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Determinants of Family Planning Service Utilization among Palestine Refugees at UNRWA Health Center in Amman, Jordan: A Qualitative and Quantitative Mixed-Methods Study

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ABSTRACT

Introduction: Family planning is a vital aspect of reproductive health, encompassing contraceptive use, pregnancy, and prevention of sexually transmitted infections (STI). Among Palestine refugees in Jordan, particularly those utilizing services by The United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), maternal mortality rates and contraceptive use highlight the urgent need to address gaps in family planning service utilization. Sociocultural factors and systemic barriers remain determinants of contraceptive use and family planning outcomes in this population.

Methods: A mixed-methods study was conducted from June 5–7, 2023, at a single UNRWA health center in Marka camp located in Amman, Jordan. The study involved structured interviews with 57 female participants, focus group discussions (FGDs) among participants, and semi-structured interviews with healthcare providers at Marka health center. Quantitative data collection encompassed sociodemographic factors, perceptions of family planning services, and sociocultural determinants influencing contraceptive use. Categorical variable findings were analyzed by frequency and proportions. Subsequently, an exploratory descriptive approach was taken to gather qualitative data via FGD and semi-structured interviews. Transcripts from FGDs and interviews were coded and synthesized by thematic analysis to identify salient determinants of family planning knowledge, perceived barriers and self-efficacy to find access to family planning services.

Results: Major findings reported include: (1) Internet and health care professionals are cited as primary sources of knowledge regarding family planning with the most common reason for choosing the preferred contraception being professional advice (22.2%), (2) Sociocultural factors significantly shaped decisions, with a majority of FGD participants citing spousal preferences as the key determinant, and (3) Perceptions of UNRWA's services were largely positive, with 98.2% rating them excellent or good. However, logistical challenges such as long wait times and transportation costs were frequently reported as barriers. These challenges did not seem to diminish the overall satisfaction for patients, but did hinder utilization of services.

Conclusion: While UNRWA's family planning services are well-regarded, persistent barriers such as sociocultural constraints, limited knowledge, and service accessibility require targeted interventions. Fostering supportive sociocultural environments and improving logistical factors like wait times can enhance service uptake. Future research should explore long-term impacts of family planning initiatives and expand the scope to include other UNRWA health centers to inform inclusive and effective health policies pertaining to reproductive health in this low-income setting.

Key words: Family planning; Women's health; Jordan; Refugee health; Epidemiology

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INTRODUCTION

Family planning is a component of sexual health that provides knowledge and resources to make decisions about childbirth.[1] The United Nations' 2030 Sustainable Development Goals highlights the significance of ensuring universal access to sexual and reproductive health, including family planning.[2] Family planning encompasses contraceptive, reproductive, pregnancy, STI, infertility, newborn, and postpartum education, care, and counseling.[3] Contraceptives include traditional methods such as periodic abstinence or withdrawal and modern methods such as condoms, contraceptive pills, and IUDs.[3] Family planning services attempt to address critical issues like infant and maternal mortality rate, STI and cervical cancer prevention, and domestic violence detection and management.[3]

The United Nations Department of Economic and Social Affairs' 2030 Agenda for Sustainable Development stated that approximately 1.1 billion women had a demand for family planning.[2] Among these, 842 million use modern methods, while 80 million use traditional methods.[2] The report found that Western Asia and North Africa's use of any contraceptive method had a prevalence of about 34.3%.[2] More specifically, in Jordan, the median prevalence of any contraceptive method was 31.1%, with about a 55.7% demand for family planning.[2] This data allows for understanding the use of family planning services within Jordan. The United Nations Relief and Works Agency (UNRWA) is a non-profit organization created to aid Palestinian refugees who were displaced to neighboring countries, such as Jordan, after the 1948 Arab Israeli war. UNRWA has multiple health care centers throughout Jordan and within these healthcare centers there are 7,519 new and 39,612 continuing patients utilizing their family planning services.[4]

