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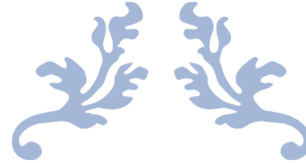

STUDYING FACTORS ASSOCIATED WITH UNMET NEED FOR FAMILY PLANNING IN ASSUIT AND SOUHAG GOVERNORATES

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Acronyms

ANC	Antenatal Care
EDHS	Egypt Demographic and Health Survey
EFHS	Egypt Family Health Survey
FGD	Focus group Discussion
FP	Family Planning
IDI	In-depth Interview
IUD	Intra Uterine Device
LAM	Lactational Amenorrhea
MCH	Maternal and Child health
PHC	Primary Health Care
SBCC	Strategic Behavioral Change Communication

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Executive Summary

Women are considered to have unmet need for FP when they want to space or limit births, but they are not using any method to prevent pregnancy which reflects an apparent discrepancy between their reproductive preferences and behavior. These women are at risk of unintended pregnancies with negative consequences on their health and the health of their children. According to the Egypt Family Health Survey (EFHS) 2021, 13.8 % of married women aged 15-49 years had an unmet need for FP with the following regional variations; Urban governorates (12.6%), Lower Egypt governorates (11.6%), Upper Egypt governorates (16.8%), and Frontier governorates (12.3%).

The current study aimed to explore the possible factors for the observed gap between women's reproductive intentions and their contraceptive behavior and provide insight on the factors attributable to that gap in two governorates with high rates of unmet need. The findings are expected to shed light on the factors associated with the unmet need for FP which will inform planning information, education, and communication campaigns and behavioral change communication programs to generate demand for FP.

The study adopted qualitative methodology in addition to desk review. Six FGDs targeted 48 married women aged (18-45 years) of different socioeconomic standards who do not desire pregnancy and are currently not using modern contraception. Ten in-depth interviews (IDIs) were conducted with FP service providers.

The study revealed that most of the people in the studied communities oppose contraceptive use and desire many children to support and empower their families. Among the people who use contraceptives, the majority access the health unit and public hospitals where services are offered free of charge while private facilities are accessed by few who can afford their costs. Popular FP methods among contraceptive users were mainly subdermal implants, 3-month injections followed by IUD and pills.

The study revealed that in both Upper Egypt governorates, there are well-defined cultural norms and traditions governing the desirable number, sex, and timing of

children. These norms and traditions stand out as the major obstacle to the use of contraceptives followed by fear of side effects of contraceptives and health concerns per participating women's perceptions. Having girls only is a major barrier to using contraceptives and a woman has to get pregnant until she delivers a boy. Even women who deliver a boy have to get pregnant again to have a brother for the boy. The mother-in-law and husband were the key figures that made sure that norms and traditions related to sex and number of children are kept for the ultimate goal of many children, mostly boys, for an empowered family "Ezzwa". Fear of side effects is an important cause for not using contraceptives among women in their communities who desire to space or limit pregnancies. The main side effects that they usually hear about are bleeding, infertility, weight gain, bone aches, and cancer. Interviewed women added that because of these side effects, women stopped using contraceptives. Furthermore, women who were breastfeeding and not menstruating, and women whose husbands were working abroad believed that they face little risk of becoming pregnant. Accordingly, they were not motivated to use contraception despite their desire to space or limit. Women who have indicated their future intention to use family planning represent low-hanging fruit for programs to reduce unmet need because their intentions make them more likely to use FP.

FP service providers reflections were more or less similar to those of women who participated in the FGDs. The interviews did not display difference between the two governorates.

The study had several recommendations to combat potential reasons for unmet need for FP including behavioral segmentation and targeted communication to tackle familial opposition, improved counseling to address side effects and prevalent rumors in addition to women empowerment.

Background

Unmet need for family planning (FP) is a key indicator for determining the demand for contraception. Women are considered to have unmet need for FP when they want to space or limit births, but they are not using any method to prevent pregnancy which reflects an apparent discrepancy between their reproductive preferences and behavior. These women are at risk of unintended pregnancies which have negative consequences on their health and well-being as they can lead to maternal morbidities and even death. Furthermore, children born from unintended pregnancies are less likely to be breastfed, more likely to be stunted, and are at higher risk of child mortality than children from wanted pregnancies (1).

Unmet need for FP provides an indication of the success of reproductive health programs in addressing demand for services. Unmet need complements the contraceptive prevalence rate by indicating the additional extent of need to delay or limit births (2).

Where many women prefer large families and do not want to space or limit births, unmet need as well as contraceptive use are low. In transition to smaller families, unmet need will probably increase until information, supplies, and services meet the increasing demand for contraception. Therefore, the high levels of unmet need are not necessarily due to the failure of a family planning program, but may reflect growing demand for contraception (3). Woman's age was negatively associated with total unmet need for FP, meaning as women get older the unmet need for FP decreases. The number of children was found to be a positively associated determinant for a woman's total unmet need. Also, woman's level of education was negatively associated--as a woman's education improves, her total unmet need decreases (4).

Egypt is the most populous country in the Middle East and the third most populous country in Africa. On January 1 of 2023, Egypt's population has reached 104,462, 545 people inside the country (5).

