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Original Research Article

Knowledge, attitudes and practices regarding modern contraception in a referral hospital in Madagascar

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ABSTRACT

Background: Modern contraception is essential for birth spacing and prevention of avoidable maternal and neonatal morbidity. This study assessed knowledge, attitudes and practices regarding modern contraceptive methods among women hospitalized at CHUGOB, Antananarivo, Madagascar.
Methods: A descriptive cross-sectional KAP survey was conducted from May to September 2019 among women aged 15-49 years. Data were collected using a structured questionnaire and analysed descriptively.
Results: Among 210 women approached, 207 participated, giving a response rate of 98.5%. Mean age was 37.07±8.64 years. Most women were married or cohabiting (70.0%), housewives (56.0%) and multigravidae or grand multigravidae (69.9%). Knowledge of contraception was high: 90.8% defined contraception as birth limitation or spacing and 64.2% knew at least two modern methods. Overall, 50.2% had used a modern contraceptive method, but only 30.0% were regular users. Injectables were the most commonly used method (44.0%), followed by oral contraceptives (25.0%). The main reasons for non-use were fear related to rumours of diseases caused by contraception (41.2%) and fear of side effects (37.1%). Health personnel and media were the main sources of information.
Conclusions: Awareness of contraception was high, but regular use remained limited. Patient-centred counselling, correction of misconceptions, better explanation of side effects and continued follow-up are needed to improve informed and sustained contraceptive use.

Keywords: Accessibility, Attitudes, Contraception, Knowledge, Practices

INTRODUCTION

Modern contraception is a key component of reproductive health because it allows women and couples to plan pregnancies, space births and reduce exposure to preventable maternal and neonatal risks.[1,2] Beyond its individual benefits, family planning contributes to fertility regulation, improved maternal outcomes and broader socioeconomic development through its role in demographic transition.[1,2]

Despite global progress in access to contraceptive methods, modern contraceptive use remains uneven, particularly in sub-Saharan Africa.[3] This gap cannot be explained by service availability alone, because women's contraceptive choices are also influenced by quality of information, fear of side effects, misconceptions, partner or family attitudes, cultural norms and continuity of counselling and supply.[3]

In Madagascar, family planning has been recognized as a national public health priority since the adoption of the reproductive health policy in 2000, which aimed to improve access to information and services, increase contraceptive prevalence, reduce unmet need and lower maternal mortality.[4] However, recent national data show

that important challenges persist and that modern contraceptive coverage still requires improvement.[5]

The University Hospital of Gynecology and Obstetrics of Befelatanana (CHUGOB), located in Antananarivo, receives women from diverse social and geographic backgrounds. Hospitalization provides an opportunity to assess knowledge, attitudes and practices related to modern contraception and to identify barriers that may be addressed before discharge. This study therefore aimed to evaluate women's knowledge of modern contraceptive methods, describe their attitudes and analyse their practices and obstacles to use.

METHODS

We conducted a descriptive cross-sectional knowledge, attitudes and practices survey at the Centre Hospitalier Universitaire de Gynecologie et d'Obstetrique de Befelatanana (CHUGOB), Antananarivo, Madagascar. CHUGOB is a level III referral maternity and gynecology hospital located in Mahamasina, in the fourth district of Antananarivo. It receives most obstetric and gynecological referrals from the capital, surrounding districts and other provinces.

The exact field survey period was from 1 May 2019 to 30 September 2019. The target population comprised women of reproductive age hospitalized in the gynecology and obstetrics services of CHUGOB. Eligible participants were women aged 15-49 years who were admitted during the study period and agreed to answer the questionnaire. Women were not included when they declined participation or when the clinical context made the interview inappropriate, including miscarriage, stillbirth, critical health status at the time of contact or the need for rest immediately after care.

The minimum sample size was calculated using the formula $n = z^2 \times p(1-p)/m^2$, with $z=1.96$ for a 95% confidence level, $p=0.50$ and a margin of error of 0.07. This gave a minimum required sample of 196 women. During the survey period, all eligible and consenting women were included, giving an exhaustive sample of 207 respondents. Overall, 210 women were approached.

Data were collected using an informed-consent form and a structured questionnaire. The questionnaire included closed questions with fixed responses and predefined answer categories. Eligibility was checked from the medical file before contact. Each eligible woman was informed about the objectives of the research, anonymous processing of collected data and her right to refuse participation. Face-to-face interviews were designed not to exceed 45 minutes and explored knowledge, attitudes and practices in a sequence intended to be understandable for participants with different educational levels.

Sociodemographic and obstetric variables included age group, marital status, educational level, occupation, place of residence, gravidity, parity and reason for hospitalization. Knowledge variables included knowledge of the definition of contraception, number of modern methods known, types of methods known and side effects cited. Attitudes toward modern contraceptive methods were categorized as favourable, moderately favourable or unfavourable. Practice variables included current use of a modern method, regularity of use, type of method used, reported side effects, duration of use, sources of information and reasons for non-use. Modern contraceptive methods in the questionnaire included oral contraceptives, injectables, implants, intrauterine devices and condoms.

