is happening." (Younger Woman)

One Community Leader noted that the Karamojong are very traditional and therefore it is essential to ensure that the design and messages of a project are culturally sensitive. Promotion of modern FP could easily be seen as an affront to their existing FP practice (a form of extended post-partum abstinence).

> "You know this family planning has not really come the Karamojongs' thinking so much, because they have been doing it (using traditional practice). So when you talk of family planning, they will tell you that you are talking about what we have done, what we know." (Community Leader)

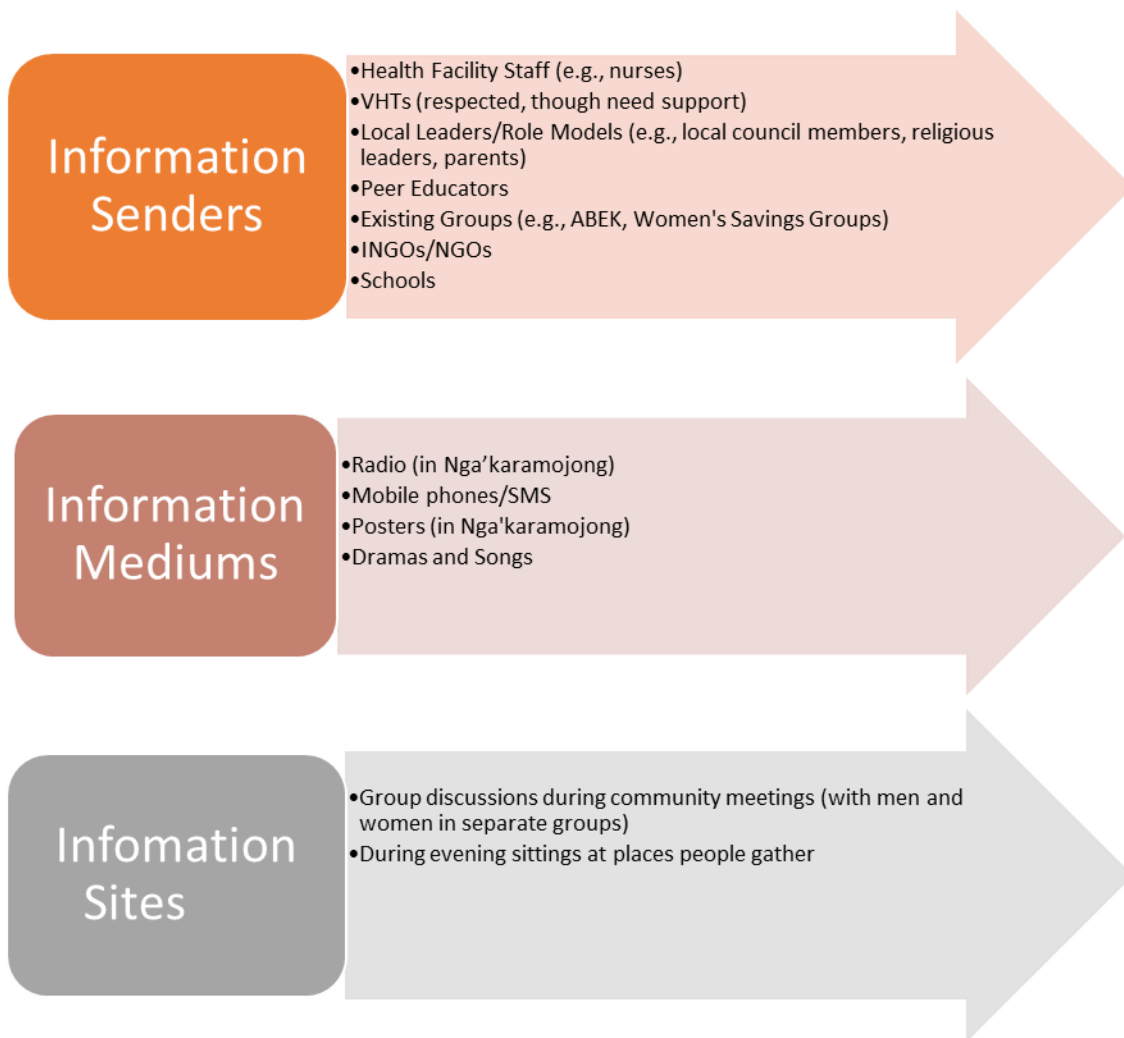


**Figure 5** | Methods of Delivering FP Information |

Overall, it seems that there is a strong interest among men and women in Karamoja in learning more about fertility awareness. In addition, useful information was offered to enhance the effectiveness of an intervention that is important to consider. Furthermore participants offered a variety of suggestions for effective diffusion of FP information that will help to inform intervention design.