In 1994, UNRWA initiated family planning services to improve reproductive health among Palestinian refugees.[5] A 2015 analysis on the outcomes of family planning services by UNRWA in Jordan revealed 59% of Palestinian refugees use modern contraceptives, 18% use traditional contraceptives, and 23% use no contraceptives.[6] Family planning services among Palestinian refugees is of significant concern because maternal mortality among Palestinian mothers in Jordan has increased by 3% between 2015 and 20166. One way hypothesized to reduce maternal mortality rates is by increasing utilization of contraceptives, thereby lengthening birth intervals, and minimizing adverse maternal and neonatal health outcomes.[7]

In a 2018 study about UNRWA's family planning services, reasons for not using contraceptives included wishing to conceive (22%), ongoing pregnancy (19%), and opposition from spouse (20%).[5] Mothers with at least one male child were more likely to use modern contraceptives compared to mothers with no male child.[5] These findings identify sociocultural factors that may be determinants of family planning service utilization. Another study listed opposition by husband or in-laws, preference of child's sex, pride in having many children, fear of infertility, and incorrect use of contraception as perceived barriers to usage of family planning.[6] Thus, a gap in knowledge exists regarding which determinants are most prevalent, which are modifiable, and what models of change may facilitate change in attitude toward use of family planning services. This study aims to characterize and

delineate salient determinants of family planning services among Palestinian refugees in Jordan in partnership with UNRWA health centers.

METHODS

This is a single-center study conducted using a mixed methods approach consisting of structured interviews with predeveloped questionnaires, focus group discussions (FGDs) with female patients who were pregnant, post-natal or trying to conceive, and semi-structured interviews with healthcare providers utilizing pre-developed guidelines. The study was conducted from June 5th, 2023, to June 7th, 2023. The study population consisted of a random sample of patients who visited the Marka health center in Jordan within the dates stated above. Consent was obtained in Arabic from each participant before conducting the structured interviews and FGDs. Interview questions were developed under the supervision of faculty with expertise in public health research in Arabic-speaking populations as well as the director of the health department at UNRWA. The questions were then thoroughly reviewed by a nurse practitioner who has been working at UNRWA health centers for over a decade. The multi-layered review the UNRWA's director of health department, nurse practitioner and university faculty expertise in research among Arabic-speaking population ensured face validity and content validity of the questionnaires as well as FGD & semi-structured interview prompts and probing questions. The transcripts of both the FGD and semi-structured interviews were coded with inductive approach for thematic analysis of the qualitative data.

For the quantitative portion of the study, structured interviews with 57 participants were conducted. Participants were female Palestinian refugees using services by UNRWA who were pregnant, post-natal, or trying to conceive. All interviews were conducted in the UNRWA health clinic in Marka camp by medical students who were trained in conducting interviews. Questionnaires consisting of closed-ended and open-ended questions were used (see Supplemental Figure 1). The interviews were conducted in Arabic and the patients had access to the questionnaire throughout the interview. The goal of the interviews was to gather the experiences, perceptions, as well as the challenges faced by the participants regarding their experience with family planning services at UNRWA. Part of the interview collected sociodemographic information consisting of whether the patients live in or outside the refugee camps, the total number of people living in their household, their household income, the participants' highest level of education, marital status, and employment status. After gathering demographic information, the subsequent part of the interview collected information regarding the patients' current experience with family planning. To enhance clarity in this study, we distinguish between "contraceptive use" and "family planning utilization." Contraceptive use refers to the actual adoption of a birth control method, such as pills or condoms, while family planning utilization encompasses broader services such as education, counseling, and STI prevention. While these terms were previously used interchangeably, they are now applied with this distinction throughout the manuscript. Patients were asked to report whether they were currently using or had previously used any contraceptive methods, and to explain why they chose a specific method over others. In addition, participants were asked whether they were currently pregnant, had recently given birth, or were trying to conceive. A history of previous pregnancies and

births was also collected. Frequencies for each categorical variable explored in the questionnaire were computed to reflect the proportion (in %) of participants selecting each response option.