Questionnaire responses were entered anonymously in Microsoft Excel 2013 and analysed descriptively. Categorical variables were summarized as frequencies and percentages, and continuous variables were summarized as means with standard deviations when available. No inferential comparison was performed because the objective was descriptive and the study was not powered to test associations between participant characteristics and contraceptive behaviour. Confidentiality, anonymity and professional secrecy were ensured throughout the survey.

RESULTS

Of the 210 women contacted, 207 completed the questionnaire, giving a response rate of 98.5%. Among women who refused, the main reason was the need to rest, reported in 66.7% of refusal cases.

Respondents were predominantly young and middle reproductive-age women. Women aged 25-39 years represented 78.8% of the sample. The mean age was 37.07±8.64 years. Most participants were married or living with a partner (70.0%), and 62 women were single (30.0%). Regarding education, 101 had secondary education (48.8%) and 28 had university education (13.5%). Housewives represented the largest occupational group (56.0%). Most respondents lived in an urban area (80.6%).

Most women were multigravidae or grand multigravidae. Gravidity was G2-G4 in 126 women (60.7%), and mean gravidity was 2.24±2.36. Parity followed a similar profile, with P2-P4 in 127 women (61.2%) and mean parity of 2.33±1.90. More than half of the women were hospitalized for delivery (52.2%), while pregnancy-related pathologies accounted for 27.0% of admissions and gynecological pathologies for 20.8%.

Knowledge of the basic definition of contraception was high: 188 women (90.8%) defined contraception as limitation or spacing of births. Regarding modern contraceptive methods, 133 women (64.2%) knew two or more methods, 55 (26.6%) knew one method and 19 (9.2%) did not know any modern method. The most frequently known method was the injectable contraceptive (40.6%), followed by the pill (27.05%), intrauterine device

(12.07%), implant (11.0%) and condom (9.66%). When asked about side effects, respondents most often cited weight gain (51.2%), menstrual-cycle irregularity (21.3%), headache (21.0%), secondary infertility (5.8%) and cancer (0.9%).

Health personnel and the media were the leading channels for information on family planning. Health personnel were cited by 82 women (39.7%) and media by 59 (28.6%), together accounting for 68.3% of information sources. Attitudes were mostly not fully favourable: 58 women (28.0%) reported a favourable attitude toward modern methods, 122 (58.9%) were moderately favourable and 27 (13.0%) were unfavourable.

Modern contraceptive use was heterogeneous. Among the 207 respondents, 103 (49.8%) were non-users, 63 (30.0%) were regular users and 41 (19.3%) were irregular users. Therefore, 104 women reported use of a modern method, either regular or irregular, corresponding to an overall modern-method use proportion of 50.2%. Among users, injectables were the most common method (44.0%), followed by oral contraceptives (25.0%). Among non-users, the main reported barrier was fear related to rumours that contraceptive methods cause disease (41.2%), followed by fear of side effects (37.1%).

Among the 104 users, 35 women (33.6%) reported no side effects. The most frequent adverse effect was genital bleeding, described as spotting or metrorrhagia, in 31 users (29.8%). Amenorrhea was reported by 20 women (19.2%) and weight gain by 10 (9.6%). Most users had been using contraception for one to three years (66.0%), while 26.0% had used contraception for more than three years.

Table 1: Distribution of respondents according to the socio-demographic profile.

Variables	Frequency (n=207)	Percentage
Age group (in years)		
<20	12	5.8
20-24	26	12.6
25-34	123	59.5
35-39	40	19.3
40-45	4	1.4
>45	4	1.4
Marital status		
Single	62	30.0
Married or cohabiting	145	70.0
Educational level		
Primary level	78	37.7
Secondary level	101	48.8
University level	28	13.5
Occupation		
Public sector	23	11.1
Private sector	30	14.5
Informal sector	38	18.4
Housewife	116	56.0
Place of residence		
Urban area	167	80.6
Suburban area	40	19.3
Gravidity		
G0	32	15.4
G1	30	14.4
G2-G4	126	60.7
Parity		
P0	32	15.4
P1	30	14.4
P2-P4	127	61.2
>P4	18	8.6
Reason for hospitalization		
Delivery	108	52.2
Pregnancy-related pathology	56	27.0
Gynecological pathology	43	20.8

Table 2: Distribution of women interviewed according to knowledge of contraception.

