Low use of Family Planning among men and women aged 15-49 years old in a peri-urban area of Maputo City, Mozambique

Authors: Mehol Jamnadas[1], Joelma Baduro[1], Nilzlio Cavele[1], Cremildo Manhiça[1], Américo José[1] and Ivalda Macicame[1]

1 -Instituto Nacional de Saúde (INS) – Mozambique

Abstract

Introduction: Family Planning (FP) aims at preventing unwanted pregnancy and allowing women to space out pregnancy. Recent World Health Organization (WHO) shows that 214 million women in the developing countries are not using any FP method even though they would like to postpone or stop childbearing. In Mozambique the use of FP methods has increased steadily but still 1 in 4 women in relationship have their need for FP unmet.

Objective: To assess the awareness, sources and use of FP methods among men and women aged 15-49 years old in a peri-urban area of Maputo city.

Methods: This community-based cross-sectional study was conducted in the surveillance area of Polana Caniço Health and Demographic Surveillance System (HDSS) which enrolled participants between 15-49 years old from October 2018 to July 2019. Variables included sociodemographic characteristics, awareness of FP method, use of FP method, source of acquisition. Data were analyzed using software STATA version 12.

Results: Out of 3.190 participants interviewed, awareness of any FP was universal. The actual use of any FP method among men and women was 41.2% and 58.8%, respectively. Most women acquired their FP from the Health Facilities (80.1%) while for men acquired mostly from the Health Facilities (46.2%) and shopping center or bar or fuel station (39.4%). Participants who were aware of any FP method and desired between 3-4 children were more likely to use FP method. However, being less than 20 years old and never being pregnant were less likely to use FP method.

Conclusion: There is a gap between awareness and use of FP

Keywords: Awareness; Family Planning use; Polana Caniço HDSS; Maputo; Mozambique.

Introduction

Family planning (FP) is the delivery of methods and services with the aim of preventing unwanted pregnancies and allowing women to space out pregnancies [1, 2]. In addition, FP prevents pregnancy-related health risks in women, decreases maternal and infant mortality, helps to prevent the acquisition of HIV and slows down the population growth [3].

Recent statistics from the World Health Organization (WHO) shows that approximately 214 million women in developing countries are not using any FP methods even though they would like to postpone or stop childbearing [1,3].. This has led to the development of Sustainable Development Goals (SDG) 3.7 which aims to achieve at least 75% of women of reproductive age who have their need for FP met with modern methods by 2030.

Current evidence demonstrates that awareness of FP methods is universal but that their uptake is low among women of reproductive age [4,5,6,7]. Most studies showed that urban residency, age higher than 30 years, higher level of education and higher monthly household income were associated with a higher use of FP methods. The association of other factors such as employment status, number of pregnancies and religion varied from region to region [8,9].

In Mozambique, even though the use of modern FP methods has increased among married couples from 21% to 25%, from 2003 to 2015, respectively, 1 in 4 women in a relationship have their FP needs unmet in spite of wanting to postpone or limit the number of pregnancies [10,11]. As a consequence, fertility rates remains high (5.3 children per woman) which is associated with high maternal mortality. Additionally, it can lead to a significant increase in the population number that can create an excessive demand on healthcare and education resources which is scarce and reduce the number of employment chances [12].

There are no published reports on FP awareness, its use and associated factors in Mozambique with most of these type of studies being done in Northern and Central Africa. Findings from other regions may not be transferrable to Mozambique. Moreover, few studies included male participants. For this reason, we carried out this study with the objective to assess the awareness, sources of information and use of FP methods among men and women aged 15-49 years old in a peri-urban area of Maputo city in Mozambique.

Methods

Study design and setting

This cross-sectional, community-based study was conducted in the Polana-Caniço neighborhood, a peri-urban area of the city of Maputo in South of Mozambique. The Polana Caniço Health Training and Research Center (CISPOC) runs a Health and Demographic Surveillance System (HDSS) since 2017 in Polana Caniço A and B neighborhoods with a total population of 92.067 inhabitants (Census of 2007) divided over 117 Enumeration Area (EA).

Study Population

We included participants aged 15-49 years old living in the household for at least 3 months prior to the interview and who voluntarily agreed to sign the informed consent form.

