



ST PAUL'S HOSPITAL MILLENNIUM MEDICAL COLEGE

**KNOWLEDGE, ATTITUDE AND ASSOCIATED FACTORS
TOWARDS USING PERMANENT CONTRACEPTIVES AMONG
FAMILY PLANNING USERS IN SPHMMC**

BY:

GIRUM ZERIHUN, INTERN

**A STUDENT RESEARCH TO BE SUBMITTED TO THE DEPARTMENT
OF PUBLIC HEALTH, SPHMMC, AS THE PARTIAL FULLFILLMENT
OF THE REQUIRMENTS FOR THE DEGREE OF DOCTOR OF
MEDICINE**

SEPTEMBER, 2017

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ACRONYMS

CRP – Contraceptive prevalence rate

EDHS – Ethiopian demographic and health survey

EGOPD – Emergency gynecologic outpatient department

ETB – Ethiopian birr

FP- Family planning

IUCD- Intrauterine contraceptive device

LAPMs – Long acting and permanent methods

LARC – Long acting and reversible contraceptives

OPD – Outpatient department

PCMs – Permanent contraceptive methods

RGOPD – Regular gynecologic outpatient department

SPHMMC – St Paul’s hospital millennium medical college

SRS – Systematic random sampling

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ABSTRACT

Background

An estimated 358 000 maternal deaths occurred worldwide in 2008, a 34% decline from the levels of 1990. Despite this decline, developing countries continued to account for 99% (355 000) of the deaths. Fortunately, the vast majority of maternal and newborn deaths can be prevented with proven interventions to ensure that every pregnancy is wanted using modern contraceptive and every birth is safe. Vasectomy and female sterilization are the least used methods of modern contraceptive each accounting only for 0.2%.

Objective of the study

To assess knowledge and attitude of using permanent contraceptives among SPHMMC FP users and assess the determinants affecting using permanent contraceptives

Method

A cross-sectional quantitative student based study was used. The actual sample size for the study was determined using the formula for single population proportion. A trained interviewer was used to administer the interview to the respondents. The data collected in questionnaire was physically checked and entered in to SPSS version 21. The data were analyzed by summarizing, tabulating and presenting in various formats

Results

A total of 205 respondents, with 100% response rate, were participated in this research. Out of them 173(84.4%) of the respondents have heard about at least one of the permanent contraceptive methods. 84(48.6%) of them knows both tubal ligation and vasectomy as permanent contraceptive methods. 79(45.7%) heard about PCMs from friends/families. 155(75.6%) of the respondents have negative attitude towards using PCMs.

Using 95% confidence interval; sex, educational status, plan to have more children, plan to limit fertility and monthly income show statistically significant relation with knowledge of at least one type of PCMs. Whereas educational status, occupation, monthly income and number of children show statistically significant relation with attitude towards using PCMs.

Conclusion

In conclusion, the knowledge towards using PCMs is still low for the society to be a good alternative family planning choice. Even if the community has appreciable attitude towards limiting fertility and having adequate family size, PCMs are still by far the least choice of family planning method.

INTRODUCTION

Background

An estimated 358 000 maternal deaths occurred worldwide in 2008, a 34% decline from the levels of 1990. Despite this decline, developing countries continued to account for 99% (355 000) of the deaths. Sub-Saharan Africa and South Asia accounted for 87% (313,000) of global maternal deaths [1]. Fortunately, the vast majority of maternal and newborn deaths can be prevented with proven interventions to ensure that every pregnancy is wanted using modern contraceptive and every birth is safe

Ethiopia is the second most populous nation in Africa. Its population has increased nearly seven times from 11.8 million at the beginning of the 20th century to about 80 million today [1]. The total fertility rate of Ethiopia is 5.4 children per women, population growth rate is estimated at 2.7% per year, contraceptive prevalence rate (CPR) is only 15% and an unmet need for family planning is 34 percent. Vasectomy and female sterilization are the least used methods of modern contraceptive each accounting only for 0.2% [2]. Addressing the unmet need of family planning in Ethiopia is expected to avert 12,800 maternal deaths and more than 1.1 million child deaths by the target date of 2015 [3]. Permanent contraceptives are important choices to the family planning using communities since they are safe, cost effective and with very low failure rate. Yet knowledge and prevalence of practicing them is almost none in the country.

Statement of the problem

Couples who want safe and effective protection against pregnancy would benefit from access to more contraceptive choices, including permanent methods which include: tubal ligation, and vasectomy. These are by far the most effective (>99%) methods of contraception available and are very safe and convenient. The permanent nature of these forms of contraception does not require daily motivation on the part of users and thus have higher continuation and effectiveness rates. Couples also require fewer visits to health providers,

thus saving time, effort and money, and the patient load at health care facilities is lessened [4]. This means that they are cost effective for programs over time. At a system level, the use of permanent methods can result in substantial cost savings for governments, and contribute directly to reaching national and international health goals. Other indirect advantages are the reduction of high maternal mortality and morbidity, as well as elective abortions. According to a study done in different nations across the globe, more than 300,000 abortions per year in Vietnam, more than 100,000 in Ukraine, and 80,000 in Turkey could be averted by the use of contraceptives [5]. Despite these advantages, these methods remain a relatively small, and sometimes missing, component of many national reproductive health and family planning programs. Strong family planning programs offer a full range of contraceptive methods, but in many places, permanent methods are the least available, the least used, and possibly the least understood methods by client [4,6]. For example, evidence from sub-Saharan Africa suggests there is a large discrepancy between the proportion of women who want to stop having children and the proportion using permanent methods. This implies large unmet need for permanent contraceptives [7]. The Ethiopia Federal Ministry of Health (FMOH) has considered the important role of permanent contraceptives and aims to increase the availability of these methods to 20 % of all family planning clients [8]. Use of family planning in Ethiopia has traditionally focused on short-acting methods such as injectable and birth control pills. Permanent contraceptives accounted for less than 1% of users in 2011 in Ethiopia. The main factors associated with this are lack of knowledge, wanting more children and fear of the surgical procedure [8]. High discontinuation rates are associated with the short-acting hormonal methods, such as injectable, that are predominantly chosen by contraceptive users in sub-Saharan Africa. However, increasing contraceptive method mix has been shown to reduce discontinuation rates [8, 9]. The present study emphasizes on the determinant factors of LAPM methods utilization in SPHMMC with the aim of providing policy makers and program managers findings that contribute to the improvement of service provision with regard to permanent contraceptives.

Significance of the study

Ethiopia is one of the most populous countries in the world and its population is even growing fast to the extent that is becoming difficult for the economy to support the growing population and now is the time to tackle the problem. The policy makers need to know the extent of problem and the effectiveness of measures already taken. There are not much of researches done to address the problem and this research is expected to add on those few researches made on the topic and be a good comparison to them.

