## International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)

# Magnitude of Current Contraceptive Usage among Males of Reproductive Age, in Asmara, Eritrea 2016 

*Ghirmay Ghebreigziabher, Habtom Mekonen, Lidya Ghirmai, Menghis Michael, Nardos Solomon, Rahel Habtemariam
College of Health Sciences, Asmara, Eriteria.
Corresponding author: Ghirmay Ghebreigziabher
Email: ghiberaki@yahoo.com
ABSTRACT
Introduction
Contraception is a means of birth control by regimen of one or more actions, devices, sexual practices, or medications
followed in order to deliberately prevent or reduce the likelihood of pregnancy or childbirth. Men can participate in
birth control by using a male method like condom, withdrawal, periodic abstinence and vasectomy. Objective of this
study is to assess the magnitude of current male contraceptive usage among males of reproductive age in Asmara,
Eritrea in 2016 .
Methodology
A quantitative cross-sectional design was applied. A total of 612 eligible males whose age between $15-59$ years and
residing in Asmara were included in the study. A structured questionnaire was used to generate a quantitative data.
An ethical consent was sought out from the study participants. Significant associated variables were further analyzed
using logistic regression analysis

## Results

The magnitude of current male contraceptive users are $38.2 \%$. Condom was the most preferred method of male contraceptive $(68.7 \%)$. The main reason for preferring was less side effects ( $26.5 \%$ ). About half ( $56.2 \%$ ) of the respondents had a positive attitude towards male contraceptives. The majority ( $77.6 \%$ ) had a good knowledge about male contraceptives. A very large proportion ( $97.2 \%$ ) of the respondents knew the presence of a male contraceptive in the market and only $8.7 \%$ opposed for its marketing.

## Conclusion

Magnitude of current contraceptive usage is low. A significant relationship was established among the users with age, educational level, marital status, and having children alive. Majority had a good knowledge and about half had positive attitude towards male contraceptives.

## Recommendation

Male centered family planning services are recommended in order male to have rich access for male contraceptive methods.
Keywords: Magnitude, Current, Male contraceptives and Males of Reproductive age.

## INTRODUCTION

Family planning is the practice of controlling the number of children in a family and the intervals between their births, particularly by a means of contraception [3]. A key recommendation of both the International Conference on Population Development (ICPD) and the 1995 Fourth World Conference on Women encouraged husbands and wives to share in responsibilities pertaining to fertility and reproductive health. However, male involvement in family planning remains limited despite the 1994 ICPD in Cairo, which emphasized the need for men's involvement in sexual and reproductive health issues [12].

There has been little increase in the use of methods that require male participation [10]. Men can participate in family planning in two ways: by supporting their partner's decisions to use family planning methods or by participating a male method of family planning like condom, withdrawal, or periodic abstinence [6].

## Problem Statement

The Eritrean people are patriarchal; characterized by strong male dominance. The use of contraceptive among couples is mainly women's business. Furthermore, women might not be able to obtain family planning services without the consent of their husbands. The magnitude of male contraceptive users and their Knowledge attitude and practice (KAP) toward male contractive is not known.

## Research Question

What is the magnitude of current male contraceptive usage among males of reproductive age in Asmara?

## Hypothesis

$\mathbf{H}_{\mathbf{0}}$ : Magnitude of current male contraceptive users=Magnitude of non-contraceptive users
$\mathbf{H}_{1:}$ Magnitude of current male contraceptive users $\neq$ Magnitude of non-contraceptive users (at $\alpha=0.05$ ).

## General objective

To assess the magnitude of current practice of male contraceptives by males of reproductive age.

## Specific objectives

- To assess the level of knowledge and attitude of male contraceptive users among the study population.
- To identify the preferred methods of contraceptives used among the study population.
- To describe the possible association of contraceptive usage and socio-demographic characteristics of the respondents.


## Significance of the study

The attitudes of males toward contraceptives and their willingness to use or allow their spouses to do so are very significant to population change. The study can be used as a reference of male contraceptive practice in Asmara. It can be also used as base line information for further studies in the country.

## Study design

A quantitative cross-sectional design was applied.

## Study area

After Asmara is geographically stratified in to four regions north, south, west and east one subzone from each region was randomly selected. The selected once are Akria, Gejeret, Tsetserat and Arbaete Asmara.

## Sample size and sampling method

The sample size was 612 and it was determined using [8, 4] formula. The sample was proportionally allocated by size to the selected 4 subzones of Asmara. Furthermore, the respondents were selected randomly from the selected subzones. If a house hold has more than one male of reproductive age, only one is selected through simple random sampling.