Sampling strategy

We took a stratified random sample (n=20) of EA's (clusters), stratified by neighborhood (Polana Caniço A and B). The 20 clusters consisted of 270 households and 14.445 inhabitants. Within the clusters we systematically included all eligible individuals in the survey. We made 2 attempts to find the respondent when not available at the time of the interview.

Data collection

Data was collected through Polana Caniço HDSS's community surveillance between October 2018 and July 2019, through house-to house visits in which a closed ended questionnaire was administered by trained fieldworkers. The collected variables included socio-demographic characteristics (gender, age, marital status, level of education, religion), awareness, source of acquisition and utilization of different FP methods (male and female condoms, injectable, pills, male sterilization, female sterilization, implants, intrauterine device, lactation amenorrhea, withdrawal, emergency contraception and other traditional methods). Additionally information related to pregnancy such as previous pregnancy, age at first pregnancy, if the first pregnancy was planned, number of pregnancies and desired number of children was collected.

Definitions

Awareness of FP methods is defined as the participant having heard about one of the FP methods.

Enumeration area is the geographic area canvassed by one census representative and can be composed of one or more adjacent blocks.

Actual use of FP is defined by the use of any FP method to avoid pregnancy at the time of the interview.

Statistical analysis:

We described socio-demographic characteristics, awareness, source of information and utilization of different FP methods, by sex, using frequencies and percentages. Furthermore, we carried out a univariable analysis to calculate crude odds ratios and 95% confidence intervals of the association between different factors of interest and no use of FP methods, adjusting for design effect of the cluster sampling. We also undertook multivariable analysis to adjust each association for age and sex, using unconditional logistic regression, again adjusted for clustering. The software used to do all analysis was STATA version 12.

Ethics

Results

Out of 14.445 total inhabitants in Polana Caniço neighborhood, 9.163 were eligible for the study out of which 3.190 (34.8%) were included. Among the study population, 61% were females. In addition, 74.9% of total participants were less than 35 years old, followed protestant religion (62.3%) and were non-professional worker (57.2%; Table 1).

Table 1: Sociodemographic characteristics of the study population by sex (n=3.190)

Characteristic	Total	
	n	(%)
Sex		
Male	1247	39.1
Female	1943	61
Age group		
15-19	722	22.6
20-24	788	24.7
25-29	514	16.1
30-34	366	11.5
35-39	330	10.3
40-44	263	8.2
45-49	207	6.5
Marital status		
Single	1799	56.7
Married	1310	41.3
Divorced/widowed	62	2
Level of education		
Primary	1123	35.4
Secondary or higher	1952	64.5
None	97	3.1
Religion		
Catholic	458	14.4
Muslim	97	3.1
Protestant	1982	62.3
Zion	348	10.9
Atheist	264	8.3
Other	34	1.1
Occupation		
Student	899	28.2
Professional worker	219	6.9

Non-professional worker	1826	57.2
Unemployed	246	7.7

Awareness, source of acquisition and actual use of FP methods

Awareness of FP methods among the participants were universal (97.1% vs 99.3%, respectively). Additionally, almost all the men and women ever heard about male condoms, female condoms, pills and implants (99.8% vs 99.6%; 95.9% vs 95.9%; 94.6% vs 98.5% and 98.2%, respectively; table 2). Overall, the actual use of any FP method among men and women was 41.2% and 58.8%, respectively. The FP method most used by women was implants (29.3%) and in men was male condoms (95.2%, table 3). On top of that, most women (80.1%) acquired their FP method from the health facility (HF) while men had more than one preferred source of acquisition of FP methods, 46.2% from the HF and 39.4% from a shopping center or bar or fuel station (table 4).