Variable	Frequency (n=207)	Percentage
Knowledge of contraception		
Knew contraception as birth limitation and/or spacing	188	90.8
Did not know contraception	19	9.2
Knowledge of modern contraceptive methods		
Knew two or more modern contraceptive methods	133	64.2
Knew one modern contraceptive method	55	26.6
Knew no modern contraceptive method	19	9.2
Type contraceptive methods known		
Condom	20	9.66
IUD	25	12.07
Implant	22	11.0
Pill	56	27.05
Injectable	84	40.6
Cited side effect		
Weight gain	106	51.2
Menstrual-cycle irregularity	44	21.3
Headache	43	21.0
Secondary infertility	12	5.8
Cancer	2	0.9
Source of information		
Health personnel	82	39.7
Family members	16	7.9
Work colleagues	20	9.5
Friends	30	14.3
Media	59	28.6

Table 3: Attitudes of surveyed women toward modern contraceptive methods.

Attitude toward modern contraceptive methods	Frequency (n=207)	Percentage
Favourable	58	28.0
Moderately favourable	122	59.0
Unfavourable	27	13.0

Table 4: Distribution of the practice of women interviewed with regard to modern contraceptive methods (n=207).

Variables	Frequency (users/ non-users as applicable)	Percentage
Use of modern contraceptive methods		
Non-user	103	49.8
Regular user	63	30.0
Irregular user	41	19.3
Method used among users		
Injectable contraceptive	47	44.0
Oral contraceptive	26	25.0
Condom	13	12.7
Intrauterine device	10	9.5
Implant	8	7.9
Reason for non-use among non-users		
Fear related to rumours of diseases caused by contraceptive methods	42	41.2
Fear of side effects	38	37.1
Desire to have children	9	8.5
Prohibited by husband or family	7	6.8
Access problems or lack of knowledge	7	6.8

Continued.

Variables	Frequency (users/ non-users as applicable)	Percentage
Reported side effect among users		
Hypertension	8	7.9
Weight gain	10	9.6
Amenorrhea	20	19.2
Spotting or metrorrhagia	31	29.8
None	35	33.6
Duration of use among users		
<1 year	8	7.9
1-3 years	69	66.0
>3 years	27	26.0

DISCUSSION

This descriptive cross-sectional survey provides an overview of knowledge, attitudes and practices regarding modern contraception among women of reproductive age hospitalized at CHUGOB. Among 210 eligible women approached, 207 agreed to participate, corresponding to a high response rate of 98.5%. This response rate strengthens the internal validity of the survey and is comparable to the participation reported by Koné et al in a reproductive health KAP survey in Burkina Faso.[6]

Most respondents were adult women in the central reproductive age groups. Women aged 25 to 39 years represented 78.8% of the study population, and the mean age was 37.07±8.64 years. This age structure differs from the rural Burkina Faso study by Bakyono et al, in which the mean age was younger at 29 years.[7] These findings indicate that contraceptive counselling at CHUGOB should not be restricted to adolescents or young postpartum women but should also address mature women seeking birth spacing or birth limitation.

Married women or women living in a couple represented 70.0% of respondents. This distribution differs from reports in Lomé, where the proportion of married women was higher, and from school-based studies in which most respondents were unmarried.[8] The presence of both married and single women in the present survey highlights the need for inclusive counselling. Married women may require couple-oriented communication and support for shared decision-making, whereas single women need confidential and non-judgmental access to contraception to prevent unintended pregnancies.

The reproductive profile confirms the relevance of family planning in this hospital population. Mean gravidity was 2.24±2.36, and 69.9% of participants were multigravidae or grand multigravidae. Modern contraception is particularly important in Madagascar, where the total fertility rate remains high and varies by region.[9] It should therefore be presented not as a restriction of fertility but as a tool enabling women and couples to achieve their desired family size while protecting maternal and child health.

Educational attainment was relatively favourable, with 62.3% of women having reached at least secondary school. Education has been shown to influence contraceptive use by increasing women's openness to health information and their capacity to discuss family planning with partners.[10] Nevertheless, the persistence of non-use despite this level of education indicates that literacy alone does not eliminate fear, rumours or access barriers.

Knowledge of contraception was generally satisfactory in this survey. Most participants knew the definition of contraception, and nearly two-thirds knew at least two modern methods. The injectable method was the most frequently known, followed by oral pills and intrauterine devices. This hierarchy suggests that short-acting hormonal methods are more visible and better known than long-acting reversible contraceptive methods or barrier methods. In comparison, a French survey reported broader knowledge of multiple contraceptive methods, with pills and male condoms being the best known.[11]

However, knowledge of method names does not necessarily mean accurate understanding of efficacy, eligibility, adverse effects or return to fertility. Respondents frequently cited weight gain, menstrual-cycle irregularity, headache, secondary sterility and cancer as possible side effects. The mention of secondary sterility and cancer, even at lower frequencies, is clinically important because such beliefs can generate disproportionate fear and contribute to refusal or discontinuation. Misconceptions regarding infertility after contraceptive use should be specifically addressed during counselling.