An exploratory descriptive approach via a focus group discussion was taken for the qualitative arm of the study to determine factors of family planning service utilization not previously anticipated by the questionnaire prompts. FGDs consisted of a random sample of 7 women who visited the Marka health clinic during the study period. These women were initially in attendance for gynecologic, antepartum or postpartum visits with the health center's obstetrician and gynecologist. FGDs provided an interactive space for participants to engage in group discussions and share their perspectives to each other and the interviewer. FGD of this study was facilitated by a former nurse practitioner with more than a decade of experience working at UNRWA health centers and serving women of Marka Health Center. The moderating nurse practitioner was also assisted by medical students who were trained in leading and conducting group discussions. Medical students who are fluent Arabic speakers served as notetakers for the FDG with simultaneous recording of the discussion for retrospective review of notes. The guidelines ensured that key aspects related to the patients' experiences with family planning and contraceptives were covered in the discussion. The FGDs provided valuable qualitative data to complement and enrich the findings from the structured interviews. The FGDs consisted of three overarching questions that each had sub questions. The first overarching question was who within the family (wife, husband, in-laws, etc.) is the chief decision maker for the size of their households. The second question inquired about their access to family planning knowledge. Patients were asked how they would describe the amount of knowledge women in Jordan have regarding family planning and contraceptives in addition to how they personally attain knowledge regarding family planning services. The third overarching question examined the patients' experience with UNRWA's family planning services. Patients were asked about their experiences with the care they received at the UNRWA health centers and areas of strength and improvement based on their observations. They were also asked what determinants encourage or discourage patients from using the family planning services.

Semi-structured interviews were conducted with the senior medical officer, physician, midwife, senior staff nurse, and staff nurse working at the Marka health center. This sample size of 5 health professionals at the center included a variety of providers to obtain a balanced representation of perspectives within the healthcare setting. The semi-structured interviews were conducted in Arabic and English by medical students who were trained in conducting interviews and allowed for in-depth discussions with the providers regarding their insights, challenges, and observations related to family planning and contraceptives in Jordan and UNRWA health centers.

The semi-structured interviews had four overarching questions analogous to prompts asked during the FGDs. The first inquired about the amount of information women in Jordan have regarding family planning and contraceptives. The providers were asked where they believe women receive their information from and who makes the decision to use family planning services within the family (wife, husband, in-laws, etc.). The second question pertained to the care provided through UNRWA health care centers. The providers were prompted to explain what they believe are the strengths and

weaknesses of their services. The third question explored what they believe encourages or discourages patients from using family planning services. Providers were asked to describe determinants which they believe influence the decisions of their patients when deciding to use or not use family planning services or contraceptives. The fourth question was about how the providers view the use of family planning services in Jordan overall. They were asked to explain what they believe is the best way to increase the number of patients using family planning services throughout the country.

RESULTS

The main goal of this study was to identify the factors that influence Palestine refugees' utilization of family planning services within UNRWA health centers, specifically at the Marka health center. The research findings will be used to inform programs for disseminating education on family planning methods as well as UNRWA health center quality improvement regarding family planning. Patients who visited the Marka health centers between June 5- June 7, 2023, as well as willing providers—physicians, nurses, and directors—were invited to this study. A thematic analysis of structured interviews, focus group discussions (FGDs), and semi-structured interviews with healthcare providers in addition to quantitative analysis of questionnaires completed by a total of 57 participants revealed three major themes: 1) the role of internet & health centers in family planning education & variation in self-efficacy for attaining knowledge among Palestine refugees, 2) role of spousal and community engagement and their respective knowledge gaps, and 3) perceived systemic barriers in receiving family planning services.