Table 2: Awareness of FP methods by sex

	Female		**Male**		**Total**	**P-value**
Methods	**N**	**(%)**	**N**	**(%)**	**N**	
Awareness of any FP method	1811	99.3	1071	97.1	2882	<0.01
Male condoms	1815	99.6	1.101	99.8	2916	0.34
Female condoms	1747	95.9	1058	95.9	2805	0.98
Pills	1794	98.5	1043	94.6	2837	<0.01
Injectable	1772	97.3	946	85.8	2718	<0.01
Implants	1790	98.2	1034	93.8	2824	<0.01
Male sterilization	585	32.3	286	26.1	871	<0.01
Female sterilization	1063	58.6	421	38.4	1484	<0.01
IUD*	1635	89.8	648	59	2283	<0.01
Lactation amenorrhea	1016	56.1	326	30	1342	<0.01
Periodic abstinence	1251	68.9	644	58.7	1895	<0.01
Withdrawal	1410	77.6	850	77.2	2260	0.82
Emergency contraception	1044	57.6	469	42.7	1513	<0.01

*IUD: Intra-Uterine Device

Table 3: Actual use of FP methods by sex

	Female		Male		P-value
	N	(%)	n	(%)	
Current use of FP methods	1074	58.8	752	41.2	<0.01
Male condoms	190	17.7	716	95.2	<0.01
Female condoms	7	0.7			
Injectable	253	23.6			
Pills	221				
Male sterilization			2	0.3	
Female sterilization	22	2.1			
Implants	315	29.3			
IUD*	15	1.4			
Lactation amenorrhea	18	1.7			
Periodic abstinence	19	1.8	7	0.9	0.14
Withdrawal			20	2.7	
Emergency contraception	3	0.3			
Other traditional methods	11	1	7	0.9	0.47

*IUD: Intra-Uterine Device

Table 4: Sources of acquisition of FP methods by sex

Source of Acquisition of Family Planning Methods	Female		Male		Total	
	N	(%)	N	(%)	n	(%)
Health Facility	696	80.1	286	46.2	982	66.1
School/Brigades	41	4.7	13	2.1	54	3.6
Private clinic/Private Doctor/Private Pharmacy	41	4.7	40	6.5	81	5.5
Shopping Center/Bar/Fuel Station	47	5.4	244	39.4	291	19.6
Don't know	16	1.9	1	0.2	17	1.1
Other	26	3	35	5.6	61	4.1

Factors associated with use of FP methods

We found that participants that were aware of FP method and desired to have between 3-4 children were more likely to use FP method (OR: 0.6; 95% CI: 0.3-0.9 and OR:0.5; 95% CI 0.3-0.7, respectively). On the other hand, participants less than 20 years old and who never were pregnant were less likely to use FP methods (OR: 2.8; 95% CI: 2.2-3.5; and OR: 2.5; 95% CI: 1.9-3.3, respectively; table 5).

Table 5: Factors associated with use of FP methods

	Use of FP methods							
	Using FP		Not Using FP		Crude Odds Ratio	CI (95%)	Adjusted Odds Ratio	CI (95%)
	N	(%)	N	(%)				
Gender								
Female	1074	58.9	749	41	1.5	1.2-1.9	1.6	1.2-2.0
Male	752	68.3	349	31.7	1	1	1	1
Age group								
15-19	327	47.2	366	52.8	2.7	2.2-3.5	2.8	2.2-3.5
20-34	1105	71	453	29.1	1	1	1	1
35-49	394	58.5	279	41.5	1.72	1.4-2.1	1.7	1.4-2.1
Marital status								
Single	1024	61.5	641	38.5	1	1	1	1
Married	771	64.9	417	35.1	0.9	0.7-1.0	1.0	0.8-1.1
Divorced/widow	27	49.1	28	50.9	1.7	1.0-2.9	1.5	0.9-2.6
Level of education								
Primary	607	61.9	373	38.1	1	1	1	1
Secondary or higher	1173	63.1	685	36.9	1.0	0.8-1.1	1.0	0.8-1.1
None	41	52.6	37	47.4	1.5	0.9-2.3	1.4	0.9-2.6
Religion								
Muslim	52	57.8	38	42.2	1	1	1	1
Zion	212	66.3	108	33.8	0.7	0.4-1.1	0.7	0.5-1.1
Catholic	257	59.9	172	40.1	0.9	0.6-1.4	1.0	0.6-1.5
Protestant	1129	62	693	38	0.8	0.5-1.3	0.8	0.6-1.2
Atheist	150	66.4	76	33.6	0.7	0.4-1.1	0.8	0.5-1.2
Occupation								
Student	475	54.6	395	45.4	1.6	1.3-2.0	1.3	1.1-1.6
Professional worker	133	67.2	65	32.8	1.0	0.7-1.3	1.2	0.9-1.6
Non-professional worker	1088	66.5	549	33.5	1	1	1	1
Unemployed	130	59.4	89	40.6	1.4	1.1-1.7	1.2	1.0-1.5
Pregnancy before								
Yes	876	64.8	477	35.3	1	1	1	1
None	196	42	271	58	2.6	2.0-3.1	2.5	1.9-3.3
Age of first pregnancy								
15-19	576	65.1	309	34.9	1.0	0.8-1.2	1.0	0.8-1.4
20-34	164	33.5	298	64.5	1	1	1	1
35-49	1	20	4	80	7.3	0.8-65.6	5.5	0.4-72.0