The current programs and measures are proven not enough to tackle the problem in increasing the use of contraceptive methods in general and permanent methods in particular and achieve both the international and national goals. The aim of this study is to analyse the adequacy of knowledge and attitude towards using permanent contraceptives. It can also be used to analyze the detailed factors associated with the knowledge gap, and asses the adequacy and effectiveness of the policies and programs on ground and asses for any gap between the legislated policies and the actual implementation of the programs. It can also be used for policy makers to tackle the knowledge gap and to work on those issues that increase the attitudes of the clients towards using permanent contraceptives. It can also be used as a source of information for future studies

LITERATURE REVIEW

There are researches done on long acting permanent contraceptive methods on different areas of the nation I have tried to see the results and compare them. And it's discussed as follows

On study done among married women of reproductive age in Mekelle town, Tigray region, north Ethiopia on factors associated with utilization of long acting and permanent contraceptive methods 64% of the married women heard about LAPMs [9] as compared to research done among married women of reproductive age groups in western Ethiopia, Wollega University, Nekemte, Oromia, Ethiopia on determinants of long acting and permanent contraceptive methods utilization knowledge of at least one form of LAPMs were high (85.9%) [10]. On other research done on assessment of the prevalence and factors affecting use of permanent and long acting contraceptive methods in Jinka town, south Omo Zone, SNNPR, Ethiopia the knowledge of at least one form of LAPMs is 46% [11] on the other hand on the research done on Knowledge and attitudes towards use of long acting reversible contraceptives among women of reproductive age in Lubaga division, Kampala district, Uganda the knowledge of the participants towards long acting reversible contraceptive methods is 73.6% [13] while on a research done on knowledge, attitude and practice of Family Planning among married women in Banteay Meanchey, Cambodia the knowledge about modern contraceptives is 99.3% [14] A health center was the most cited source of information (56%) and source of family planning services (59%) respectively. A private clinic (18%) was the second option and a pharmacy (13%) the third option from which respondents said that they can receive family planning information on the research done on Cambodia. [14]

More than half (53.6%) of the married women had negative attitude towards practicing of LAPMs on the research done in western Ethiopia, Wollega University, Nekemte, Oromia, Ethiopia [10]. The overall positive attitude towards using LAPMs is only 19.7% on the research done on Uganda while the overall positive attitude towards using any family planning service on the research done on Cambodia is 55.2% The overall prevalence of

LAPMs use was 12.3% on the research done on Mekele town, northern Ethiopia [9] as compared to research done in Wollega University 20% of respondents were currently using long acting and permanent contraceptive methods [10] and 7% on the research in Jinka town [11]. However; there were no users for female or male sterilization and only 15.6% of the married women heard about vasectomy on the research in Jinka town on the contrary on the research done on Wollega university majority of women in this study used implants (77.6%) followed by IUCD (14.9%) and tubal ligation (7.5%). There were no respondents who used vasectomy [10]. On the research done in Jinka town 89.2% is using implants, 10.8% is using IUCD and the prevalence of permanent contraceptive is none [11]. On the research done on Uganda injectables are the most currently used contraceptive use 77.3% followed by implants 64.3% and IUCD 16.3%. [13]

On the research made on Mekele town, northern Ethiopia the main reason cited by the majority of the married women for not using LAPMs was using another method of contraception 360 (93.3%) [9] and it is also the main reason mentioned on the research done on Jinka town among 79.6% of the respondents [11]. Interest to have children in the future (61%) is the most common reason cited for not using LAPMs in the research done in Wellega University. Lack of decision making power and fear of the surgical process are among other reasons mentioned [10]. Side effects of the pill and contraceptive injection (54%), and the desire for more children (32.1%), were the main reasons for not using modern contraceptives on the research done in Cambodia. [14] A health center was the most cited source of information (56%) and source of family planning services (59%) respectively. A private clinic (18%) was the second option and a pharmacy (13%) the third option from which respondents said that they can receive family planning information on the research done in Cambodia [14]

On the research done in Nekemit town, Western Ethiopia where respondents who had secondary school education and above were more likely to utilize LAPMs compared to those who had primary school education and below (AOR=1.72,95%CI = 1.02 - 3.05)[10] and it's also consistent with the research done in Mekele town, Northern Ethiopia where mothers

who had high knowledge were 8 times more likely to use LAPMs as compared with those who had low knowledge (AOR = 7.9, 95% CI of (3.1, 18.3)[9]. On the research done in Uganda where current use of LARC was about one and a half (1.47) times higher among respondents who had children than those who had none (AOR 1.47; 95% CI 1.03, 2.11;p= 0.036)[13] and also consistent with the research done in Nekemit town, Western Ethiopia where women who had more than two children were two times more likely to utilize LAPMs compared to those who had less than or equal to two children (AOR = 2.42,95% CI: 1.46-4.02)[10]

OBJECTIVE

General objective

To assess knowledge and attitude of using permanent contraceptives among SPHMMC FP users and assess the determinants affecting using permanent contraceptives

Specific objectives

- To assess knowledge of permanent contraceptives among clients who visit to SPHMMC
- To assess attitude towards using permanent contraceptives among clients who visit to SPHMMC and their partners
- To know the important factors affecting the knowledge and attitude towards permanent contraceptives.

METHODS

Study design

A medical college based cross sectional descriptive study was conducted among FP users

Study area and period

This study will be carried out in SPMMC. St. Paul's Hospital was built in 1969 (was named St Paul General Specialized Hospital until 2008) by Emperor Haile Selassie in collaboration with the German Evangelical Church, as a source of medical care for underserved populations. It currently has 392 beds, with an annual average of 200,000 patients and a catchment population of more than 5 million. Approximately 75% of the patients receive medical services free of charge. There are over 1300 clinical and non-clinical staffing over 13 departments, most recently launching its new hemodialysis unit. There are currently 510 medical students at St. Paul's, with additional 18 students in training to receive their Bachelor's in critical care and ICU nursing, and 16 studying for a Bachelor's in operation theater nursing

The study was conducted from June 22-29, 2017

Source and Study population

Source population

All family planning users in SPHMMC who were there while the study is being conducted

Study population

All family planning users in SPHMMC

Inclusion criteria

Those who are sexually active or age 21 or above

Exclusion criteria

Those who are critically or mentally ill.

Sample size

Using single population proportion formula, based on the assumptions of knowledge on LAPMs 85.9% (p) from related Study conducted in Wollega university, Nekemit town, Oromia on determinants of long acting and permanent contraceptive methods utilization with 95% confidence interval ($Z_{\alpha/2} = 1.96$) and with 5% marginal error(d), and 10% for non-response rate:

$$n_i = \frac{(Z_{\alpha/2})^2 P (1- P)}{d^2} = \frac{(1.96)^2 0.859(1-0.859)}{0.05^2} = 186$$

$$d^2 = 0.05^2.$$

With 10% non-response rate the final sample size will be 205

Sampling procedure

Multi-stage sampling technique was used in sampling the study subjects. SPHMMC gives family planning service on Michu clinic, emergency gynecologic OPD and regular gynecologic OPD. By using cluster sampling method 88 respondents were selected from emergency gynecologic OPD, 67 respondents were selected from Michu clinic and 50 respondents were selected from regular gynecologic OPD according to their respective client

flow. To get the sample units (subjects) from the selected service centers systematic random sampling, every third client and every fourth attendant was interviewed.