Demographic Characteristics of Participants

A total of 57 participants consented to, and completed, a structured interview using a questionnaire (Table 1). The sample was entirely female, with 26.3% residing in camps and 73.7% outside camps. Most participants were between 18-24 years (33.3%) and 25-29 years (31.6%), indicating a young user base. Education levels varied: 40.4% had reached middle school, and 29.8% had completed secondary school. The overwhelming majority were housewives (93%), with a small fraction employed (5.3%). Parity among the participants also varied with a median parity of 3 and a third of participants (33.5%) with parity that can be categorized as "grand multiparity" (Supplemental Figure 2). Grand multiparity is defined in most literature as parity of 5 or more8. Additionally, a total of 40.3% were not using family planning methods at the time of the study. Of those not using family planning, 15.8% were pregnant, 10.5% were trying to conceive and 14% were within 6-months postpartum. Most of the participants (59.6%) were currently using a family planning method. However, only 32 participants provided specific responses about their chosen contraceptive method (Table 2). This minor discrepancy is due to two participants not specifying their method during the interview. Contraceptive methods varied, with 37.8% using male condoms, 29.7% using birth control pills, 27.0% using IUDs, and 5.4% relying on injections (Table 2 & Figure 3).

Table 1. Demographic Characteristics of Participants

Demographic Characteristics of Study Participants					
	n	%		n	%
Place of Residence			Para		
In Camp	15	26.3	1	5	8.8
Outside Camp	42	73.7	2	14	24.6
Total	57	100	3	11	19.3
Age			4	8	14
>18	1	1.8	5	7	12.3
18-24	19	33.3	6	7	12.3
25-29	18	31.6	7	1	1.8
30-34	10	17.5	8	2	3.5
35-39	8	14.0	9	1	1.8
≥40	1	1.8	10	1	1.8
Total	57	100	Total	57	100
Educational Level			Household size		
Illiterate	1	1.8	2	1	1.8
Primary School (Grade 1-6)	5	8.8	3	10	17.5
Middle School (Grade 7-10)	23	40.4	4	12	21.1
Secondary School (Grade 11-12)	17	29.8	5	15	26.3
Diploma (Grade 12-14)	7	12.3	6	6	10.5
Bachelor's degree or higher	4	7	7	8	14
Total	57	100	8	2	3.5
Employment status			9	1	1.8
Employed	3	5.3	12	1	1.8
unemployed	1	1.8	15	1	1.8
housewife	53	93	Total	57	100
Total	57	100	Household Income		
Pregnancy Status			Under JOD 500	50	87.7
Pregnant	9	15.8	Between JOD 500 and JOD 999	6	10.5
Trying to conceive	6	10.5	Between JOD 1,000 and JOD 1,499	1	1.8
Gave birth within the past 6 months	8	14	Total	57	100

Table 2. Choice of Contraceptives

Birth control method		
	Frequency	Percent
Male condom	12	37.5
Pills	11	34.4
IUD	8	25
Injection ديبوبروفيرا	1	3.1
Total	32	100

Note: 34 participants reported using contraception, but only 32 provided method-specific responses. Percentages reflect those 32.

Knowledge of Family Planning Information: Role of internet & health centers in family planning education & Self-efficacy for attaining knowledge

Qualitative analysis from focus group discussions (FGD)s and semi-structured revealed that the internet is one of the primary sources of knowledge regarding family planning that the participants claimed to use. Education through social media, TV and other websites were cited by two participants in the focus group, one physician at the UNRWA health center and one certified midwifery nurse as the most common way patients seem to attain family planning information. The health clinics was another commonly mentioned source of family planning education per two FGD participants and one midwifery nurse. A nurse stated, "We explain the advantages and disadvantages [of family planning]. We share the appointments between her and her baby or even other family members to avoid having them make multiple visits". Yet, one participant expressed that she does not feel adequately educated on family planning methods when she comes into clinic. Thus, variation among visits may exist in the experience of clients serviced by the health center. Interestingly, on quantitative analysis, the most common reason for choosing their preferred family planning method was professional advice (22.2%) (Table 3). In other words, the knowledge distributed to participants either through professionals with internet presence, or through providers they encounter in clinic, had the most influence over the type of family planning method chosen by participants.