According to the Egypt Family Health Survey (EFHS) 2021, the percentage of currently married women aged 15-49 year currently using any modern method of family planning increased to 64.7 % in 2021, from 56.9 % in 2014. However, EFHS also revealed that the use of modern methods of FP among younger age groups is significantly lower at 39% for married women aged 15-19-years and 52.3% for those aged 20-24 years. The survey also pointed that 13.8 % of married women aged 15-49 years had an unmet need for FP with the following regional variations; Urban governorates (12.6%), Lower Egypt governorates (11.6%), Upper Egypt governorates (16.8%), and Frontier governorates (12.3%). A difference of unmet need for FP was observed between urban areas (13.5%) and rural areas (13.9%) and between rural Upper Egypt (18%), and rural Lower Egypt (11%).

In demographic and health surveys, the data on reasons for nonuse are based on a single survey question and capture only women's major reasons, without conveying the potentially complex interplay of barriers that contribute to nonuse and in most cases the woman provided only one reason for nonuse. This approach likely does not capture many cases in which women have multiple concerns.

Accordingly, the current study aimed to explore the possible factors for the observed gap between women's reproductive intentions and their contraceptive behavior and provide insight on the factors attributable to that gap in two governorates with high rates of unmet need. The findings are expected to shed light on the factors associated with the unmet need for FP which will inform planning information, education, and communication campaigns and behavioral change communication programs to generate demand for FP. Understanding women's reasons for nonuse of FP despite desire is vital to arriving at FP interventions targeting specific audience segments and tailoring behavior change communication efforts to reach these intended audiences effectively. That understanding may guide the design of FP projects by helping to identify the reasons for unmet need among specific audiences and by suggesting ways to develop and fine-tune family planning approaches that are user-friendly and community-oriented.

Methodology

Study design, setting and participants

To enable a better understanding of the reasons for non-use of contraceptives and factors associated with the unmet need for FP among women in settings with high prevalence, the current study adopted qualitative methodology in addition to desk review.

Desk review of relevant documents, including demographic and health surveys, family health survey, technical reports and studies focusing on unmet need for FP, was conducted. The study employed focus group discussions (FGDs) and in-depth interviews (IDIs) to explore the potential reasons for not using FP services among women with unmet need despite their intentions.

Six FGDs (three in each governorate) targeted 48 married women aged (18-45 years) of different socioeconomic standards who do not desire pregnancy and are currently not using modern contraception. Each FGD included 8 women selected through purposive sampling technique from women accessing the primary health care (PHC) facilities to receive antenatal care (ANC) services for pregnancy which was mistimed/unwanted or scheduled children immunization for their children after validating eligibility criteria. To gain an insight of the perspective of FP service providers towards unmet need for FP, ten in-depth interviews (IDIs) were conducted with family planning service providers five in each of the study governorates. The researcher recruited targeted participants for both IDIs and FGDs via the National Population Council NPC and its governorates branches.

Data collection

The FGDs and IDIs started by brief introduction of the study and the importance of the participants' contribution and then they were asked to provide their consent for voluntary participation and recording of the FGDs and interviews for those who consented to participate in the study. If the interviewee refused recording, the

researcher resorted to taking notes. The FGDs were facilitated by female data collectors to ensure that participants feel comfortable and at ease.

At the beginning of each FGD and IDI, the facilitator orally introduced the informed consent form to familiarize them with the objectives of the study, process of FGD and IDI, and their voluntary nature of participation in the FGD or IDI. In addition, the interviewees were informed on confidentiality, data usage, potential risks and benefits of the study.

The FGDs with pregnant and post-caesarean women were conducted in a separate room in the PHC facilities that provided privacy for women to share their thoughts. The study team managed to ensure homogeneity of the participants in the FGDs in terms of education and socio-economic status. The interviews took place in the physician's own room in the PHC facility after regular office hours in order not to interrupt the flow of work.

All IDIs and FGDs were tape-recorded, with verbal informed consent (considering the local culture and related constraints on taking written consent).

The FGDs and IDIs were conducted by a research team qualified in qualitative research. The consultant oriented the selected researchers towards the study tools in addition to the respective ethical considerations and conduct supervisory field visits throughout data collection phase.

Study locations:

According to 2021 EFHS, the highest rate of unmet need for FP was observed in Upper Egypt compared to other regions (see table1).

Table 1: Unmet need for FP/place of residence	
Place of residence	**Unmet need for FP (%)**
Urban	12.6
Lower Egypt	11.6
Upper Egypt	16.8
Frontier	12.3

The Egypt Family Health Survey 2021 also revealed that in Upper Egypt, the unmet need percentages in the below listed governorates are the highest rates of unmet need for FP compared with other governorates in the other regions (table 2).

Table 2: Unmet need for FP in four governorates of Upper Egypt with highest %	
Governorate	**Unmet need for FP (%)**
Assiut	22.4
Sohag	22.3
Qena	19.7
Minya	17.5

Accordingly, Assuit and Souhag governorates were selected as the study locations with focus on rural areas as the 2021 EFHS revealed higher rates of unmet need in rural areas compared to urban areas. The study was conducted at PHC facilities and recruited women, from among those accessing the PHC facilities to receive ANC services and children immunization, according to the below selection criteria:

Women are considered to have unmet need for spacing if they are (6):

- At risk of becoming pregnant, not using contraception, and either do not want to become pregnant within the next two years, or are unsure if or when they want to become pregnant;

- Pregnant with a mistimed pregnancy; or
- Postpartum amenorrheic for up to two years following a mistimed birth and not using contraception.