## Inclusion criteria

- A male will be eligible if he is a resident in the study area and age range 15-59.


## Exclusion criteria

- Male visitors in the predetermined household.


## Pilot study

A pilot study was done in Dahlak shoe factory and Barka secondary school on 65 males in order to test the weakness, strength and consistency of the questionnaire.

## Research Instrument

A structured questionnaire was used to assess male's usage of contraceptives, their knowledge and attitude towards male contraceptives. Questionnaire was prepared in English and translated in to the interviewees' local language during interview.

## Validity

The validity of the final instrument was established as it was adopted from a previous study done by $[10,2]$. The tool was revised, modified and finalized by the research team.

## Reliability

The reliability of the instrument was computed using the Cronbach's alpha formula and was found to be reliable ( $\mathrm{r}=0.78$ ).

## Data collection method

The study relied on primary data collected using interview having four sections: Section one demographic and behavioral characteristic; section two knowledge assessments; section three attitude assessments; section four practice assessments.

## Data analysis

Data was edited, cleaned and analyzed using SPSS version 22. Association between practice,
attitude, knowledge levels and socio demographic characteristics were carried out using the Chi square test; hypothesis was tested using Pr-test method. Statistical significance was maintained when $P$ value was $<0.05$ and CI of $95 \%$. The respondent's level of knowledge and attitude was determined using a scoring system and the total knowledge and attitude was categorized as follows: scores of $0-49 \%=$ negative attitude, poor knowledge and $50-100 \%=$ positive attitude, good knowledge [1]. Those with significant association ( p -value<0.05) were further analyzed using logistic regression analyses.

## Dependent variable

Current contraceptive usage, knowledge and attitude of males towards contraceptive use.

## Independent variables

Age, marital status, address, education level, and employment status.

## Ethical consideration

Ethical clearance was obtained from the Research Ethics Review Committee of Asmara College of Health Science (ACHS).Written consent with their signature was obtained from the respondents. If the respondents didn't agree they were free to quit the interview at any time.

## RESULTS

Table 1. Current Male contraceptive usage

|  | Frequency | Percentage |
| :--- | :--- | :--- |
| Yes | $\mathbf{2 3 4}$ | $\mathbf{3 8 . 2}$ |
| No | 378 | 61.8 |
| Total | $\mathbf{6 1 2}$ | $\mathbf{1 0 0}$ |

Out of 612 respondents, $234(38.2 \%)$ were users and $378(61.8 \%)$ were non users of any male method.
Table 2. Type of contraceptive methods used

|  | Frequency | Percentage |
| :--- | :--- | :--- |
| Condom | 163 | $69.7 \%$ |
| Periodic Abstinence | 62 | $26.5 \%$ |
| Male sterilization | 1 | $0.4 \%$ |
| Withdrawal | 8 | $3.4 \%$ |
| Total | $\mathbf{2 3 4}$ | $\mathbf{1 0 0 . 0 \%}$ |

Table 2 presents condom appears to be the most preferred method ( $69.7 \%$ ) followed by periodic abstinence, withdrawal and male sterilization.

Table 3. Reasons for preferring a male method over a female method

|  | Frequencies | Percentage |
| :--- | :--- | :--- |
| Less side effect | $\mathbf{6 2}$ | $\mathbf{2 6 . 5}$ |
| Easily available | $\mathbf{6 1}$ | $\mathbf{2 6}$ |
| Easy to practice | $\mathbf{3 5}$ | $\mathbf{1 5 . 0}$ |
| Wife likes it | $\mathbf{3}$ | $\mathbf{1 . 3}$ |
| Low price | $\mathbf{1 0}$ | $\mathbf{4 . 2}$ |
| Lower risk of pregnancy | $\mathbf{3 5}$ | $\mathbf{1 5 . 0}$ |
| Both likes it | $\mathbf{2 8}$ | $\mathbf{1 2 . 0}$ |
| Total | $\mathbf{2 3 4}$ | $\mathbf{1 0 0}$ |

Table 3 revealed less side effect and easily available were the two major reasons for preferring a male method than female

Table 4. Reasons for not using a male method of contraceptive

| Reason | Frequency | Percentage |
| :--- | :--- | :--- |
| It decreases sexual satisfaction | $\mathbf{2}$ | $\mathbf{0 . 5}$ |
| Not currently involved in sexual intercourse | $\mathbf{1 7 2}$ | $\mathbf{4 5 . 5}$ |
| My partner is already using one | $\mathbf{6 8}$ | $\mathbf{2 2 . 8}$ |
| Desire for more children | $\mathbf{8 3}$ | $\mathbf{2 2 . 8}$ |
| Menopause | $\mathbf{2 6}$ | $\mathbf{6 . 9}$ |
| Others | $\mathbf{9}$ | $\mathbf{2 . 3}$ |

The respondents major reasons for not using contraceptive were uninvolved in sexual
intercourse $45.5 \%$ followed by desire for more children $22.8 \%$ and partner using $22.8 \%$.