Table 3. Reason for Choice of Contraceptives

Reason for choice		
	Frequency	Percent
Professionals' advice	12	22.2
My family members used before	10	18.5
Husband preference	6	11.1
Medical indication	6	11.1
Convenience/Ease	5	9.3
This is what I know	3	5.6
Avoid methods depend on hormonal control	3	5.6
No side effects	3	5.6
Side effect from another method	3	5.6
Effectiveness	2	3.7
Used to it	1	1.9
Total	54	100

Self-efficacy regarding the participants' perceived ability to find educational resources for family planning varied. Those with high self-efficacy for attaining knowledge stated, "I ask on my own to get the information; I like asking questions" and "I learn a lot from doctors on the internet". Still others stated, "I learn from trial and error", "I don't get information for family planning" and "I don't have enough information about family planning". Thus, there was an overall variance in self-efficacy to attain knowledge on family planning.

Sociocultural Determinants of Contraceptive Use: Role of spousal and community engagement and their respective knowledge gaps

Sociocultural influences, specifically family members' thoughts on family planning, significantly impacted the participants' family planning decisions. On quantitative analysis of structured interview, family members' experience with methods of family planning (18.5%) was the most common reason for choice of family planning second to professional advice. Additionally, husbands' preference was the third most common reason for participants' method of choice. In FGDs, all of the participants expressed that their husbands are the primary decision makers for the use of family planning services. Interestingly, they also noted gap in knowledge regarding family planning methods among husbands despite being the primary decision makers. Participants noted, "the man does not have the right knowledge, but they are the ones that make the decisions" and "men don't have the knowledge to know what to do". Still another noted, "I feel like not all of the women in my family know about family planning." Thus, there appears to be a dissonance in the fact that husbands and family members are not well educated on family planning, yet they are the chief decision makers and influencers for whether a woman may use family planning service or not, and if they do, what they choose to use. A comment by a physician at the health center also addresses this phenomenon. He states, "The community must be engaged. Efforts have been successful when they include the community, and any project that excluded the community has failed. …They should work with the community to discuss future plans and previous concerns and introduce people in the camps to new services" in response to a query on how to increase utilization of family planning services. Therefore, findings generally show spousal and community-level engagement for family planning services will be crucial for individual decisions on the use of family planning methods.

Perceptions of UNRWA Family Planning Services & perceived systemic barriers to receiving family planning services

Most participants reported positive experiences with UNRWA's family planning services, with 52.6% of participants reporting "Excellent" and 45.6% reporting "Good". However, during FGDs, long wait time was highlighted as a perceived barrier, potentially impacting service utilization. Multiple participants shared that, "If there weren't long lines it would encourage us to come more often" and that "There's a lot of time waiting because the IUD insertion takes a long time". This reflects an understanding of why the wait times are long, but that time nonetheless is a barrier to receiving services. In addition to wait time, a physician at the health center highlighted fees for transportation to the clinic as another major perceived systemic barrier. Notably, religion was not cited as a barrier for utilizing family planning services among FGD participants as well as healthcare providers who were interviewed. Overall, despite logistical challenges, UNRWA's services were viewed as accessible across income levels, with participants expressing comfort and reassurance regarding care quality.

DISCUSSION

The quantitative and qualitative findings of this single-center study conducted at Marka health center provide a glimpse into the determinants of family planning service utilization among Palestine refugees in Amman, Jordan. Overall, results indicate that while the services provided by UNRWA are generally perceived as excellent or good, there are significant gaps in knowledge of family planning at the community level as well as perceived barriers to service and that warrant addressing.