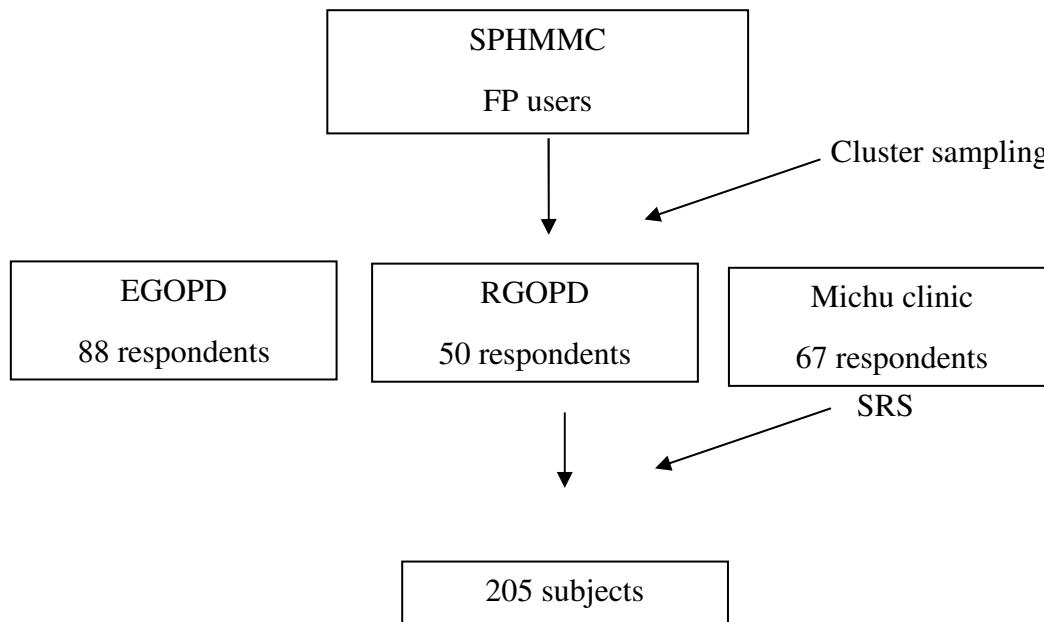


Figure - 1 sampling procedure

Variables

Dependent variables

- Knowledge of permanent contraceptives
- Attitude towards using permanent contraceptives

Independent variables

- Socio demographic characteristics:
 - Age
 - sex
 - Educational status
 - Religion
 - Ethnicity

- Occupation
- Marital status
- Monthly income

- Knowledge factors:
 - Ever heard at least one PCM
 - Discussed with health professional
 - Source of information
 - Discussed with partner
 - Partners attitude

- Attitude and demand for PCMs related factors:
 - Currently sexually active
 - Number of children
 - Child planned
 - Preferred method of FP
 - Want to limit fertility any time
 - Preferred occasion to limit fertility
 - Reasons for not limiting fertility
 - Reasons for not to use PCMs

Operational definitions

- Family planning user- those who are sexually active or age 21 and above
- Knowledge of the permanent contraceptives – knowing of at least one of the two permanent contraceptives (bilateral tubal ligation, vasectomy)
- Child planned – any plan to have children in the next 5 years
- Limiting fertility – planning not to have baby anymore
- Sexually active – those who are having regular sexual interaction at least twice a month.

Data collection procedures and quality assurance

The data is be collected by investigator using structured questionnaire after training the data collectors. It is be prepared in English and be interpreted to the local languages of the participants. Pretest was undertaken in 10%, which is not included in the study. In the case of the concurrence of incompleteness and inconsistency, data collectors went back to respondent's site to refill the questionnaire.

Data management and data analysis

Data entry, cleaning, and analysis is done using SPSS version 20 program. Descriptive analysis is computed in order to determine frequencies and percentages. To determine the association between the dependent and independent variables chi square test is done and regression analysis was done asses the strength of relation of the categories under those variables with the dependant variables Moreover, in this statistical analysis, association is determined, if p value is less than 0.05, it is considered as statistically significant.

ETHICAL CONSIDERATIONS

Approval and clearance for the study is received from SPHMMC public health department before administration of the questionnaires and the objective and importance of the study is explained as well. Participation was voluntarily and the participants were informed that all the data used will only be used for scientific purpose. Verbal Informed consent was sought and obtained from the participants before administration of the questionnaires.

Privacy and confidentiality was maintained at all times, all findings were portrayed in a confidential manner; no personal or identifiable information was recorded or printed in the study. All participants were reassured that the option to withdraw from the research at any time without penalty or repercussions was upheld.

The proposed study's findings cause no harm to the participants and society. All findings and results presented were that of facts stated in the questionnaire and interviews, no false information or accusations were included in the final report.

RESULTS

Socio-demographic characteristics of FP users in SPHMMC, Addis Ababa Ethiopia, June 2017

A total of 205 respondents, with 100% response rate, were participated in this research. 84(41.0%) of the respondents were in 24-29 years age groups. And 121 (59.0%) of the respondents were females. The majority 106(51.7%) of the respondents are followers of Ethiopian orthodox religion. 56(27.3%) of the respondents have learned up to primary education. Majority 97(47.3%) of the respondents are from Oromo ethnic background. 128(62.4%) of the respondents are married. 68(33.2%) of the respondents are farmers. Majority 109(53.2%) of the respondents have monthly income between 1000-5000 ETB.

Table -1 the socio-demographic characteristics of the FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Characteristics	Frequency	Percentage
age groups		
18-23	31	15.1
24-29	84	41.0
30-35	50	24.4
36-40	36	17.6
Above 40	4	2.0
Sex		
Female	121	59.0
Male	84	41.0
Religion		
Eth. Orthodox	106	51.7
Protestant	42	20.5
Muslim	51	24.9
Others	6	3
Educational status		

Can't read or write	47	22.9
Primary education	56	27.3
Secondary education	51	24.9
Higher education	51	24.9
Ethnicity		
Oromo	97	47.3
Amhara	53	25.9
Tigre	11	5.4
Ethiopian Somali	1	0.5
Others	43	21.0
Marital status		
Single	55	26.8
Married	128	62.4
Divorced	7	3.4
Widowed	15	7.3
Occupation		
Farmer	68	33.2
Health professional	8	3.9
Other government employee	41	20.0
Private work	66	32.2
Unemployed	13	6.3
Student	9	4.4
Monthly income		
Less than 1000 ETB.	48	23.4
1000-5000 ETB.	109	53.2
Above 5000 ETB.	48	23.4

Demand for PCMs related factors of the FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Majority 146 (71.2%) of the respondents are currently sexually active. Majority of the respondents have plan to have (more) child which is 129 (62.9%). The most favorite contraceptive of the participants is injectable 95(46.3%). 98 (47.8%) of the participants want to limit their fertility at some point and out them 51% want to limit their fertility currently.

28(48.3%) of the participants doesn't want to limit fertility because they want a child of different sex.