First pregnancy planned								
Yes	325	52.9	290	47.2	1		1	1
No	578	60.5	377	39.5	0.78	0.6-0.9	0.8	0.7-1.1
Number of pregnancies								
None	196	42	271	58	1	1	1	1
1 to 2	424	62.8	251	37.2	0.4	0.3-0.5	0.6	0.5-0.7
3 to 4	283	69.2	126	30.8	0.3	0.3-0.4	0.7	0.3-0.5
More than 4	1119	60.8	721	39.2	0.3	0.3-0.5	0.4	0.2-0.6
Number of children desired								
None	35	50.7	34	49.3	1	1	1	1
1 to 2	166	62.4	100	37.6	0.6	0.4-1.1	0.7	0.4-1.1
3 to 4	444	68.5	204	31.5	0.5	0.3-0.8	0.5	0.3-0.7
More than 4	249	58.2	179	41.8	0.7	0.4-1.2	0.7	0.5-1.1
Aware of any FP method								
Yes	1805	62.7	1075	37.3	0.5	0.3-0.9	0.6	0.3-0.9
No	21	47.7	23	52.2	1	1	1	1

Discussion

In our study we found that more than 90.0% of the participants were aware of at least one FP methods, 58.8% of women were using FP at the moment of the interview, the source of acquisition differed between men and women and that the participants were less likely to use any FP method if they were less than 20 years old.

Almost all men and women were aware of at least one FP methods. This can be explained due to the fact that since 2012, the government has prioritized FP information, services and outreach to the public, especially the youth. In addition, the government has included participation of communities, health agents, midwives and mobile clinics which helped to increase the awareness of FP among the general population [12].

58.8% of women were using any FP method at the time of the interview. This was higher than study conducted in rural Jordan [13] and South Achefer district in Ethiopia [8]. On the other hand use of FP among women was lower than studies conducted in Cameroon [4] and Bangladesh [14] in which 65.3% and 64.5% were using FP, respectively. The difference might be due to the latter group residing in urban areas while the former were residing in the rural areas which might affect differently the access to FP methods.

Over 80% of women acquired their FP methods from the HF while men acquired their FP method from HF (46,2%) and shopping centers, bars and fuel stations (39.4%). This clearly shows a big difference in the sources of acquisition between men and women. This can be explained by the fact that more than half of women used either implants or injectable which requires a visit to a HF while men mostly used male condoms which can be acquired in many different sites. Furthermore, it can also be due to women generally using more health care services [15]. So FP policies should direct their intervention towards places in which men and women acquire their FP methods as this can improve the uptake of FP.

We also found that participants less than 20 years old were less likely to use any FP method. This is aligned with national statistics showing that almost half of all Mozambican women have a child or become pregnant when they are 15-19 years old [10]. This group of participants needs to be urgently targeted, especially women, due to risk that accompanies pregnancy in this group ranging from medical complications, maternal mortality, premature birth up to social consequences such as reduced education and employment opportunities for women [12].

We found that participants that were aware were 40% more likely to use any FP method. However, we saw that the actual use of any FP methods was low among all participants, being lowest for men. This calls for actions to target more men to engage in conversations around masculinity, women's health and planning for pregnancies.

Strength

This study was done in an HDSS setting which is an excellent platform for research to be conducted. Due to its nature in which there is behavior change as there is repeated collection of data and measurement acting, HDSS may have better health indicators than to populations not under surveillance.