# CONCLUSIONS AND RECOMMENDATIONS

The Karamoja region is undergoing rapid transition due to a variety of factors and the Karamojong appear to be increasingly receptive to new information and innovation on health that benefits the whole community. These cultural shifts offer an opportunity introduce fertility awareness information. At the same time, long standing cultural beliefs and practices must be respectfully addressed and built upon to increase fertility awareness and FP use.

## Fertility

Findings from this study indicate low knowledge of fertility awareness among all participants, particularly among men. All aspects were considered to be women's issues. Further, other factors such as lack of formal mechanisms for education on fertility and pregnancy, misconceptions about the fertile period, and numerical counting and tracking of menstruation, also pose challenges to increasing fertility awareness and reducing unintended pregnancies. By providing basic information about fertile periods and education on tracking menstruation, women will have a better sense of when they are most fertile during their menstrual cycle. By including men, there is an opportunity to reduce stigma associated with menstruation and offer a foundation to engage men in informed discussions on pregnancy planning.

Women described experiencing unintended pregnancies that often had damaging effects both individually and socially. At the same time, men were said to greatly benefit from all pregnancies, through fulfilling gender expectations that tended to be rewarded within the clan. These findings demonstrate the importance of efforts to improve gender norms that result in penalties for women experiencing unintended pregnancy, yet reward men, highlighting the importance of reaching the broader community with messaging, including key leaders and influencers.
Given the high rate of HIV in the region and reports of delayed treatment of STIs, it will also be important to include messaging encouraging HIV and other STI testing and treatment that also works to reduce stigma among those experiencing symptoms or that have acquired an STI.

## FP

With regard to FP, results indicate an increasing acceptance of modern FP methods, given the present challenges of raising large families. Furthermore, the Karamojong have a longstanding practice of child spacing through extended post-partum abstinence that was facilitated by a nomadic lifestyle. Though this practice is more difficult as men become more sedentary, it indicates an existing receptiveness that can be built upon in developing messaging about modern FP methods. Given the dearth of understanding and exposure to modern FP methods, as well as misconceptions and concerns about side effects, it is essential that information about how methods work and normal side effects be included. Further messaging must be tailored to reach groups that are less engaged FP, such as polygamous families and youth. Men must also be targeted with this information, as low knowledge, along with gender roles, among men was identified as a barrier to FP use. Beyond providing information, it will also be important to offer opportunity to build self-efficacy to use FP methods, through reducing barriers to seeking FP services through efforts such as improving couple communication and joint-decision making.

Research indicated a general acceptance of discussing FP in the community, particularly among peers. Results also highlighted the importance of sharing information through social networks for the health of the entire community. Among couples, discussions about FP were said to be less common. FP is seen as a women's issue, yet men make FP decisions. This underscores the importance of engaging men in learning about FP and encouraging couples to work together to make joint FP decisions. Beyond the couple, mothers-in-law and the broader clan must also be reached with information and messages promoting women's role in FP decision-making. These efforts to build skills around healthy communication and joint decision-making, and to reach the broader family, can help to improve couple communication and norms around FP decision-making. Given that women risk violence in discussing FP with their husbands, a strategy for addressing intimate partner violence through messaging and linkages with local resources is also critical.

## Solution Design

Participants described a number of mediums to deliver fertility awareness information. Certain mediums, such as radio, were heavily emphasized but limited in capacity to reach the whole community as they primarily reach men. This solution may need to utilize multiple mediums to effectively reach the whole community and to effectively encourage behavior change. Issues with literacy must also be considered, as literacy levels are very low in the region. Participants emphasized that any written information must be delivered in Nga'karamojong.

# VALIDATION AND DISSEMINATION

Summaries of preliminary findings of this study were disseminated to district leaders and community members to ensure accurate interpretations of the findings and to inform the concept design of the *Community Mobilization through Existing Networks* solution. Findings from this study, were used during a Concept Development workshop and participatory activities held in villages, using activities that build upon human centered design approaches to elicit meaningful input on concept design.

Based on the findings from this study and the subsequent dissemination and concept development activities, an initial solution concept was developed that involves peer information sessions, forum theatre, songs, and radio (see Figure 6).