Table 5. Spouse usage of a female method

| Contraceptive Method | Frequency | Percentage |
| :--- | :--- | :--- |
| Pills | $\mathbf{4 1}$ | $\mathbf{4 1 . 8}$ |
| Injection | 42 | 42.9 |
| Intrauterine device (IUD) | $\mathbf{9}$ | $\mathbf{9 . 2}$ |
| Lactational amenorrhea (LAM) | $\mathbf{6}$ | $\mathbf{6 . 1}$ |
| Total | $\mathbf{9 8}$ | $\mathbf{1 0 0}$ |
|  |  |  |

The total number of preferred female methods appears to be higher (98) than the reason provided stating a spouse using (86) and this is because 12 condom users reported a simultaneous use of hormonal contraceptive (pills) by their spouse. The
preferred planned method among the ready respondents was Condom (62.9\%), followed by Periodic abstinence (33.1\%), Withdrawal (4\%) and none considered male sterilization as an option.

Table 6. Association between socio-demographic characteristics and contraceptive usage.

| Characteristics | Current usage |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Age | Yes (\%) | No (\%) | Total (\%) | P value |
| 16-25 | 55 (23.5\%) | 103 (27.3\%) | 158(25.8\%) |  |
| 26-35 | 81 (34.6\%) | 96 (25.4\%) | 177(28.9\%) |  |
| 36-45 | 61 (26.1\%) | 85 (22.5\%) | 146(23.9\%) | 0.002 |
| 46-55 | 33 (14.1\%) | 64 (16.9\%) | 97(15.8\%) |  |
| 56-59 | 4 (1.7\%) | 30 (7.9\%) | 34(5.6\%) |  |
| Ethnicity |  |  |  |  |
| Afar | 3 (1.3\%) | 9 (2.4\%) | 12(2.0\%) |  |
| Bilen | 1 (0.4\%) | 9(2.4\%) | 10 (1.6\%) |  |
| Hedareb | 0 (0.0\%) | 2(0.5\%) | 2(0.3\%) |  |
| Nara | 1(0.4\%) | 0(0.0\%) | 1(0.2\%) |  |
| Saho | 13 (5.6\%) | 18(4.8\%) | 31 (5.1\%) | 2 |
| Tigre | 13 (5.6\%) | 28 (7.4\%) | 41 (6.7\%) | 0.214 |
| Tigrigna | 203(86.8\%) | 312(82.5\%) | 515(84.1\%) |  |
| Religion |  |  |  |  |
| Christian | 181 (77.4\%) | 269(71.2\%) | 450 (73.5\%) |  |
| Muslim | 53 (22.6\%) | 109 (28.8\%) | 162 (26.5\%) | 0.092 |
| Marital status |  |  |  |  |
| Single | 121 (51.7\%) | 165 (43.7\%) | 286(46.7\%) |  |
| Married | 100 (42.7\%) | 204 (54.0\%) | 304(49.7\%) |  |
| Divorced | 11(4.7\%) | 7(1.8\%) | 18(2.9\%) |  |
| Widower | 2(0.9\%) | 2(0.5\%) | 4(0.7\% | 0.019 |
| Educational level |  |  |  |  |
| Illiterate | 0 (0.0\%) | 6 (1.6\%) | 6 (1.0\%) |  |
| Primary school | 4 (1.7\%) | 14(3.7\%) | 18 (2.9\%) |  |
| Junior | 31(13.2\%) | 66(17.5\%) | 97 (15.8\%) | 0.036 |
| Secondary | 112 (47.9\%) | 146 (38.6\%) | 258 (42.2\%) |  |
| Post high school | 87(37.2\%) | 146(38.6\%) | 233 (38.1\%) |  |
| Employment Status |  |  |  |  |
| Employed | 188 (80.3\%) | 279 (73.8\%) | 467 (76.3\%) | 0.065 |
| Unemployed | 46 (19.7\%) | 99(26.2\%) | 145 (23.7\%) |  |
| Children Alive |  |  |  |  |
| None | 118(50.4\%) | 182(48.1\%) | 300(49.0\%) |  |
| 1-4 | 101(43.2\%) | 137 (36.2\%) | 238(38.9\%) |  |
| 5+ | 15 (6.4\%) | 59 (15.7\%) | 74 (12.1\%) | 0.002 |
| Future fertility desire |  |  |  |  |
| Undecided | 33(14.1\%) | 34(9.0\%) | 67 (10.9\%) |  |
| Have another | 52(22.2\%) | 104(27.5\%) | 156 (25.5\%) |  |
| No more | 37(15.8\%) | 75 (19.8\%) | 112 (18.3\%) | 0.076 |
| No partner /sterile/Infertile | 112 (47.9\%) | 165 (43.7\%) | 277 (45.3\%) |  |
| Total | 234 (100\%) | 378(100\%) | 612 (100.0\%) |  |