Limitations

It was not possible to reach the expected eligible participants due to unstable housing in the study area which resulted in high emigration and immigration rates. In addition, as an eligibility criteria the participants had be living in their house for 3 months. Furthermore, there were participants that were not found and did not agree to sign the consent form which influenced negatively to reach our target eligible population. We were also limited in assessing the overall knowledge and attitudes toward the use of FP, and gender related issues such as who initiate FP, which can serve as a barrier to FP utilization. Even though we included men, we did not address gender inequalities related issues which can also affect the utilization of FP. Another limitation is that we considered women not using any FP method if their partner used male condoms. However, the investigators believe that the mentioned limitations can't inflict major impact on the validity of study finding.

Conclusion

In conclusion, we saw that there is a very big gap between awareness of FP methods and their actual use. We recommend to also direct FP promotion policies outside the HF and to specifically target the population of less than 20 years old and men.

Conflict of interests

The authors declare that they have no competing interests.

Funding

This study was funded by (1) the Center for Disease Control and Prevention (CDC) through President's Emergency Plan for AIDS Relief under cooperation agreement with National Institute of Mozambique 5U2GPS001093 and the Fundo Nacional de Investigação (FNI), for which the authors are grateful.

Acknowledgements

We would like to thank the field supervisors, data collectors, the study participants, data management staff of the Polana Caniço HDSS.

References

1. Family planning/Contraception [Internet]. Who.int. 2019 [cited 25 September 2019]. Available from: http://www.who.int/mediacentre/factsheets/fs351/en/
2. Tolefac PN, Nana TN, Yeika EV, Awungafac NS, Ntsama Y, Njotang PN. Trends and patterns of family planning methods used among women attending family planning clinic in a rural setting in sub-Sahara Africa: the case of Mbalmayo District Hospital, Cameroon. BMC Research Notes. 2018Feb;11(1).
3. [Internet]. Unfpa.org. 2019 [cited 24 September 2019]. Available from: https://www.unfpa.org/sites/default/files/resource-pdf/family_planning06.pdf
4. Nansseu J, Nchinda E, Katte J, Nchagnouot F, Nguetsa G. Assessing the knowledge, attitude and practice of family planning among women living in the Mbouda health district, Cameroon. 2019.
5. El Khoury G, Salameh P. Assessment of the awareness and usages of family planning methods in the Lebanese community. 2019.
6. Tilahun T, Coene G, Luchters S, Kassahun W, Leye E, Temmerman M et al. Family Planning Knowledge, Attitude and Practice among Married Couples in Jimma Zone, Ethiopia. 2019.
7. Alege S, Matovu J, Ssensalire S, Nabiwemba E. Knowledge, sources and use of family planning methods among women aged 15-49 years in Uganda: a cross-sectional study. 2019.
8. Semachew Kasa A, Tarekegn M, Embiale N. Knowledge, attitude and practice towards family planning among reproductive age women in a resource limited settings of Northwest Ethiopia. 2019.
9. Sensoy N, Korkut Y, Akturan S, Yilmaz M, Tuz C, Tuncel B. Factors Affecting the Attitudes of Women toward Family Planning [Internet]. IntechOpen. IntechOpen; 2018 [cited 2019Sep24].
10. Moçambique Inquérito de Indicadores de Imunização, Malária ... [Internet]. [cited 2019Sep24]. Available from: https://www.dhsprogram.com/pubs/pdf/AIS12/AIS12_SP.pdf
11. Galle A, Vermandere H, Griffin S, de Melo M, Machaieie L, Van Braeckel D et al. Quality of care in family planning services in rural Mozambique with a focus on long acting reversible contraceptives: a cross-sectional survey. 2019.
12. Strengthening Mozambique's Family Planning Market: A Way Forward [Internet]. PSI. 2019 [cited 24 September 2019].
13. Mahadeen A, Khalil A, Hamdan-Mansour A, Sato T, Imoto A. Knowledge, attitudes and practices towards family planning among women in the rural southern region of Jordan. Eastern Mediterranean Health Journal. 2012Jan;18(6):567–72.
14. Islam A. Prevalence and Determinants of Contraceptive use among Employed and Unemployed Women in Bangladesh. International Journal of MCH and AIDS (IJMA). 2016;5(2).

15. Bertakis KD. Gender Differences in the Utilization of Health Care Services. Journal of Family Practice. 2000; 49(2):147-152