Table- 2 demand for PCMs related factors of FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Characteristics	Frequency	Percentage
Total number of children		
None	66	32.2
1-2	78	38.0
3-4	56	27.3
5 and above	5	2.4
Currently sexually active		
Yes	146	71.2
No	59	28.8
Plan to have other child		
Yes	129	62.9
No	51	24.9
Not sure	25	12.2
Want to limit your fertility anytime		
Yes	98	47.8
No	58	28.3
I do not know	49	23.9
Preferred occasion to limit fertility (n=98)		
After having 2-3 children	26	26.5
After having 4-5 children	6	6.1
Now	50	51.0
Not sure	16	16.3
Reasons for not limiting fertility(n=58)		
I want more children	17	29.3
I want child of different sex	28	48.3
I do not know	13	22.4

The most favorite contraceptive of the participants is injectable 95(46.3%) followed by pills 49(23.9%) then implants/IUCDs 28(13.7%). 8.3% of the participants doesn't want any type of contraceptive method and only 4.4% preferred PCMs.

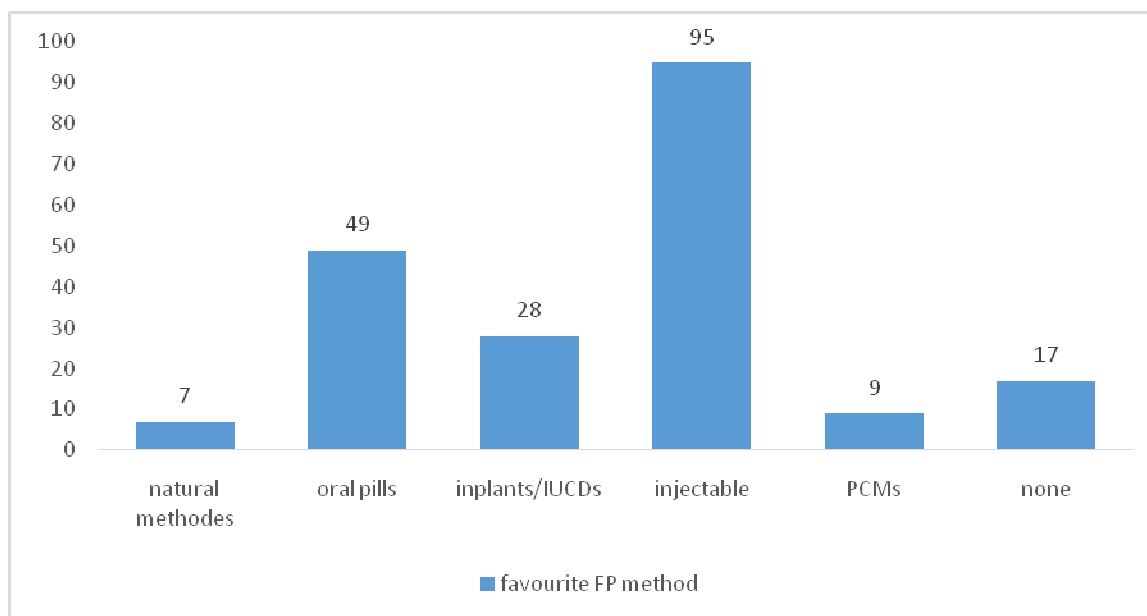


Figure - 2 Bar graph for preferred FP method of FP users in SPHMMC, Addis ~~ababa~~Ababa, Ethiopia, June 2017

Knowledge and attitudes FP users in SPHMMC, Addis Ababa Ethiopia, June 2017

The knowledge of the FP users in SPHMMC, Addis Ababa Ethiopia, June 2017 is showed in the figure below

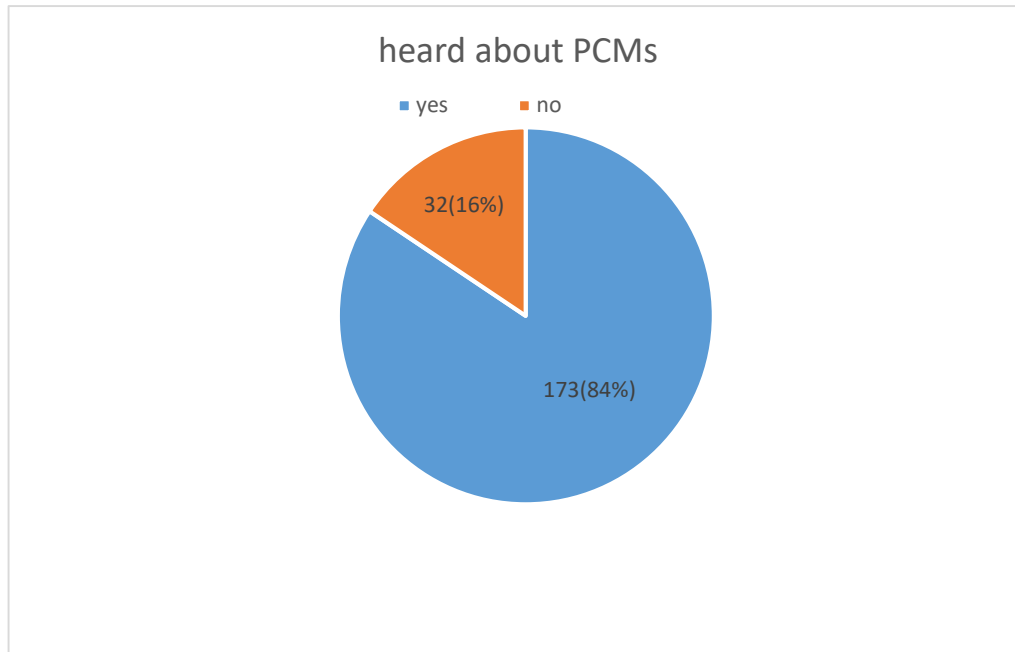


Figure -3 Pie chart for knowledge of the FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Out of the respondents who have heard about PCMs 84(48.6%) could mention both tubal ligation and vasectomy. While 26(15%) could only mention vasectomy and 63(36.4%) could only mention tubal ligation.