As illustrated in table 6 age, educational level, respondents showed statistical significant having living children, and marital status of the association $\mathrm{p}<0.05$ with contraceptive usage.

Table 7. The Knowledge level was analyzed by the following scoring method

| Score | Knowledge level | Frequency | Percentage |
| :--- | :--- | :--- | :--- |
| $0-49 \%$ | Poor | 138 | $22.4 \%$ |
| $50 \%-100 \%$ | Good | 474 | $77.6 \%$ |

Table 7 shows the mean score in the level of knowledge was 2.92 . Majority of the respondents ( $77.6 \%$ ) scored above the mean and are considered to have a good level of knowledge, whereas, the
rest ( $22.4 \%$ ) scored below the mean and are considered to have a poor level of knowledge about male contraceptives.

Table 8: Knowledge Results

| Knowledge Assessment |  | Number | Percentage |
| :--- | :--- | :--- | :--- |
| Do you know any source of information about <br> contraceptives that is only focused towards men? | Yes | $\mathbf{4 9 7}$ | $\mathbf{8 1 . 2}$ |
| Which of the following media can be the best source of <br> information to you about male contraceptives? | No | 115 | 18.8 |
|  | Radio | 58 | 9.5 |
|  | Newspaper | 91 | 14.9 |
|  | Television | $\mathbf{1 5 7}$ | $\mathbf{2 5 . 7}$ |
| Do you know the presence of any male contraceptive in the | Yes Seminar | 149 | 24.3 |
| market? | More than one method | 149 | 24.3 |
| Do you think that male contraceptives should be | No response | 8 | 1.3 |
| present(marketed)? | Yes | $\mathbf{5 9 5}$ | $\mathbf{9 7 . 2}$ |
| List any methods of male contraceptives you know | No | 17 | 2.8 |
|  | Condom | $\mathbf{5 5 9}$ | $\mathbf{9 1 . 3}$ |
|  | periodic abstinence | 53 | 8.7 |

About $97.2 \%$ were aware of the presence of some male contraceptives on the market and only $8.7 \%$ opposed the marketing of male methods. Few respondents ( $18.8 \%$ ) were not aware of any source of information about male contraceptives; $25.7 \%$ called for a special television program addressing issues related to male contraceptives.

Majority of the respondents (38.9\%) were able to list only condom as a male contraceptive followed by condom and periodic abstinence
(23.3\%); condom, periodic abstinence and withdrawal ( $16.7 \%$ ); condom and withdrawal ( $11.6 \%$ ); periodic abstinence ( $1.0 \%$ ); condom and male sterilization ( $0.8 \%$ ) and $7.7 \%$ listed the four methods available. Almost all of the respondents ( $99.01 \%$ ) knew about condom.
The knowledge level was significantly associated with the educational level of the respondents ( $\mathrm{p}=0.025$ ).

## Attitude Result

Table 9. Attitude was analyzed by the following scoring method

| Score | Attitude level | Frequency | Percentage |
| :--- | :--- | :--- | :--- |
| $0-49 \%$ | Negative | 268 | 43.8 |
| $50 \%-100 \%$ | Positive | 344 | 56.2 |

The mean score of the attitude level was 3.98 . the rest ( $43.8 \%$ ) who scored below the mean score More than half ( $56.2 \%$ ) who scored above the mean were considered to have a positive attitude, while, are considered to have a negative attitude towards male contraceptive.

Table 10. Attitude results

| Attitude statements |  | Number | Percentage |
| :--- | :--- | :--- | :--- |
| If a man uses contraceptive it may cause infertility in men | Agree | 253 | 41.3 |
|  | Disagree | $\mathbf{2 8 0}$ | $\mathbf{4 5 . 8}$ |
| If a man uses contraceptives his satisfaction with sex may decrease | No opinion | 79 | 12.9 |
|  | Decrease | $\mathbf{3 3 0}$ | $\mathbf{5 3 . 9}$ |
|  | Increase | 9 | 1.5 |
| Male contraceptive use would increase if there was special male | No change | 224 | 36.6 |
| planning service. | No opinion | 49 | 8.0 |
| Do you agree with the statement that contraception is a woman's | Disagree | $\mathbf{4 1 0}$ | $\mathbf{6 7 . 0}$ |
| business | No opinion | 69 | 21.7 |
|  | Agree | 126 | 20.6 |
| Men are as much responsible for planning pregnancies as women | Disagree | $\mathbf{4 7 1}$ | $\mathbf{7 7 . 0}$ |
|  | No opinion | 15 | 2.4 |
|  | Agree | $\mathbf{5 2 9}$ | $\mathbf{8 6 . 4}$ |
|  | Disagree | 71 | 11.6 |
|  | No | 12 | 2.0 |