Women are considered to have unmet need for limiting if they are (6):

- At risk of becoming pregnant, not using contraception, and want no (more) children;
- Pregnant with an unwanted pregnancy; or
- Postpartum amenorrheic for up to two years following an unwanted birth and not using contraception.

Data analysis and validation

The FGDs and IDIs were transcribed then analyzed manually using thematic analysis. Potential reasons of unmet need stated by women were compared with physicians' views. The same themes which were commonly being reflected across the participants were grouped together. However, divergent but relevant themes were also reported separately.

The findings of the study were validated through round table discussion (RTD) with stakeholders from governmental entities, research entities and international organizations focusing on FP.

Results

The below section displays the themes that came out of the FGDs with women who have unmet need for FP whether spacing or limiting and IDIs with service providers who provide FP services in the same communities of participating women. Data analysis did not reveal differences in the themes between the two governorates.

Background Characteristics of study participants

Six FGDs were conducted with 48 fecund women who are not using contraception but who wish to postpone the next birth (spacing) or stop childbearing altogether (limiting); 24 women in each of Assuit and Souhag. Out of the 48 women who participated in the FGDs, 16 were pregnant. The below table displays the main sociodemographic characteristics of studied women.

Table (3) Main characteristics of women who participated in FGDs

Variable	Numbers
Age	Range: 22-45 years Average (mean)± SD: 31.56±6.6 years
Education	9 women were illiterate 13 women completed primary/preparatory 26 completed secondary and above
Occupation	12 women were employed (clerks and admin assistants) 36 women were housewives.

Perception of FP and contraceptive use in the studied communities

According to 2021 EFHS, the total fertility rate (the average number of children per woman of reproductive age between 15 to 49 years old), was 2.85 children per woman with the highest rate of 3.6 observed in rural Upper Egypt. The qualitative results also reflected that most of the studied communities prefer having many children.

Women at FGDs were asked if people in their communities are generally supportive of or opposing to contraceptive use. They stated that most of the people oppose contraceptive use and desire many children to support and empower their families "Ezzwa". Some noted that educated people prefer to plan their families and have two children compared to the uneducated who prefer large families. The same applies to employed women given that they are obliged to attend to their work in addition to raising children and managing home chores. One woman added that the younger generations are supportive of FP compared to older generations; her sisters-in-laws have 2 or 3 children, do not want more children and want to use FP methods. Another woman added that young couples, who have been married for few years, are living on their own not in extended families as it used to be so they do not have the familial support and have to manage home chores and raise children alone so they cannot afford raising many children. However, older couples, who have been married for several years, want more children and want a brother for their baby girls to support and empower their families, even if they are poor and cannot afford raising children. Some women added that the economic situation pushes some people to use FP given the cost of raising children.

"The level of education in Upper Egypt is low, and level of illiteracy is high. People who are not educated have many children, and the child works and supports the head of the family." (Souhag, 35ys, university graduate, housewife, 2 boys & 2 girls)

The 2021 EFHS recorded total fertility rate of 3.3 in Upper Egypt (3.77 in Assuit and 3.68 in Souhag) which is higher than Egypt figure (2.85). Additionally, the 2021 EFHS recorded modern contraceptive prevalence rate of 57.8% in Upper Egypt (50.8% in Assuit and 45.3% in Souhag) which is lower than Egypt figure (64.7%).

When asked about where do women in their communities who want to plan their families go to receive FP services, the majority stated the health unit and public hospitals where services are offered free of charge. They added that private facilities are accessed by few who can afford their costs. One woman noted that some women access

private facilities to receive FP services when they do not want others to know they are using contraceptives so they claim that they need to visit the private doctor for other reasons.

"There are people who do not want others to know that she is using a (FP) methods, so they go to a private doctor to be examined for infection, for example, and she is going to have a (FP) method. The husband wants her to have children and she does not want to."

(Assuit, 30ys, university graduate, clerk, boy &girl)

Interviewed women were asked about preferred FP methods among women, in their communities, who use contraceptives, and potential causes of that preference. Discussions yielded the following methods in both governorates according to popularity.

Subdermal implant (capsule): The preferred method for young women who prefer it as it lasts for three years. "Once inserted in the body forget about it" and many people used it and were satisfied.

The three-month injectables: women who prefer it are not worried about a daily dose and being one or two weeks late for the injection and are not dissatisfied with the absence of the period for 3 months.

IUD: is the preferred method among older women. People prefer an IUD because it lasts for a long time, does not contain hormones, "does not move in the body unlike the capsule", the occurrence of the menstruation makes the woman feel feminine.

The contraceptive pills (tablets): preferred by people who fear injections or inserting something in their bodies. Pills are easy to use" you just swallow it without pain", cheap and can be obtained from the pharmacy. Women whose husbands are working abroad prefer using the pills before husbands' arrival.