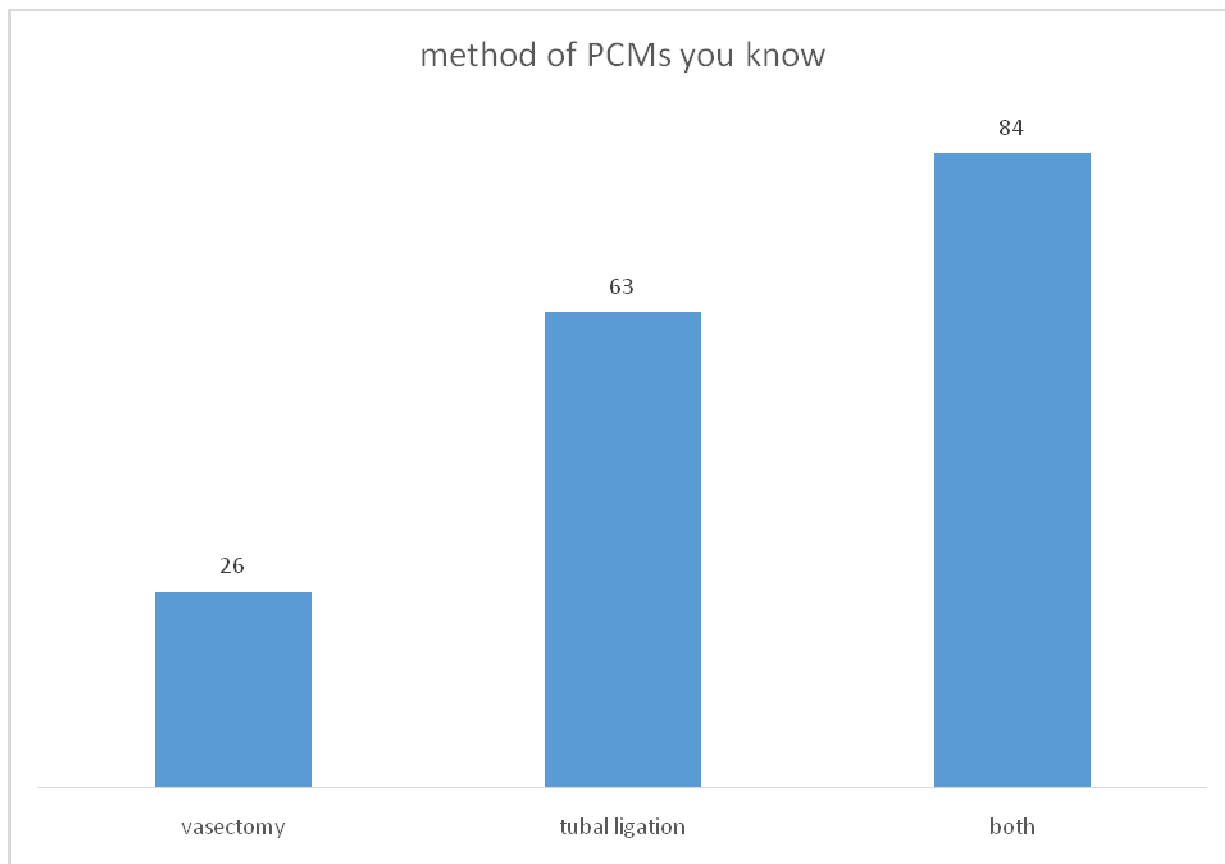


Figure- 4 Bar graph for type of PCMs known by FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Out of those who have heard about PCMs the majority heard about it from families/friends 79(45.7%). 67(38.7%) heard about it from health professionals and only 8(4.6%) heard about it from TV/radio and the other 19 (11%) mentioned different combination of the above sources.

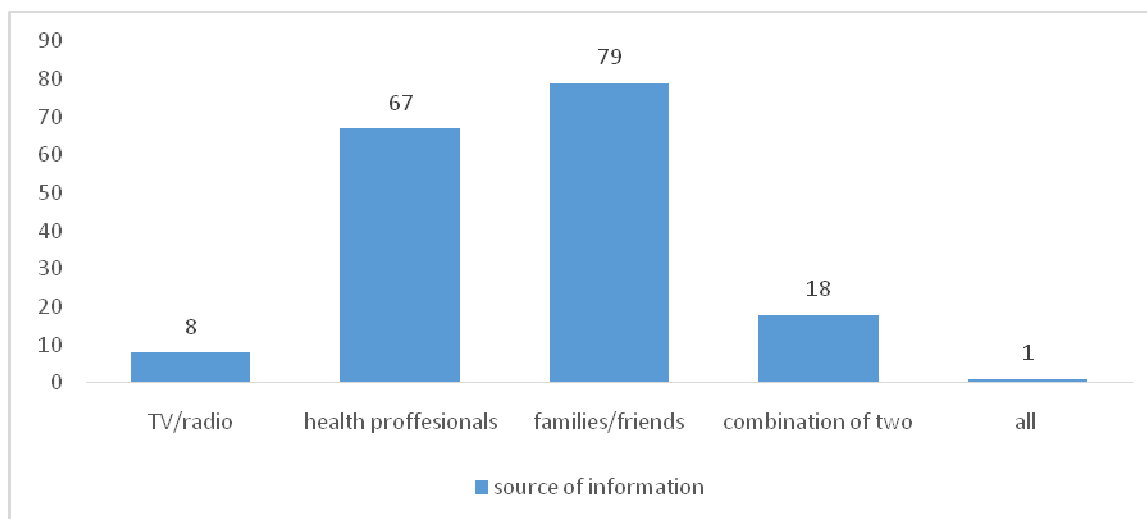


Figure - 5 Bar graph for the source of information of PCMs mentioned by FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

On assessment of attitude towards using PCMs 155 (75.6%) of the participants don't want to use and 41 (20%) want to use PCMs at some point in life. 9 (4.4%) of them are not sure about it.

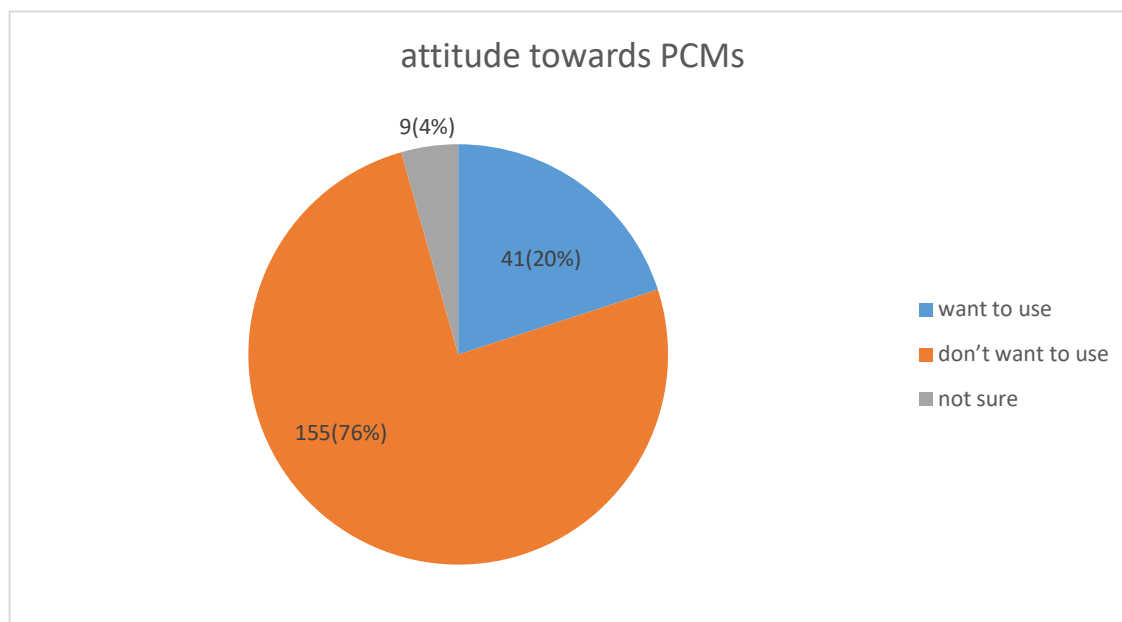


Figure -6 Pie chart for attitude towards using PCMs of FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

From those who wanted to use PCMs 68.3% put less hospital visit as a major benefit of PCMs. The other put economic and medical benefit 12.2% each.