The statement which got the highest percentage of positive answer is that $86.4 \%$ believe that women and men have equal responsibility in planning pregnancies. The lowest percentage
(36.6\%) of positive response was seen in the statement that male contraceptive use doesn't cause change in sexual satisfaction.

Table 11. Socio demographic characteristics associated with attitude

| Characteristics | Attitude |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Age | Positive (\%) | Negative (\%) | Total (\%) | P value |
| 16-25 | 82(23.8\%) | 76(28.4\%) | 158(25.8\%) |  |
| 26-35 | 102(29.7\%) | 75(28.0\%) | 177(28.9\%) |  |
| 36-45 | 85(24.7\%) | 61(22.8\%) | 146(23.9\%) | 0.292 |
| 46-55 | 51(14.8\%) | 46(17.1\%) | 97(15.8\%) |  |
| 56-59 | 24(7.0\%) | 10(3.7\%) | 34(5.6\%) |  |
| Total | 344(56.2\%) | 268(43.8\%) | 612(100\%) |  |
| Ethnicity |  |  |  |  |
| Afar | 2(0.6\%) | 10(3.7\%) | 12(2.0\%) |  |
| Bilen | 5(1.4\%) | 5(1.9\%) | 10(1.6\%) |  |
| Hedareb | $0(0.0 \%)$ | 2(0.7\%) | 2(0.3\%) |  |
| Nara | $0(0.0 \%)$ | 1(0.4\%) | 1(0.2\%) | 0.000 |
| Saho | 14(4.1\%) | 17(6.3\%) | 31(5.1\%) |  |
| Tigre | 14(4.1\%) | 27(10.1\%) | 41(6.7\%) |  |
| Tigrigna | 309(89.8\%) | 206(76.9\%) | 515(84.2\%) |  |
| Total | 344(100\%) | 268(100\%) | 612(100.0\%) |  |
| Religion |  |  |  |  |
| Christian | 274(79.7\%) | 176(65.7\%) | 450(73.5\%) |  |
| Muslim | 70(20.3\%) | 92(34.3\%) | 162(26.5\%) | 0.000 |
| Total | 344(100\%) | 268(100\%) | 612(100.0\%) |  |
| Marital status |  |  |  |  |
| Single | 147(42.7\%) | 139(51.9\%) | 286(46.7\%) |  |
| Married | 186(54.1\%) | 118(44.0\%) | 304(49.7\%) |  |
| Divorced | 7(2.0\%) | 11(4.1\%) | 18(2.9\%) | 0.011 |
| Widower | 4(0.7\%) | 0(0.0\%) | 4(0.7\%) |  |
| Total | 344(100\%) | 268(100\%) | 612(100\%) |  |
| Educational level |  |  |  |  |
| Illiterate | 2(0.6\%) | 4(1.5\%) | 6(1.0\%) |  |
| Primary school | 8(2.3\%) | 10(3.7\%) | 18(2.9\%) |  |
| Junior | 48(14.0\%) | 49(18.3\%) | 97(15.8\%) |  |
| Secondary | 137(39.8\%) | 121(45.1\%) | 258(42.2\%) | 0.029 |
| Post high school | 149(43.3\%) | 84(31.4\%) | 233(38.1\%) |  |
| Total | 344(100\%) | 268(100\%) | 612 (100.0\%) |  |
| Employment Status |  |  |  |  |
| Employed | 276(80.2\%) | 191(71.3\%) | 467(76.3\%) |  |
| Unemployed | 68(19.8\%) | 77(28.7\%) | 145(23.7\%) | 0.006 |
| Total | 344(100\%) | 268(100\%) | 612 (100.0\%) |  |
| Children Alive |  |  |  |  |
| None | 155(45.1\%) | 145(54.1\%) | 300(49.0\%) |  |
| 1-4 | 158(45.9\%) | 80(29.9\%) | 238(38.9\%) | 0.000 |
| 5+ | 31(9.0\%) | 43(16.0\%) | 74(12.1\%) |  |
| Total | 344(100\%) | 268(100) | 612 (100.0\%) |  |
| Future fertility desire |  |  |  |  |
| Undecided | 35(10.1\%) | 32(11.9\%) | 67(10.9\%) |  |
| Have another | 101(29.4\%) | 55(20.6\%) | 156(25.5\%) |  |
| No more | 65(18.9\%) | 47(17.5\%) | 112(18.3\%) | 0.056 |
| No partner /sterile/Infertile | 143(41.6\%) | 134(50.0\%) | 277(45.3\%) |  |
| Total | 344(100\%) | 268(100\%) | 612 (100.0\%) |  |