To explore rumors related to FP methods, interviewed women were asked about the drawbacks linked to specific FP methods that they hear of. Discussions revealed that IUD is believed by some people to move around and reach the heart and that women get

pregnant while using it. The capsule also moves in the body, causes bleeding and weight gain. The injectables cause infertility and hypertension. Many women get pregnant while using the pills.

Perceived causes of unmet need for FP in the studied communities

Interviewed women were then asked about their own perceptions of obstacles preventing women in their communities from using contraceptives, despite their desire to space or limit pregnancies. Discussions revealed that in both Upper Egypt governorates with the highest prevalence of unmet need for FP, there are well-defined cultural norms and traditions governing the desirable number, sex, and timing of children. These norms and traditions stand out as the major obstacle to the use of contraceptives followed by fear of side effects of contraceptives and health concerns per participating women's perceptions.

Norms and traditions: According to all of the interviewed women, having girls only is a major barrier to using contraceptives and a woman has to get pregnant until she delivers a boy. Even women who deliver a boy have to get pregnant again to have a brother for the boy. Interviewed women added that the women usually lose hope of having a baby boy after delivering 5-6 girls daughters. One woman from Assuit noted that her friend had four daughters before having a boy and she is pregnant again to have a brother for her boy but the fetus turned out to be a girl so she is seriously considering abortion.

"*If a woman has 5 or 6 daughters, she will keep getting pregnant until she gets the boy, and if she does not get the boy, he will marry again.*" (Souhag, 35ys, completed preparatory, housewife, 2 boys)

Discussions revealed that boy preference is even more deeply rooted among older couples who never give up on having a son. A woman from Assuit mentioned that she has four sisters and lately her father wanted to get married again so that he could have a boy. Another one from Assuit stated that her husband's uncle had six daughters and

he told his wife that he wanted to have a boy. The wife was afraid that he may get married again so she got pregnant and gave birth to the boy at the age of 55.

"The one who has girls is under pressure by those around her, her husband and her husband's family and her mother-in-law." (Souhag, 28ys, primary, housewife, 2 boys & girl)

The interviewed women affirmed the powerful role played by the mother-in-law in enforcing the aforementioned norms and traditions through pushing women to have more children, especially if the husband is an only child. One woman from Assuit added that sometimes the husband does not approve to his mother's attitude and to avoid a backlash from her, he agrees with his wife to use contraceptive without informing his mother. However, this is not a common attitude among husbands who oppose contraception because they want more children than their wives do and/or desire to have boys and not only girls, as revealed by interviewed women and hence, some women opt to use contraceptives covertly. A woman from Assuit stated that husband's opposition pushed her sister, who was weak and did not want more children, to take the injectables without informing him and when he found out, they had a big fight and she stopped taking the injections. Women added that some husbands even threaten their wives to divorce them or marry again if they abide by their desire to have more children. FGDs revealed that apart from the role of the husband and his mother influenced by norms and traditions, the woman's mother sometimes presents another obstacle to contraceptive use through pushing her daughter to have more children. Having many children helps to maintain stronger sustainable marital relationship per their belief.

Per the 2021 EFHS, the ideal number of children for young individuals in the age group 15-29 is 2.6 children, rising to 2.7 children among males and decreasing to 2.4 children among females reflecting what the interviewed women revealed of husbands' preference for more children than women.

Fear of side effects: Women stated during FGDs that fear of side effects is an important cause for not using contraceptives among women in their communities who desire to space or limit pregnancies. The main side effects that they usually hear about are bleeding, infertility, weight gain, bone aches, and cancer. Interviewed women added that because of these side effects, women stopped using contraceptives.

Other potential reasons: Few women referred to the transportation costs and having to arrange for someone to look after children for women who are based in remote areas, which may keep women from accessing FP services specially if a second visit is needed as FP service providers are not available on all working days.

None of the FGDs participants referred to the availability of contraceptives and/or the cost of FP services as a potential cause for women in their communities not using contraceptives. Similarly, religious opposition to family planning was not listed by any FGD participant as a potential reason for not using FP. When probed, responses mostly reflected a supportive role by the religious leaders on TV or those who attend awareness raising sessions. A woman from Assiut added that her relative is a religious leader and his wife is using a contraceptive method. However, another one noted that her neighbor is a religious leader and has ten children.

Suggestions to overcome obstacles to contraceptive use: Participating women were asked about their suggestions to overcome the aforementioned obstacles and hence enable women who desire to space or limit pregnancies to use contraceptives. All of them stated “awareness” targeted at families, husbands, mothers-in-law and women through TV and sessions to enable attendants to ask questions and one refereed to the use of social media. The aim of the awareness is to provide information about the different FP methods, explain the benefits of FP for the woman’s health and her children; being in good health will enable the woman to look after her children. Some women mentioned the need to reassure women who experienced side effects that other methods are available that are safe and cheap and she can switch to. Few women suggested organizing convoys and providing mobile clinics to remote places.

Causes of non-use of contraceptives among interviewed women despite their desire to limit or space

Interviewed women were then asked about their own reasons for not using a FP method despite their desire to space or limit pregnancy. The reasons they stated were more or less similar to the potential reasons mentioned in the previous section, albeit they were contextualized.