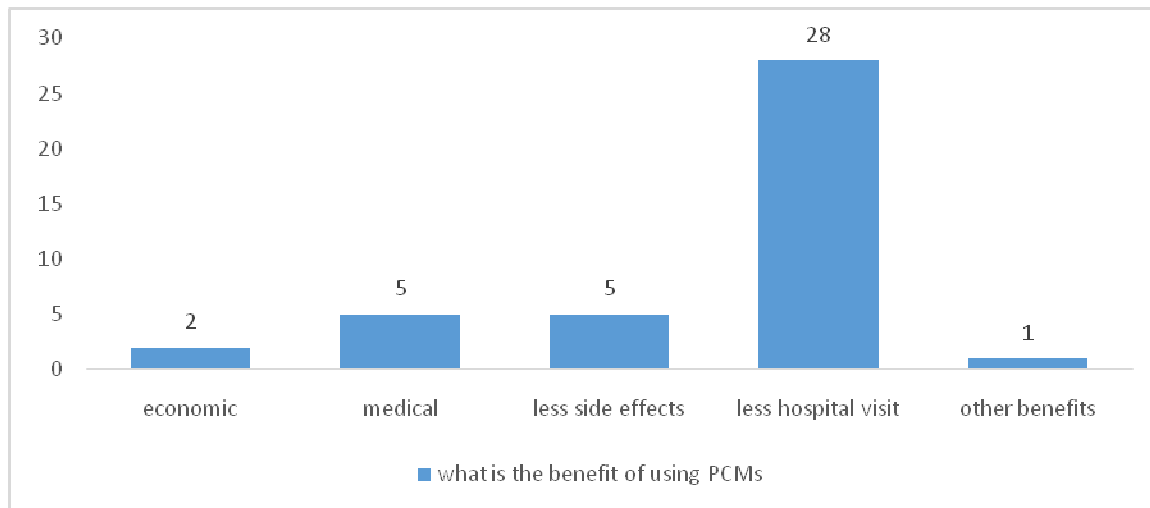


Figure- 7 Bar graph for the benefits of using PCMs mentioned by FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

From those who doesn't want to use PCMs most of them doesn't want to use it because they prefer other methods 32.3% followed by 27.1% of them who want to have more child and 15.5% of them is because their partner doesn't allow them. Procedure side effect is among the other reasons it's shown in the figure below

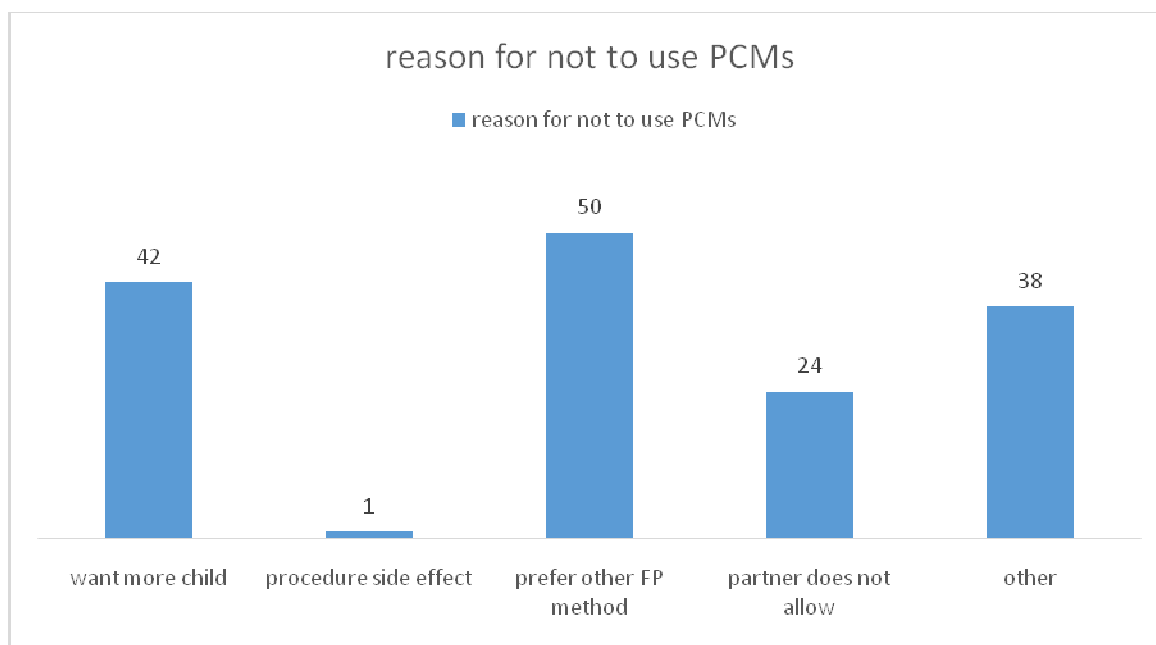


Figure- 8 Bar graph for reasons for not using PCMs mentioned by FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Table - 3 knowledge and attitude towards PCMs of the respondents FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Characteristics	Frequency	Percentage
Discussed about PCMs with partner		
Yes	68	38.7
No	106	61.3
Discussed about PCMs with health workers		
Yes	44	24.9
No	130	75.1
Who do you think provides the services		
Public health facilities	99	57.2
Private health facilities	1	0.6
Both	74	42.2

Relation of different variables of participants with knowledge and attitude towards using PCMs

I have conducted chi square and binary logistic regression statistical tests to investigate whether various respondents' baseline characteristics could determine/influence the level of knowledge and attitude towards using PCMs using 95% confidence interval. The clients occupation, educational status, the fact they are sexually active and their plan to limit fertility showed statistically significant association with knowledge of PCMs while the clients educational status, their monthly income, their occupation and the number of children they have had shown statistically significant association with the clients attitude towards using PCMs

Table - 4 Associations between socio-demographic characteristics and knowledge of FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Variable	Categories	Frequency	COR	AOR	P value
Occupation	Farmer	68	1.00	1.00	0.011
	Health professional	8	7218.079(0.000)	31861.988 (0.000)	0.999
	Other government employee	41	17.872(2.301-138.819)	26.348 (0.922-752.655)	0.006
	Private job	66	4.468(1.67-11.957)	6.045 (0.460-79.512)	0.003
	Unemployed	13	1.489(0.371-5.914)	1.440 (0.40-4.882)	0.574
	Student	9	3.128(0.362-27.053)	2.533 (0.017-16.999)	0.244
Educational status	Primary	56	2.318(0.954-5.634)	2.958 (0.846-10.344)	0.063
	Secondary	51	9.067(2.448-33.583)	5.112(0.816-32.014)	0.001
	Higher	51	28.333(3.586-223.854)	5.829(0.244-139.078)	0.002
	Can't read or write	47	1.00	1	0.000

Table – 5 Association between for PCMs related factor and knowledge of FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Variables	Categories	Frequency	COR	AOR	p-value
Are you currently sexually active	Yes	146	4.627(1.352-15.839)	2.179(0.60-3.349)	0.015
	No	59	1.00	1	0.000
Plan to limit fertility	Yes	98	1.00	1	0.027
	No	58	0.290(0.118-0.715)	0.569(0.388-4.995)	0.007
	Don't know	49	0.518(0.187-1.44)	0.78(0.693-1.667)	0.207