On review of demographic characteristics of our study population, younger women aged 18–29 form the primary age group utilizing family planning services in the UNRWA health center. This highlights a critical opportunity for targeted interventions aimed at supporting this age group with tailored education and resources to foster informed decision-making. Additionally, at least a third of the study participants were grand multiparous, or in other words, had history of 5 or more births. Grand multiparity has been repeatedly reported to have significant implications on maternal and neonatal morbidity including placenta previa, pregnancy-induced hypertension, fetal malpresentation and meconium-stained amniotic fluid.[8, 9] Other reports, however, have shown conflicting results demonstrating grand multiparous mothers do not significantly differ in their risk of maternal and neonatal complications compared to primiparous mothers.[10] Nonetheless, if indeed, grand multiparity heightens risk of maternal and neonatal complications, the prevalence of grand multiparity in our study population underscores the importance of family planning utilization in the setting of health centers serving low-income refugee populations.

According to the 2023 Annual Operational Report reported by UNRWA, 54.1% of all women registered and serviced by UNRWA health centers had a birth interval less than 36 months.[11] The World Health Organization currently recommends a minimum birth interval of at least 24 months, though some studies suggest that intervals between 36 and 60 months may offer additional benefits in reducing maternal and neonatal complications.[12-15] Studies show that infant mortality, undernutrition and risk of infant being underweight significantly decrease with a birth interval greater than 36 months.[12, 13] Therefore, family planning services will be essential in motivating the push for birth spacing that minimizes maternal and fetal morbidity. Longer birth intervals are also expected to reduce the proportion of women who are grand multiparous assuming unchanging reproductive age window.

The influence of sociocultural factors also played a role in shaping women's choices around contraceptive use. Many participants noted that husbands, and to some extent, extended family members such as mothers in law and other women in the family, significantly impacted their decisions on family planning. Previous studies on use of family planning in Palestine refugees of West Bank & Gaza Strip have also reported husbands' perceptions on contraceptive methods as the most critical factor toward family planning decisions among patients at UNRWA.[16, 17] These findings further point to the need for community-focused approaches that engage both men and women to foster more supportive environments for family planning. Interestingly, religious beliefs were not cited as reasons against family planning methods. Rather, midwives shared that they find no basis rooted in Islamic

beliefs prohibiting family planning methods. This finding agrees with the work of Goodman (2014), who found that religion was not a major deterrent to contraceptive use among Palestinian women in Jordan.[18] However, it conflicts with reports by Hassan et al. (2024), who identified religious concerns as a significant barrier among women in the West Bank, and with a 2022 study of Rohingya refugees in Bangladesh, where participants expressed hesitation with contraceptive use due to Islamic beliefs.[17,19] These conflicting findings warrant further investigation of religious beliefs as a perceived barrier to family planning across different refugee populations and UNRWA health centers.

Despite a positive reception of UNRWA's family planning services, barriers such as long wait times, challenges with transportation fees to reach health clinics and limited access to comprehensive family planning information persist. Addressing these barriers may include expanding service availability through mobile clinics, reducing wait times by increasing staffing, or enhancing infrastructure. In addition, an added emphasis on family planning education into routine healthcare visits could strengthen awareness and encourage utilization of these services. Finally, integration of family planning educational resources to the mobile application, e-MCHHandbook, by UNRWA may be a good starting point for dissemination of information.[20]

The socioeconomic challenges faced by the study population further highlight the need for cost-effective solutions. Many participants live at or below the poverty line, which restricts their access to healthcare services, including family planning. Interventions should focus on increasing affordable and accessible contraceptive methods to ensure equity in healthcare delivery. Furthermore, the educational diversity among participants emphasizes the necessity for adaptable educational materials on family planning that can cater to varying literacy levels and overcome misconceptions about contraceptive methods. In our study population, half of the participants had Grade 7-10 education or less. This finding may inform optimal level of health literacy used for educational materials.