Norms and traditions: Women who had girls were pushed to have boys and women who had a boy was pushed to have a brother for her son. The mother-in-law and husband were the key figures that made sure that norms and traditions related to sex and number of children are kept for the ultimate goal of many children, mostly boys, for an empowered family “Ezzwa”.

“I want to use FP, but my mother-in-law wants me to have children because my husband is an only child.” (Assuit 31years, illiterate, housewife with boy and 2 girls)

“My husband's brother has 7 children; my mother-in-law tells me that you should have the same number of children.” (Souhag, 31ys, completed preparatory, housewife, 5 boys)

The norms and traditions favoring boys were not limited to mother-in law opposition to contraceptive use till a boy is delivered but influenced the way the wife who delivered girls only was treated which forced women to keep getting pregnant till a boy was delivered. A woman from Assiut with four daughters stated that when she was employed, her mother-in-law refused to help her with the girls saying “*You are the mother of girls. Did you bring us a boy to help you with?*”. Another one from Assiut with four daughters added that every time she delivered a girl, her mother-in-law cried and wanted to kick her out but after she had two boys, her mother-in-law treats her well.

Some of the interviewed women stated that their husband desire for more children kept them from using a contraceptive method despite their desire. These women were either satisfied with the number of children they have or wanted to rest following consecutive

deliveries. Those women added that their husbands were not as worried about the anticipated costs of raising a child. The influence of norms and traditions related to the number and sex of children was not only reflected in husband and mother-in-law opposition but also the attitude of the surrounding community.

"I want to use FP, but my husband refuses and wants many children because he is an only child. Our neighbors are taunting us because I have two daughters only and they say I must have a boy." (Souhag, 29ys, illiterate, housewife, 2 girls)

One woman noted that her husband's opposition to contraceptive use forced her to use FP covertly but she was worried about the religious perspective so she sought religious opinion.

"I used the pills behind his back. When I asked, I was informed that it was religiously unacceptable to use FP behind his back while he wants children so I stopped and became pregnant." (Souhag, 28ys, university, housewife, 2 boys)

The 2021 EFHS demonstrated that around quarter of currently married women (23.6%) believed that their husbands desired more children than the number they desired.

A theme that emerged from the current study was an ambivalence toward pregnancy and a sense of fatalism. The FGDs demonstrated that some women have unmet need because they have ambiguous fertility preferences. Those women felt torn between the joy of having a child versus the cost of raising a child.

"We will not be able to change the way of thinking, so we will abide by what is told and deliver and that's it." (Assuit, 22ys, commercial vocational, housewife, girl)

"I want a brother for my son because the boy himself say, I wish I had a brother like my friend. This word hurst me deeply. I thank God, but I want a brother for him so that he won't be alone." (Souhag, 33ys, completed preparatory, housewife, 3 girls & boy)

The 2021 EFHS documented that that although the majority of births after the first child occurred after a spacing period of two years or more, 20% of births took place within a

short interval, i.e., within 24 months of the previous birth. The median number of months since last birth was 37.6 months with the lowest median number of 34.5 recorded in rural Upper Egypt (Assuit was 31.1 months and Souhag was 32.6 months). Figures in rural Upper Egypt and two study governorates reflect the preference of many children and closely spaced ones till the boy is delivered as the study revealed. Furthermore, the 2021 EFHS demonstrated the regional variation among married women with three children who desire to limit the number of children, with the lowest percentage recorded in rural Upper Egypt (66.1%); recorded figures for rural Lower Egypt and Egypt were (87.5%) and (82.5.3%) respectively.

Side effects and health concerns

Some of the interviewed women stated previously using contraceptives and experiencing some side effects or discomfort that was attributed to contraceptives, leading them to discontinue use. Those women had a boy or two at the time they started using a contraceptive affirming the strong influence of the norms and traditions pertaining to the preference of boys. The discussions aimed to highlight the main side effects linked to contraceptives that lead to the discontinuation decision.

Infertility and difficulty in conceiving after they ended use, were the main concerns and fears that women who used the 3 month injections had. This fear was not associated with personal experience, but rather what they heard from their social networks. They added the side effects they complained of included weight gain, weakness and absence of menstruation while using the injections. One woman noted that absence of menstruation is worrisome for possibility of pregnancy.

"*I used the 3 months injection for two times, and I heard that it causes infertility, it actually stopped the period, and I was afraid of it*." (Assuit, 30ys, university, clerk, 2 boys)

"but its (period) absence bothers me because I do not know if I am pregnant or not". (Assuit, 43 years, primary, clerk, girl and 3 boys)

Cancer is another concern of women who use contraceptives and similar to fear of infertility was not based on actual experience, whether personal or among their networks, rather rumors. Yet, fear of infertility and cancer led two women to state that they will never use contraceptives. Their decision shows that medically inaccurate beliefs are an important factor underlying the unmet need for FP. Surprisingly, fear of cancer was noted by a woman who used a non-hormonal IUD.

"I did not want more children, and had an IUD inserted twice and it fell. After that, my breast was like a stone and I was examined. I was afraid it might be something (cancer) but he gave me treatment and I said that I will not use any method" (Souhag, 30ys, primary, housewife, 2 boys & girl)

Though bleeding and backache were the main side effects linked to the IUD, yet they were not stated as the reasons for discontinuation. Few women noted husband discomfort as the reason for IUD removal. When probed, they added that husbands stated "it feels like a prickle" during sexual intercourse.