Table – 6 Association between socio-demographic factors and attitudes towards PCMs of FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Variables	Categories	Frequency	COR	AOR	p-value
Educational status	Primary	56	1.00	1	0.000
	Secondary	51	5.928(0.674-53.015)	4.382(0.521-46.901)	0.108
	Higher	51	120.313(15.269-947.994)	87.423(6.421-421.994)	0.000
	can't read or write	47	0.000	0.032(0.002-0.456)	0.998
Occupation	Farmer	68	1.00	1	0.000
	Health professional	8	26.667(4.625-153.748)	11.432(2.835-98.327)	0.000
	Other government employee	41	38.667(11.488-130.144)	17.313(7.094-86.507)	0.000
	Private job	66	0.762(0.164-3.543)	1.627(0.447-8.371)	0.729
	Unemployed	13	10.00(2.217-45.098)	14.324(5.330-78.019)	0.003
	Student	9	20.00(3.814-104.979)	6.787(1.696-33.674)	0.001
	Monthly income				
	Less than 1000 ETB	48	0.000(0.000)	0.213(0.098-0.562)	0.997
	100-5000 ETB	109	3.311(1.287-	4.139(1.649-	0.013

				8.520)	11.903)	
	Above ETB	5000	48	1.00	1.000	0.046

Table – 7 Association between demands for PCMs related factors and attitude towards PCMs of FP users in SPHMMC, Addis Ababa, Ethiopia, June 2017

Variables	Categories	Frequency	COR	AOR	p-value
Number of children	1-2	78	0.192(0.072-0.513)	0.771(0.217-1.370)	0.001
	3-4	56	0.500(0.211-1.184)	0.872(0.219-2.027)	0.115
	5 and above	5	371559(0.000)	421.321(6.301-2026.457)	0.999
	None	66	1.00	1.00	0.011

DISCUSSION

On this research the knowledge of at least one type of PCMs is 84.4%. This finding is higher when we compare it to the research done among married women of reproductive age in Mekelle town, Tigray region, north Ethiopia on factors associated with utilization of long acting and permanent contraceptive methods 64% of the married women heard about LAPMs[9] and also on other research done on assessment of the prevalence and factors affecting use of permanent and long acting contraceptive methods in Jinka town, south Omo Zone, SNNPR, Ethiopia the knowledge of at least one form of LAPMs is 46%[10]. It's also higher compared to the research done on Knowledge and attitudes towards use of long acting reversible contraceptives among women of reproductive age in Lubaga division, Kampala district, Uganda the knowledge of the participants towards long acting reversible contraceptive methods is 73.6% [13]. This may be because of relative urbanization of the areas of study and relative lapse in time of study which is important because of current widespread teaching on FP by minister of health.

But on contrary compared to research done among married women of reproductive age groups in western Ethiopia, Wollega University, Nekemte, Oromia, Ethiopia on determinants of long acting and permanent contraceptive methods utilization knowledge of at least one form of LAPMs were high (85.9%) which is a little higher compared to this researches finding which may be because they have included long acting contraceptive methods as well on their study [10]. Knowledge towards PCMs 84.4% is low compared to mini EDHS done on 2014 which has knowledge about tubal ligation up to 96.5% but on the mini EDHS the knowledge of vasectomy is only 39.9%.[12] A research done on knowledge, attitude and practice of Family Planning among married women in Banteay Meanchey, Cambodia the knowledge about modern contraceptives is 99.3% but on the same research the knowledge towards at least one form of PCMs is only 33.4% [14] this is maybe because the research was done on 2004 compared to my research which is done in 2017 make the society more informed.

Majority (57.2%) of the respondents mentioned public health facilities as a source to get the service of PCMs which is consistent to EDHS result which is 87%-[12]and also consistent with the research done in cambodia where health center was the most cited source of information (56%) and source of family planning services (59%) respectively. A private clinic (18%) was the second option and a pharmacy (13%) the third option from which respondents said that they can receive family planning information on the research done in cambodia[14]

More than half (53.6%) of the married women on the research done among married women of reproductive age groups in western Ethiopia, Wollega University, Nekemte, Oromia, Ethiopia had negative attitude towards practicing of LAPMs[10] which is consistent with this research accounting 75.6% showing negative attitude towards PCMs. The higher negative attitude of this research is maybe because this study does not included LAMs and it shows the study population has even more negative attitude towards PCMs. The overall positive attitude towards using LAPMs is only 19.7% on the research done on Uganda while the overall positive attitude towards using any family planning service on the research done on Cambodia is 55.2% and still maybe because the research was done for on modern family planning methods.

The main reason cited by the majority of the respondents for not using PCMs was using another method of contraception 32.3% and it is also the main reason mentioned on the research done on Jinka town 79.6% of the respondents [11] and also on the research made on Mekele town, Northern Ethiopia 93.3% [9]. Interest to have children in the future (61%%) is the most common reason cited for not using LAPMs in the research done in Wollega University. Lack of decision making power and fear of the surgical process are among other reasons mentioned. [10] Lack of decision making power and fear of the surgical process are among other reasons mentioned [10]. Side effects of the pill and contraceptive injection (54%), and the desire for more children (32.1%), were the main reasons for not using modern contraceptives on the research done in Cambodia. [14]

Injectable are by far the most favorite method of contraceptive mentioned on this study accounting 46.3% which is consistent with 2014 mini EDHS accounting 31% followed by oral pills 23.9%.[12] also consistent with the research done in Uganda where injectables are the most currently used contraceptive use 77.3% followed by implants 64.3% and IUCD 16.3% [13] this is maybe because of relative similarity of the two countries on socio-demographic and economic background.

Out of the participant's base line characteristics educational status, occupation, sexual activeness and plan to limit fertility show statistically significant relation with knowledge of at least one type of PCMs whereas educational status, occupation, monthly income and number of children show statistically significant relation with attitude towards using PCMs.

In this research government employees have 26 times more knowledge of at least one type of PCMs compared to farmers with AOR 26.348(95% CI 0.922-752.655) p value 0.006 this because government employees have more information to reproductive health and FP. Respondents who have higher educational level have five times more knowledge about at

least one type of PCMs compared to respondents who can't read or write with AOR 5.829 (95% CI 0.244-139.078) p value 0.002. If the participants are sexually active they have two times more knowledge about at least one type of PCMs compared to those who are not sexually active with AOR 2.179 (95%CI 0.60-3.349) p value 0.015 this is maybe because the sexually active respondents are more informed about FP methods than those who are not sexually active. If the respondents doesn't want to limit their fertility they have 43% less knowledge about at least one type of PCMs compared to those who want to limit their fertility with AOR 0.569(95% CI 0.388-4.995) p value 0.007 this can be explained by the fact that if people want to limit their fertility they will search for a means to do it.