While the current study attempted to utilize both quantitative analysis with data gathered from structured questionnaires as well as qualitative analysis from focus group discussions among Palestine refugee women serviced by UNRWA health centers and providers working at the health centers, limitations indeed exist. A major limitation is that this was a single center study conducted at Marka health center, which is one of many UNRWA health centers in Jordan and, at large, the middle east. The small sample size and qualitative arm of the study, by nature, limits generalizability to the Palestine refugee population at large. Nonetheless, the demographic represented in our study population is largely in alignment with previous studies on family planning services for Palestine refugee populations serviced by UNRWA with respect to age, mean parity, household size, and educational level.[21] Additionally, while findings from the focus group discussion may have had selection bias for volunteers willing to consent to a prolonged group discussion on family planning methods without the accompaniment of husbands, it may be speculated that those women who were unable to join the FGD may represent the pivotal role husbands have in the women's health decisions. If so, this demonstrates a greater reason to intentionally involve husbands in the education and decision process of family planning.

CONCLUSION

The data collected in this study highlights the opinions and utilization of family planning services among refugees in Jordan. While the findings suggest that most participants view UNRWA's services positively, they also show the need for interventions to address persistent gaps in accessibility, education, and cultural acceptance. By reducing misconceptions about contraceptives, fostering supportive sociocultural environments, and reducing perceived barriers to access family planning services, significant progress can be made in improving the service utilization.

Future research should focus on longitudinal analyses to better understand the long-term effects of family planning initiatives on maternal and neonatal health outcomes. Expanding this research to include additional UNRWA health centers and diverse geographical areas could also provide a more comprehensive understanding on the key determinants of family planning utilization among Palestine refugees. Furthermore, innovations such as mobile health services, community-based education programs, and digital tools for consultation and awareness could help overcome identified challenges.

This study contributes valuable insights that highlight the critical importance of enhancing family planning services. Addressing these challenges will not only improve the reproductive health of refugees in Jordan but will also advance global efforts to achieve universal access to sexual and reproductive health care, as outlined in the United Nations' Sustainable Development Goals. Continued investment in these areas will ensure that vulnerable populations are able to make informed decisions about their reproductive health, leading to improved overall wellbeing and quality of life.

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Supplement

ID (unique identifier)

1. Name of HC

2. Location of living: □ inside camps □ outside camps

3. Date of Birth (DD - MM- YYYY) _____/_____/_____

4. What is the highest grade or level of school you completed?
   - □ Illiterate
   - □ Primary (1-6)
   - □ Middle school (7-10)
   - □ Secondary (11-12)
   - □ Diploma (12-14)
   - □ Bachelor's degree or higher

5. What is your current employment status?
   - □ Employed
   - □ Unemployed
   - □ Housewife

6. How many people live in your household including you?
(How many <5 years of age)?

7. How much is your monthly income?
   - □ >500 JOD
   - □ 500 - >1000 JOD

- □ 1000 - >1,500 JOD
- □ 1,500 - >2,000 JOD
- □ 2,000 - >2,500 JOD
- □ 2,500 - >3,000 JOD
- □ 3,000+ JOD

8. Are you currently
   - □ Pregnant
   - □ Trying to conceive
   - □ Gave birth within the past 6 months

9. What is your
   Gravida (total # of pregnancies)
   Para (total # of births)

10. Are you currently using any of the family planning / contraception methods?

11. If yes what is it?
   - □ Birth control pills
   - □ IUD
   - □ Male condom
   - □ Female Condom
   - □ Injection
   - □ Hormonal implant
   - □ Tubal ligation
   - □ Male Vasectomy

13. Have you been using any of the family planning / contraception methods?

14. If yes what is it?
   - □ Birth control pills
   - □ IUD

- ☐ Male condom
- ☐ Female Condom
- ☐ Injection
- ☐ Hormonal implant
- ☐ Tubal ligation
- ☐ Male Vasectomy