Bleeding was mentioned as the main side effect that led to discontinuing using the capsule by interviewed women who used them.

"*I gave birth to the second child and had a capsule inserted. I had bleeding for two years and I couldn't bear it and had the capsule removed*." (Assuit, 34ys, illiterate, housewife, 2 boys)

Getting pregnant while using the pills was a major side effect reported by three women who used them. FGDs revealed that the perceived method failure was in fact inaccurate and inconsistent use of the pills.

"I used the pills, but the pills can be forgotten because we are ignorant. The educated woman knows how to set the clock, but we leave it to God, so we forget."

(Souhag, 28ys, primary, housewife, 2 boys & girl)

Awareness about potential side effects is essential for continued use. FGDs revealed that women who discontinued contraceptives did not have this knowledge awareness. Furthermore, women who sought medical care after experiencing side effects, were counseled to switch to another method. None of them was reassured that side effects would settle down over time or offered medication to control some side effects.

"I used the pills and had bleeding so I stopped. Then I used the capsule for one and half years and I had bleeding then I used the injection and it caused bleeding and I stopped it two months ago" (Assuit, 23ys, completed preparatory, housewife, boy and girl)

The 2021 EFHS recorded that only about 42% of users received information from service providers about potential side effects of the methods, and only 28% were informed by service providers about how to deal with side effects if they occur.

Some of the women who discontinued using a contraceptive method got pregnant. None of them was aware of the possibility of getting pregnant after method discontinuation and their reflection was *"I was surprised that I was pregnant*."

"*I used pills and had bleeding so I stopped*. *The doctor told me to come when I have the period to insert a method. I did not have a period and became pregnant."* (Souhag, 25ys, commercial vocational, housewife, 2 girls & boy)

The 2021 EFHS displayed that the percentage of unintended births (whether wanted for the future or unwanted at all) increased from 15.7% during the five years preceding the 2014 Egypt demographic and health survey (EDHS) to 20.5% during the five years prior to the 2021 EFHS. This highlights the need to improve the quality of counseling provided by the service providers to include proper use of method, potential side effects and how to deal with them instead of discontinuing the method. The 2021 EFHS also underscored that side effects and health concerns were the most common reasons for discontinuation, accounting for 11% of cases, while 4% discontinued due to method failure (becoming pregnant while using the method). Approximately 30% of FP methods users in Egypt discontinued use within 12 months after beginning to use the method. Furthermore, the 2021 EFHS demonstrated that in the five years preceding the survey,

around fifth (20.5%) of pregnancies were unwanted at the time of pregnancy where 11.8% were unwanted and 8.7% were mistimed. This percentage is also higher than 2014 EDHS (16%).

Perceived low risk of pregnancy

FGDs revealed that women who were breastfeeding and not menstruating, and women whose husbands were working abroad believed that they face little risk of becoming pregnant. Accordingly, they were not motivated to use contraception despite their desire to space or limit.

Six women who participated in the FGDs had been breast feeding for more than one year and in absence of menstruation were confident that they will not get pregnant.

"I do not get pregnant for the entire period of breastfeeding. I get pregnant once the baby is weaned." (Assuit, 26 years, illiterate, housewife,3 girls and 2 boys)

Most of the pregnant women with unwanted/mistimed pregnancy who participated in the FGDs added that they got pregnant while breastfeeding in absence of menstruation. Although, the lactational amenorrhea (LAM) is a traditional FP method but the FGDs revealed that the participants did not understand the conditions under which breastfeeding can reduce the chances of becoming pregnant.

Furthermore, some women whose husbands were working abroad believed they have no chance of getting pregnant with infrequent sex. They added that their husbands return every six months.

Intensions for future contraceptive use

Contraceptive intentions were found to be strong predictors of future use (7). Women who have indicated their future intention to use family planning represent low-hanging fruit for programs to reduce unmet need because their intentions make them more likely to use FP. Most of the participants expressed positive intentions to use

contraceptive method in the future. A small number of participants stated that they do not intend to use contraception in the future due to past dissatisfaction with methods used, lack of support from their husbands and families and husbands working abroad. One woman noted that there is no need for contraceptives for women above 40 years.

"We are over 40 years old. I don't think that over 40 years there will be pregnancy." (Souhag, 42 ys, vocational, housewife, 3 girls &boy)

Those who would consider using an FP method said they would select a method with few side effects and convenient to use. Capsule and oral pills followed by injections were the most cited preferred methods for future use among interviewed women. Capsules were preferred for the long duration and absence of bleeding; pills for the ease of use and stopping use and the 3 months injectables for the duration.

"A capsule for its long duration, my sisters-in-law have it inserted, and there is no bleeding or anything else." (Assuit, 24 years, completed preparatory, housewife, boy)

The IUD was cited by few women for its long duration and being suitable for those who do not prefer hormonal methods. Most of the women who have positive future intentions were not motivated to use IUD. When probed, these women reflected their discomfort of the insertion process which is embarrassing regardless of the gender of the attending service provider. Some added that husbands refuse to let wives use the IUD for the same reason.