The main sources of information were health professionals and the media, which together accounted for 68.3% of reported information sources. This pattern is close to that reported by Gall et al, where health professionals were the principal source of information.[11] The low contribution of family communication is noteworthy. Studies among young people in Burkina Faso have emphasized that insufficient parent-adolescent communication on sexuality maintains adolescents in uncertainty and increases vulnerability.[12] The present findings therefore support family- and school-based sexual education while

maintaining health professionals as trusted providers of accurate information.

Attitudes toward modern contraception were mixed. Only 28.0% of respondents were clearly favourable to modern contraceptive methods, 58.9% were moderately favourable and 13.0% were unfavourable. Compared with the EDSMD III, in which 38% of non-users reported an intention to use contraception in the future, the proportion of women in the present study expressing at least some favourable attitude after sensitization was substantial.[13] However, it remained lower than the approval reported by Koné et al in Burkina Faso.[6]

Regular contraceptive use remained modest. Among all respondents, 30.0% were regular users and 49.8% were non-users. The regular-use rate is close to the national modern contraceptive prevalence reported in Madagascar in 2012-2013 and lower than later national estimates.[14,15] These comparisons confirm that Madagascar has made progress but that contraceptive coverage remains insufficient to meet national reproductive health objectives.

Among women who had used a modern contraceptive method, injectables were the most commonly used method, followed by oral contraceptives. This predominance of injectables is consistent with national and regional patterns reported in Madagascar, where injectables are frequently preferred over pills and other methods.[13,16] It contrasts with some Cameroonian data, where male condoms were reported more frequently, and with French patterns where oral methods and intrauterine devices have historically occupied a larger place depending on age.[17,18]

The low uptake of long-acting reversible contraceptive methods is an important programmatic finding. Intrauterine devices and implants represented only a small proportion of methods used. Low use may reflect limited awareness, fear of invasive methods, insufficient provider training or inconsistent availability. Balanced counselling should therefore present the full range of methods, including short-acting, long-acting and barrier methods, and should help women select a method that matches their reproductive goals, medical eligibility and tolerance of expected side effects.[18,19]

The main reasons for non-use were fear related to rumours that contraceptive methods cause disease and fear of side effects. These findings are consistent with the national family planning action plan, in which health concerns and fear of side effects are reported as major reasons for not using family planning.[14,16] They also agree with studies showing that inadequate counselling on adverse effects is associated with early discontinuation of contraceptive use.[20]

The side effects reported by users confirm the need for anticipatory counselling. One-third of users reported no side effects, but spotting or metrorrhagia and amenorrhea were frequent. Bleeding disturbances are common reasons for anxiety when they have not been explained before method initiation. Counselling should therefore distinguish expected, non-dangerous effects from warning signs requiring medical evaluation, and it should provide a clear plan for follow-up or switching methods if symptoms are unacceptable.[18,21]

Access barriers and ignorance were reported by a small proportion of non-users, but this figure may underestimate structural constraints because the study was conducted in a tertiary hospital in the capital. Globally, unmet need for contraception remains substantial, and the World Health Organization emphasizes the need for access to safe, effective, acceptable and affordable contraceptive methods.[21] In Madagascar, geographic distance, cost, stock-outs and variable quality of counselling may remain important obstacles, particularly in rural and suburban areas. Maintaining contraceptive supply chains and integrating family planning into all levels of care should therefore remain priorities.

The study has limitations. First, it was hospital-based and conducted in a tertiary referral centre in Antananarivo, which limits generalization to all Malagasy women, especially those living in rural areas or not attending hospital services. Second, the cross-sectional descriptive design does not allow causal inference or identification of independent predictors of contraceptive use. Third, face-to-face interviews may have introduced social desirability bias, particularly for sensitive questions on sexual and reproductive behaviour. Fourth, some variables were self-reported and may have been affected by recall bias or misunderstanding. Finally, the study did not include qualitative interviews, which could have explored rumours, partner influence and reasons for discontinuation in greater depth.

CONCLUSION

This study highlights a clear gap between women's knowledge of modern contraception and its regular use among patients hospitalized at CHUGOB. Although most participants were familiar with contraception and could identify several methods, uptake remained limited and inconsistent. Fear related to rumours, misconceptions and anticipated side effects emerged as major obstacles, while the limited role of family communication suggests persistent social and cultural taboos around sexual and reproductive health. These findings indicate that improving contraceptive prevalence requires more than increasing awareness. Strengthened patient-centred counselling before hospital discharge, clear information on expected side effects and continued follow-up are essential to support informed and voluntary choices. Training health professionals in respectful communication, involving partners when appropriate and promoting community-based reproductive health education may help reduce misinformation. By improving trust, access and continuity

of care, family planning services can better support women's reproductive autonomy and contribute to maternal and child health in Madagascar.

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