15. If yes to any, why did you choose this method?
    - ☐ Professionals advise (physician or nurse)
    - ☐ This is what I know
    - ☐ My family members used before
    - ☐ Others, specify

If no to any: Why?
- ☐ They are harmful (explain, _____
- ☐ Religion reasons
- ☐ Medical condition, what is it? _____
- ☐ Others, specify _____

How would you describe the family planning services at UNRWA's health centers?
- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Week

Figure S1. Questionnaire distributed for structured interview (n=57)

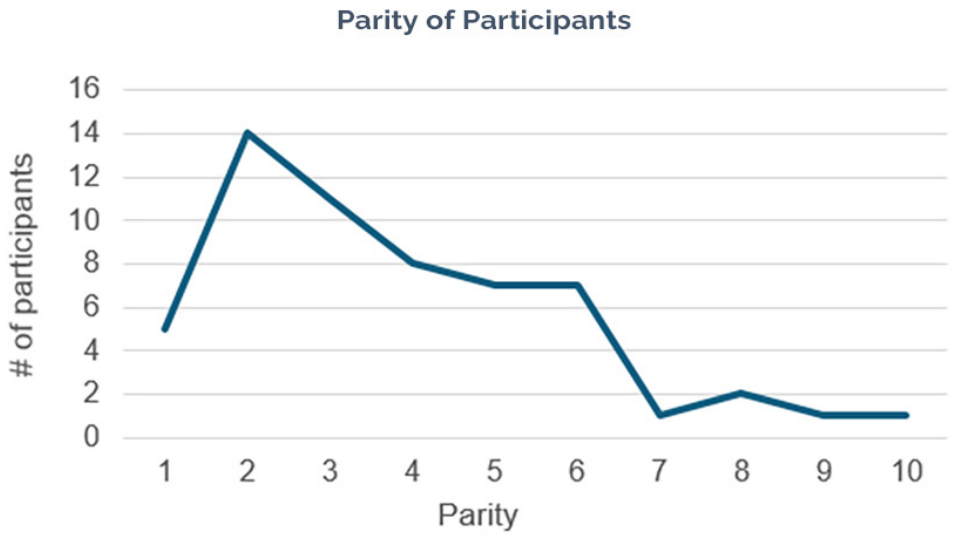

Figure S2. Parity of Participants

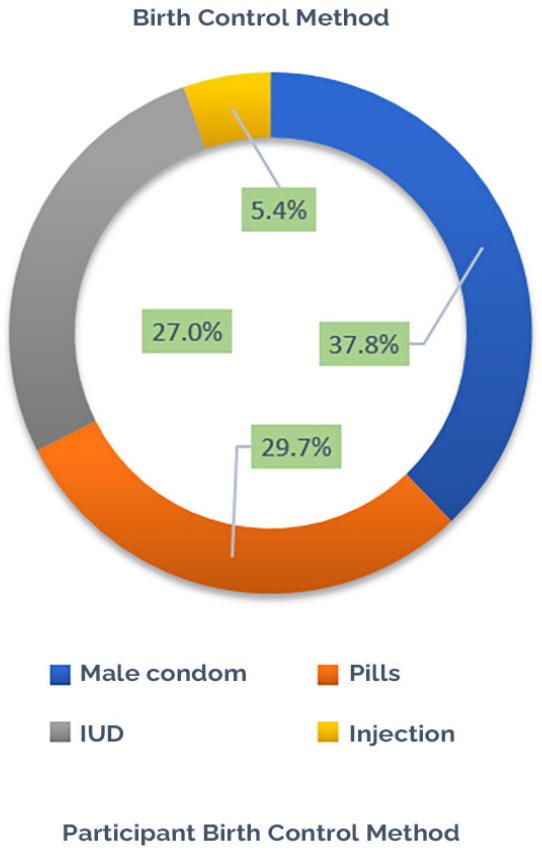

Figure S3. Questionnaire distributed for structured interview (n=57)