The 2021 EFHS displayed similar findings regarding preferred modern FP methods. Although, the highest percentage of women still use the IUD yet, this percentage has decreased by 1 point (from 30% to 29%) between 2014 EDHS and 2021 EFHS (with lowest percentage of 20.4% recorded in Upper Egypt). Meanwhile the same surveys revealed that the use of other modern methods has increased between 2014 and 2021 as follows; pills from 16% to 20%, injections from 9% to 10% (with highest percentage 12.6% recorded in Upper Egypt) and subdermal implants s from 0.5% to 2.6% (with highest percentage 3.7% recorded in Upper Egypt).

Providers' perceptions

The study interviewed ten FP service providers, five from each governorate. The interviewed providers were all females and included a contracted retired family medicine doctor and four family planning specialists with an experience ranging between 6 to 10 years in Assuit. While in Souhag, the study interviewed a consultant and four specialists with 20 years of experience. FP service providers reflections were more or less similar to those of women who participated in the FGDs. The interviews did not display difference between the two governorates.

Contraceptive use in the studied communities

Interviewed providers were asked about the characteristics of women with unmet need based on what they have experienced throughout their professional career. They stated that these women are usually young being more influenced by the familial opposition, poorly educated being more influenced by rumors and myths and unemployed with limited exposure to information. They also added women with many children who rarely leave their houses being overwhelmed with home chores and hence unable to access health facilities.

The providers stated that the FP methods most in demand currently are: the subdermal implants (capsules), the three-month injections and the pills. Capsules and injections are preferred by many women who use contraceptives for their long duration and using them does not necessitate gynecological examination like the IUD. Additionally, absence of the menstruation is preferred by many women to avoid interruption of religious commitments. Pills are also popular among contraceptive users being easy to start and end using and not requiring gynecological examination. They added that the demand for IUD decreased compared to the past and attributed that to the embarrassment of gynecological examination and fear of pain and heavy bleeding which were either previously experienced or conveyed through others.

"No rumors are linked to the capsule and hence it is popular among users." (Assuit FP service provider)

Potential causes for unmet need

Almost all interviewed FP service providers reflected the following challenges that they perceived as potential barriers for contraceptive use and hence contributing to unmet need for FP:

- Norms and traditions in favor of having a son or two before contraceptive use and the value of having many children for an empowered family and siblings supporting each other.
- Familial opposition to contraceptive use led by mother-in-law and husband to abide by the norms and traditions and to be equivocal to other sisters-in-law
- Fear of side effects mainly as a result of rumors conveyed by others rather than actual experience such as the heavy bleeding caused by the IUD and cancer caused by hormones.
- Shortage of some FP methods, especially the capsules that are currently in high demand. The service providers added that in such case they propose the 3 months injections until the method is available in order not to lose the client.
- The request of some providers *“to see the period in order to insert the IUD"* and the approval required when inserting the IUD and capsule may result in loosing potential clients.
- The geographical distribution of the facilities is not feasible for all women to reach. Being far from where some women live entails transportation costs and arranging for someone to look after the children. Hence, it is very frustrating for women when they are faced with absence of the doctor or shortage of the method.

  “A husband prevented his wife from using transportation to go and pick up the method and follow up on it, and he told her It’s better to get pregnant each visit costs 30 pounds.” (Souhag FP service provider)
- Shortage of female doctors in some units, and accordingly counting on available ones to rotate among several units which is a burden on the doctors given that both governorates have districts that are widely separated. Furthermore,

women who miss the doctor on the day they accessed the unit, rarely come again.

Suggestions to reduce unmet need for contraceptives

The FP service providers were then asked about their suggestion to overcome the aforementioned barriers. Their highly recommended suggestion is awareness raising through different channels; TV advertisements, holding seminars for all members of community and home visits by outreach workers. They also focused on utilizing the opportunity of women attending antenatal care visits and/or receiving tetanus toxoid immunization and educating them about contraceptives in addition to those accessing the units for premarital examination. The interviewed providers affirmed the importance of increasing the number of available doctors and ongoing training of FP doctors for updated knowledge and skills especially those related to counseling. Focus on counseling especially side effects of FP methods will help to combat rumors through providing accurate information and responding to the concerns of women. An important theme that came out of the discussion with the providers is the need to collaborate with private entities whether clinics or hospitals. A good share of potential clients access the private facilities for antenatal care and delivery and *"A private client will always remain private client."*

Study limitations

Qualitative research is not meant to provide statistically generalizable results and similar analyses in different contexts should also be conducted. However, the results of this study may hold true in similar contexts.

It was definitely challenging to investigate both women's and physicians' views in the same study. The strengths of the study include getting similar responses from both the providers and care receivers in regards to potential reasons of unmet need for FP.

The findings of this study are from a small, purposively sampled group, and therefore generalization is difficult. While we are confident in the findings of this study, it was not without its limitations. The study was conducted in two governorates of Upper Egypt with the highest recorded prevalence of unmet need for FP. Yet, the study findings do not accurately represent women's and physicians view from other governorates in the same subdivision. While the objective of the study was not to produce nationally representative results, adequate contextual description was provided to allow readers to determine whether the findings are relevant in other areas of Egypt and elsewhere in low- and middle-income countries.