Table 11 illustrated except age and future fertility desire all the above socio-demographic characteristics showed strong association with altitude level and contraceptive users.

Table 12. Multivariable (Logistic) Regression Analysis

| Age | B | S.E. | Df | Sig. | OR |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Age (26-35) | .4925 | .242 | 1 | 0.042 | 1.636 |
| Age (36-45) | .4322 | .316 | 1 | 0.172 | 1.541 |
| Age (46-55) | .3209 | .377 | 1 | 0.395 | 1.378 |
| Age (56-59) | -.9489 | .630 | 1 | 0.132 | .3871 |

## Educational level

| Illiterate | 0 |  |  |  | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Primary School | -.068 | .641 | 1 | 0.916 | .9346 |
| Junior | -.220 | .276 | 1 | 0.425 | .8025 |
| Secondary | .255 | .195 | 1 | 0.191 | 1.290 |
| Post High school | 0 |  |  |  | 1 |

## Marital Status

| Married | -1.436 | .454 | 1 | 0.002 | .2378 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Divorced | -.3052 | .670 | 1 | 0.649 | .7370 |
| Widower | .111 | 1.34 | 1 | 0.934 | 1.118 |
| Children alive |  |  |  |  |  |
| $1-4$ | 1.258 | .452 | 1 | 0.005 | 3.521 |
| $5+$ | .5146 | .561 | 1 | 0.359 | 1.673 |
| Constant | -.6615 | .189 | 1 | 0.000 | 0.516 |

Table 12 shows the association between the demographic and behavioral characteristics and male contraceptive usage. Males whose age is 2635 (OR: 1.6, p= 0.042); married (OR: 0.24, $\mathrm{p}=0.002$ ) and have children $1-4$ (OR: $3.5, \mathrm{p}=0.005$ ) were more likely to have a high male contraceptive usage at statistically significant level. On the other hand, although, males whose age is 36-45 (OR: 1.5, $\mathrm{p}=0.17$ ); secondary (OR: 1.3, $\mathrm{p}=0.19$ ); widowers (OR: 1.2, $\mathrm{p}=0.93$ ) and have $5+$ children (OR: 1.7, $\mathrm{p}=0.36$ ) were more likely to have male contraceptive usage, but these relationships were not statistically significant.

## Inference for the whole male of reproduction age population of Asmara

The prevalence of male contraceptive users from this study is 0.38 . This value falls between ( $0.34,0.42$ ) of confidence interval as calculated below. Therefore, the researcher are confident enough to say the estimated sample 0.38 is a representative sample for the total population of males of reproductive age in Asmara since the value of the sample falls between 0.34 and 0.42 ranges.
$\begin{array}{ll}\text { C.I }=\mathrm{P}+\underline{\mathrm{Z}} * \mathrm{~S} . \mathrm{E}(\mathrm{P}) & \text { WHERE: C.I }=\text { Confidence Interval } \\ \mathrm{S} . \mathrm{E}(\mathrm{p})=\sqrt{\frac{p(1-p)}{n}} & \mathrm{P}=\text { Estimated value of the sample }\end{array}$
$\mathrm{C} . \mathrm{I}=\mathrm{P}+\mathrm{Z}^{*} \sqrt{\frac{p(1-p)}{n}}$
$C . I=\frac{0.382+1.96 \sqrt{ } 0.382 \times 0.618}{612}$
C.I $=0.382+1.96 \times$ V0.000386
C. $I=0.382+1.96 \times 0.01964$
C. $I=0.382+0.0385$
C.I= (0.34-0.42)

## DISCUSSION

This study showed $38.2 \%$ male contraceptive users. This value is higher than the EPHS survey conducted in [5] (27.2\%) in Eritrea, [10] (18\%), [7] ( $22.4 \%$ ), [13] ( $11 \%$ ), and [9] ( $12.3 \%$ ) but was consistent with a study done by [6] and by [11] (19\%).