Members of ECCD Center Management Committees (CMCs) will assist in facilitating the EDEAN solution. The CMCs are comprised of ten members: two caregivers (one literate, one not), parents, a mobilizer, an ABEK teacher, an LC1 (Village Local Council Member), and a CMC chairperson. As part of the solution, young women and men will participate in a series of approximately five peer group meetings arranged by ECCD CMCs.

Initially, young women and men will meet separately to learn about fertility and FP methods in groups of about 10-12 people. During these meetings, those attending will be given a product that depicts information related to fertility awareness in a visual manner that is easy to interpret and share. Topics from the product will be used to organize meetings and subsequent forum theatre activities that will initially be held within group meetings. Participants will be encouraged to use the product to share information about fertility awareness outside of the peer meetings. After a series of meetings focused on fertility and FP, young women and men will join together to discuss couple communication and access to FP and perform forum theatre activities. Ultimately, the group will select topics to perform at a community event. Song writers will be invited to the community event. They will be encouraged to write songs based on the performance to further diffuse key messages. Though a competition, songs will be selected to perform over the radio for even wider diffusion.

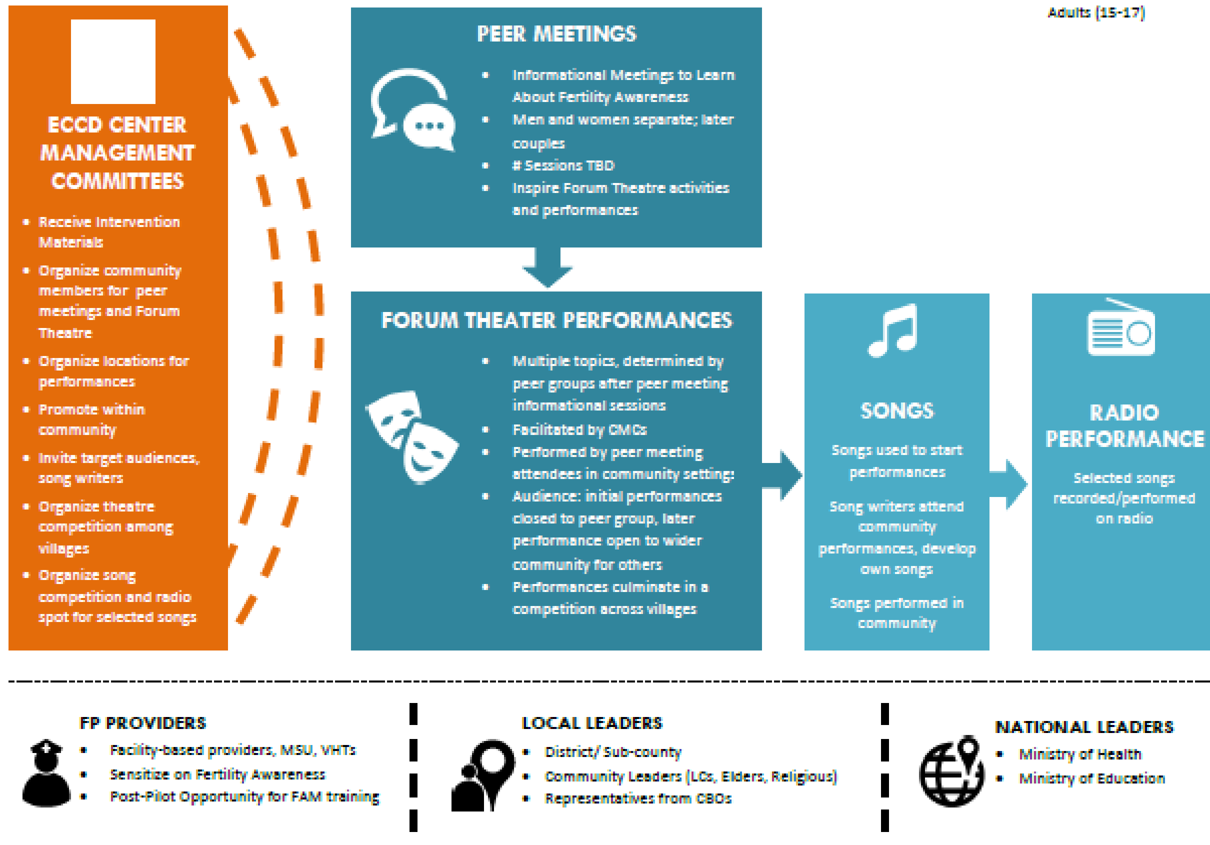


**Figure 6** | EDEAN Solution Concept |

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