In this research respondents who have higher education have 87 times positive attitude towards using PCMs with AOR 87.423 (95 % CI 6.421-421.994) p value 0.000 while respondents who can't read or write 97% less positive attitude using PCMs with AOR 0.032(95% CI 0.002-0.456) p value 0.998 compared to those who have primary education. This result is consistent with the research done in Nekemit town, Western Ethiopia where respondents who had secondary school education and above were more likely to utilize LAPMs compared to those who had primary school education and below (AOR=1.72,95%CI = 1.02 - 3.05)[10] and it's also consistent with the research done in Mekele town, Northern Ethiopia where mothers who had high knowledge were 8 times more likely to use LAPMs as compared with those who had low knowledge (AOR = 7.9, 95% CI of (3.1, 18.3)[9] this is may be because the those who have higher education will more information about reproductive health and the benefit of the PCMs. Health professionals have eleven times more positive attitude towards using PCMs with AOR 11.432 (95% CI 2.835-98.327) p value 0.029 compared to farmers this is because health professionals have more knowledge about the benefits of PCMs and may be they know more about the safety of the procedure. The respondents who have monthly income between 1000-5000 ETB have four times more positive attitude towards using PCMs with AOR 4.139(95% CI 1.649-11.903)p value 0.013 than those who have monthly income above 5000 ETB this may be attributed to the respondents belief having more income will let them afford raising more children. If the respondents have five or more children they have 421 times more positive attitude towards using PCMs with AOR 421.321(95% CI 6.301-2026.457) p value 0.999 compared to those who don't have any child this is found to be consistent with the research done in Uganda where current use of LARC was about one and a half (1.47) times higher among respondents who had children than those who had none (AOR 1.47; 95% CI 1.03, 2.11;p= 0.036)[13] and also consistent with the research done in Nekemit town, Western Ethiopia where women who had more than two children were two times more likely to utilize LAPMs compared to those who had less than or equal to two children (AOR = 2.42,95% CI: 1.46- 4.02)[10] this maybe because the more children the respondents have the more higher attitude they will towards limiting fertility and using PCMs.

CONCLUSION

In conclusion, the knowledge towards using PCMs is still low for the society to be a good alternative family planning choice. Families and friends are the major sources of information to the society which may lead to biased information and negative attitude towards using PCMs. Mass Medias and health professionals play a very little role to be the source of knowledge for the community on the issue of PCMs than expected on mentioning the clear benefits of using PCMs building their attitude towards using PCMs.

The community's attitude towards using PCMs is very low. Even if the community has appreciable attitude towards limiting fertility and having adequate family size, PCMs are still by far the least choice of family planning method.

Among many mentioned reasons for not wanting to use PCMs, lack of partner's good willingness still plays a significant role.

The clients occupation, educational status, the fact they are sexually active and their plan to limit fertility showed statistically significant association with knowledge of PCMs. Farmers are the least of the occupations to hear about PCMs while health professional know better than all other occupations. The more the respondents get educated the more they know about PCMs. The more they have plan to limit fertility the more they know about PCMs.

The clients educational status, their monthly income, their occupation and the number of children they have had shown statistically significant association with the clients attitude towards using PCMs

RECOMMENDATION

The government and the minister of health should focus on teaching about PCMs as it has huge economical and medical benefit both for the government and the individual of the community.

Mass media should teach the community about PCMs on major public and private Medias as they can reach the broad society

Health professionals should play a significant role in addressing the matter to the community

Improving the lifestyle of the society and empowering woman is still the major and basic move of addressing the issue.

LIMITATION OF RESEARCH

I should have adopted a standardized questioner in order to assess the knowledge and attitude towards using PCMs.

The research is hospital based study, it would have been more applicable if it was community based study.

There was no study done on PCMs on literature reviews to compare with. All of my literature review sources are conducted on long acting and permanent contraceptive methods.

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ANNEXES

Hello, my name is Girum Zerihun, I am a medical Intern at SPHMMC and I am conducting a research for partial fulfillment of requirement for the degree of doctor of medicine on knowledge, attitude and association factors towards using permanent contraceptives in SPHMMC family planning users. This is the interview for the research and your participation is very important. The data from this interview is fully confidential and will only be used for statistical purpose. Thank you for your participation and you have the right to discontinue the interview any time you feel discomfort.

Do you agree to participate on the interview?

· Yes · No

Interviewing format

Socio-demographic factors of the respondents related questions

1. How old are you -----
2. Gender
 - A. Male
 - B. Female
3. What religion are you following
 - A. Orthodox
 - B. Protestant
 - C. Muslim
 - D. Catholic
 - E. Others
4. What is your educational status
 - A. Primary
 - B. Secondary
 - C. Higher education
 - D. Illiterate
5. What ethnicity are you from
 - A. Oromo

- B. Amhara
 - C. Tigre
 - D. Somali
 - E. Others
6. What is your marital status
- A. Married
 - B. Single
 - C. Divorced
 - D. Widowed
7. What is your occupation
- A. Farmer
 - B. Health professional
 - C. Government employed
 - D. Private
 - E. Unemployed
8. How much do you get per month in ETB, on average
- A. Less than 1000 birr
 - B. 1000-5000 birr
 - C. Above 5000 birr

Demand for PCMs of the respondents related questions

9. Are you currently sexually active
- A. Yes
 - B. No
10. How many children do you have?
- A. 1 and 2
 - B. 3 and 4
 - C. 5 and above
 - D. None
11. Do you have plan to have(more) child
- A. Yes
 - B. No
 - C. Don't know
12. What is your preferred method of FP?
- A. Natural methods
 - B. Pills
 - C. Implants/IUCDs

- D. PCM
- E. Nothing

13. Do you want to limit your fertility?

- A. Yes
- B. No
- C. Don't know

14. If yes to No. 22, what is your preferred occasion to limit fertility?

- A. After 2-3 children
- B. After 4-5 children
- C. Don't exactly know

15. If no to No. 22, what is your reason for not limiting your fertility?

- A. Want more children
- B. Want children from different sex partner
- C. Don't know

Knowledge and attitude of the respondents related questions

16. Have you ever heard at least one PCMs?

- A. Yes
- B. No

If your answer is no to question no. 9 skip the next questions

17. If your answer is yes to question No. 9 which type of PCMs do you know?

- A. Tubal ligation
- B. Vasectomy

18. What is your information source

- A. TV/Radio
- B. Health professional
- C. Friends/family
- D. Combination of any of the above
- E. All
- F. Others

19. Have you ever discussed with your partner about PCMs

- A. Yes
- B. No

20. Have you ever discussed with health professional about PCMs

- A. Yes
- B. No

21. Where do you think you can get the service of PCMs

- A. Public health facilities
- B. Private facilities
- C. Others

22. Do you want to use PCMs?

- A. Want to use
- B. Don't want
- C. No idea

23. If you want to use, what do you think is the benefit?

- A. Economical
- B. Medical
- C. Less side effect
- D. Less hospital visit
- E. Other

24. If you don't want to use, what is your reason?

- A. I want to have more children
- B. Side effects of the procedures
- C. Prefer other contraceptive methods
- D. My partner doesn't allow me
- E. Other

ASSURANCE OF INVESTIGATOR

The undersigned agrees to accept responsibility for the scientific, ethical and technical conduct of the research project and for providing of required progress report as per term and conditions of the research and publication directorate or /and Department of Public Health of St Paul's Hospital Millennium Medical College.

Name of Student _____

Date _____ Signature _____

APPROVAL of ADVISORS

Advisors

Signature

Date

Name: 1. _____

2. _____