The preferred method in this study was condom ( $69.7 \%$ ).This finding is similar with all of the above paragraph cited studies except [10] where the preferred method was periodic abstinence (50\%). The purpose of using condom in this study was for fertility issues and prevention of STDs (65.1\%) and $14.7 \%$ percent claimed to be using it only to prevent STD infections. This is almost consistent with a study by, [10] where majority (above $60 \%$ ) were using contraceptives to control their fertility and the minority ( $22 \%$ ) were up for male contraceptives to prevent STD infections. In this study only $1(0.4 \%)$ has undergone vasectomy and this is consistent with all of the above comparative studies except in a study by [11] where $12 \%$ were sterilized.

Respondents were asked about the fertile period of women, $66.1 \%$ correctly answered it as half way between her two periods, and this value is higher from EPHS 2010 result which showed that only $25.3 \%$ of the respondents knew the correct answer.

The main reason for preferring a male method over a female method given in this study is less side effects ( $26.5 \%$ ) similar with a comparative study done by. but in [6] the main reason was easy availability of male contraceptive methods ( $12.7 \%$ ).

The most adduced reason for not using a male contraceptive in this study was not currently being involved in sexual intercourse ( $45.5 \%$ ), Other reasons from this study which were also reported in the [13] study include desire for more children, difficulty in practicing, spouse usage of a female method, male method decreases sexual satisfaction, and limited male based methods available.

The respondents (46.3\%) voiced their willingness or readiness to use a male method in the future than what is reported in [12] by Petro which happened to be $28 \%$. None of those who voiced their willingness to use a male method considered vasectomy as a future planned method of preventing pregnancy.
For those who reported spouse usage of a hormonal method, the popular female methods reported were injection and pills $42.9 \%$ and $41.8 \%$ respectively. This result is supported by all of the above mentioned studies except in Nigeria [9]. where hormonal contraceptive use was not reported.

Socio-demographic and behavioral characteristics associated with the use of male contraceptives

An association was established in this study between male's age and contraceptive use suggesting a bell shape curve where the usage peaked in the age group $26-35(34.6 \%)$ and eventually dropped down to $1.7 \%$ in the age group of 56-59. This is evidenced in the study conducted by [10] and [7] where the highest usage recorded was in the age group 25-34. In contrary, a study conducted in Northern Nigeria by [2], the peak age range of practice was 36-40. Not only the peak age of usage but the association established in this study is evidenced in all of the above studies including Nigeria's study in 2010 by [9].

In this study single men were found to be the highest (51.7\%) male contraceptive users. In contrast, a study conducted by [7] showed that $59.1 \%$ of the users were married and in [10], $60 \%$ of the users were married.

In association with educational level the contraceptive usage was found to be higher in Secondary and above accounting for $85.1 \%$. This result was higher than the study conducted in [2] which revealed that $37 \%$ and [11], accounting for $42 \%$ were from secondary and above schooling. This study and the above mentioned studies showed
a significant association between the prevalence and educational level.

Men who had secondary or higher education had odds ratio (OR: 1.3) of using contraceptive compared to those with no education. This result is congruent with the study conducted by [7] which showed an odds ratio of ( $\mathrm{OR}=2.13$ ).

Religion as one of the socio demographic factors which is presumed to have an influence on the practice of Contraceptive. Most of the users in this study were Christians (77.4\%). This is supported by related study by [10], in which Christians accounted for (89.7\%). However, no significant association was established in both studies.

Considering employment status, this study couldn't demonstrate any significant association between the current contraceptive practice and employment status of the respondents. Most of the users were employed accounting for $80.3 \%$. This is in inconsistent with a study done by [7] and in a study conducted by [10] as they showed a significant association.

This study further showed that the number of living children was an important factor influencing the use of contraceptives among the respondents. The magnitude of the practice showed a decline with an increase in number of children at a significance of 0.02 . This correlates with the study done by [10]

This study revealed that single males have higher odds of contraceptive usage than those coupes who wanted additional children. Males with no partner account for $47.3 \%$ of the users in this study which was higher than the study conducted by [7] in which they accounted for $43.1 \%$ of the users. Although no significant association was established in this study, a significant association exists in the study conducted by [7].

## Knowledge discussion

This study revealed a good knowledge (77.6\%) among the respondents which was a bit higher than the study by Petro in [12] (66.7\%) and Mustapha and Ismailia, in Nigeria, [2] (63.6\%). All the credit goes to the continuous information given through mass Medias and the improved understanding of males about the need and purpose of the methods. The study clearly shows that almost all of the respondents $(99.01 \%)$ knew about condom, this is evidenced in similar study conducted by [10],
where $96 \%$ knew about condom as a method of male contraceptive. This is congruent with the study done by [10] in which condom was the most known method followed by withdrawal. Knowledge about vasectomy was limited in this study (8.5\%) as increased knowledge (48\%) was reported in a study [10].