The study's main strength was documenting the experiences and perceptions among women with unmet need themselves. However, qualitative studies have limitations related to validity, subjectivity, and reliability. To address these issues, efforts were made to increase the rigor and trustworthiness of the findings through the selection of diverse participants and utilizing different data collection methodologies (FGDs and IDIs) to enrich the findings.

Conclusion and Recommendations

Women who want to space or limit births but are not using contraception are considered to have an unmet need for FP. Despite efforts made to expand access to FP services, a significant proportion of currently married women in rural Upper Egypt still has an unmet need for both spacing and limiting of births. Knowing why women have unmet need for FP is useful when planning different programmatic interventions and strategic behavioral change communication (SBCC) programs to generate demand for FP services. The current study sought to understand the reasons behind the unmet need for FP in two settings with highest prevalence, Assuit and Souhag Governorates. Norms and traditions favoring many children specifically sons, fear of side effects and perceived low risk of pregnancy were the potential reasons that the current study revealed.

Norms and traditions favoring many children especially sons result in family opposition to contraceptive use, specifically the husband and mother-in-law. Experienced side effects and fear of health consequences of contraceptive use also stand out as potential reasons for unmet need. The prevalent concerns regarding side effects and health risks among women having unmet need for FP reflects a need for information and counseling to help women learn more about the side effects and mechanisms through which women can switch methods when needed.

The study underscored bleeding changes, fear of infertility and cancer and method failure as potential reasons for unmet need for FP. The study also noted the improper use of contraceptive pills by the majority of women using them which resulted in many of them getting pregnant while using the pills and mistakenly perceiving that as method failure. Hence, helping women understand typical bleeding changes associated with the selected contraceptive method could lead to greater acceptance of the changes, increased method uptake, improved satisfaction, and higher continuation rates. Furthermore, failure rates can be reduced when women are sensitized towards the proper use of contraceptives to ensure the method is used correctly and consistently.

The study noted the prevalent misconception of low pregnancy risk linked to breast feeding that may extend for more than one year in absence of abiding by strict criteria of lactational amenorrhea as a traditional FP method. Low pregnancy risk was also observed among women whose husbands are working abroad which is a common situation in both governorates. The study also noted the “low popularity” of the IUD among the younger generations though the long duration and being free of hormones were acknowledged as advantages by most of the interviewed women.

Accordingly, the study recommends the following to combat the potential reasons for unmet need for FP:

Tackling familial opposition: Women whose husbands and mothers-in-law are opposed to contraception would benefit from communication programs to enhance communication about FP between husbands and wives about the benefits of small families and spacing between births. Improvements in information and counselling can affect social and cultural opposition to family planning.

Addressing side effects and health concerns: Strategies to address the fear of side effects depending upon the basis of the concerns. If the concern is due to experienced side effects or legitimate health reasons, these women would benefit from proper pre-adoption information, counseling and effective follow-up by outreach workers (Raedat Rifyat) to assess the level of satisfaction with the method and address issues that might prompt clients to discontinue. Similarly, health concerns about a specific method need not be a barrier as these potential users should be guided to the most appropriate method, taking into account their specific concerns while dispelling any misconception. On the other hand, if concerns are based on rumors, tailored communication activities should be conducted where accurate information about the methods available are provided and rumors are rejected, especially by satisfied users. The communication activities should involve mass media, social media to provide education regarding common myths, perceptions and medically inaccurate beliefs about contraceptives in addition to interpersonal communication.

Improving counseling: Is critical to help women select and effectively use an appropriate method and to promote continued use of modern contraceptive methods. Women should be made aware of the method mechanism of action, possible side effects, and what to do when they experience side effects. Additionally, improvement of postpartum counseling and timely use of contraception can reduce unwanted pregnancy among postpartum women.

Focusing on providing information: Accurate information about the value and safety of family planning and modern methods needs to reach male husbands and others who may influence women's use of contraceptives. Promoting the benefits of small and well-spaced families are more likely to influence women with unmet need for spacing.

Combating perceived low pregnancy risk: Regarding women with husbands working abroad or travelling most of the time, who cite infrequent sex, and those who breast feed and count on postpartum amenorrhea, they would benefit from counseling regarding their risk of pregnancy and the methods that are appropriate for their circumstances.

Empowering women: Education enrollment and expanding the economic opportunities for women will empower women and girls to negotiate their fertility preferences with their husbands. Women educational and economic empowerment will positively influence the perception of husbands, mothers-in-law and community regarding the benefits of small family.

Creating demand: Use of positive deviants, satisfied users, and other key influencers may lead to an increase in contraceptive uptake and enhance continuation.

Building the capacity of providers: Capacity building of FP providers on contraceptives should not just focus on the technical skills on insertion and removal for long-term methods. The need of accurate, up-to-date information about how contraceptives work, method side effects, and training to convey this information to clients and to answer their questions about method effects is crucial.

Conducting research: Research is needed to contribute to effective decision making and allocation of resources to satisfy unmet need for contraception. Such research should include identifying the demographic characteristics of women with unmet need for modern contraceptives; ascertaining the specific side effects that prevent large numbers of women with unmet need from using a contraceptive method, determining the extent to which perceived side effects are actually caused by method use and providers' perspectives regarding barriers to effective contraceptive use.

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