Virtually almost all of the respondents (97.2\%) knew about the presence of a male contraceptive in the market, a value higher than in a study by Petro in [12] (69.3\%) and lower number of respondents who opposed its marketing was seen in this study compared to the above mentioned study ( $8.7 \%$ and $60 \%$ respectively). This is attributed to the vivid effect of male contraceptives specifically condom seen in preventing unwanted pregnancy and STD infection which in turn is improving quality of life.

Knowledge level of the respondents was significantly associated with their educational level. This is supported by the study conducted by Petro in [12] where men with at least a secondary level of education had a good knowledge level.

## Attitude discussion

Majority of the respondents in this study were in favor of male contraceptives as $56.2 \%$ had a positive attitude. This result is higher than the study conducted by [6] of $35.7 \%$ which showed a value of $35.7 \%$ as having favorable attitude.

From this study it's evident that men see a number of reasons to favor a male contraceptive as a higher percentage of respondents believe that male contraceptive service would increase if there was special male planning service available ( $67.0 \%$ ) than the study conducted by Petro in [12] (52\%).

Similar proportion of respondents, $86.4 \%$ in this study and $86 \%$ by [12] believe that men and women have equal responsibility in planning pregnancies. As a significant association was established between educational level and attitude, it's believed that the higher number of respondents with a higher level of education resulted in a positive attitude.

## Testing the hypothesis

Using Pr-test method the hypothesis was tested and the P -value was 0.00 at $95 \%$ confidence level. Since $\mathrm{P}<0.05$, the $\mathrm{H}_{0}$ was rejected and the $\mathrm{H}_{1}$ was accepted.

## CONCLUSION

Findings of this study confirmed male contraceptive users were $38.2 \%$. Condom use has gone up markedly while vasectomy usage was extremely very low. The respondents' age, educational level, marital status and having children alive were significantly associated with male contraceptive usage. Majority of the respondents had a positive attitude and good knowledge toward male contraceptives.

## Recommendation

Male centered family planning services are very essential in having rich access for male
contraceptive methods. Educating males by different means of communication is highly recommended to increase the prevalence of male contraceptive users. Condom promotion should be encouraged to maintain the preference of choice and beyond.

## Limitations of the study

The data was collection tool questionnaire that could not be possible to confirm the respondents' actual practice of using male contraceptive methods since it's not experimental.

## REFERENCES

[1]. Ademola Adelekan, Philomena Omoregie, and Elizabeth Edoni. (2014). Male Involvement in Family Planning: Challenges and Way Forward. Nigeria
[2]. C. Duze Mustapha and Ismaila Z. Mohammed. Male Knowledge, Attitudes, and Family planning Practices in Northern Nigeria 2006.
[3]. Cunningham et al. Williams obstetrics (23), 2009..
[4]. Daniel WW Biostatistics: A Foundation for Analysis in the Health Sciences. New York: John Wiley \& Sons 1999.
[5]. Eritrean Population Health Survey. Preliminary Report National Statistics Office Asmara, Eritrea. 2010.
[6]. Jamal Abdul Nasir, M. H. Tahir, and Arif Ahmed Zaidi. Contraceptive attitude and behavior among university men: A study from Punjab, Pakistan 2010.
[7]. Kabagenyi Allen, Patricia Ndugga, Stephen Ojiambo Wandera and Betty Kwagala. Modern contraceptive use among sexually active men in Uganda, 2014.
[8]. Macfarlane SB Conducting a Descriptive Survey: 2. Choosing a Sampling Strategy. Trop Doct.; 27(1), 1997, 14-21.
[9]. NA Hussain, TM Akande, GK Osagbemi,ST Olasupo, KY Salawu, and ET Adebayo. Perception and practice of contraception among male soldiers in Sobi barracks, Ilorin, Nigeria, 2010.
[10]. Ndezanko Fabulos Male contraceptive prevalence and factors associated with Contraceptive use among men in Ngara, Tanzania. 2001.
[11]. P. Dahal Govinda, Sabu S. Padmadas and P.R. Andrew Hinde. Fertility-Limiting Behavior and Contraceptive Choice among Men in Nepal, 2008.
[12]. Petro-Nustas Wasileh. Men's Knowledge of and Attitudes toward Birth spacing and Contraceptive Use in Jordan, 1999.
[13]. Yasir Nawaz, Ashfaq Ahmed Maan, Babak Mahmood and Fawad Asif. Knowledge and usage of contraceptives, influencing male reproductive health behavior. Pakistan, 2013.

