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Prevalence of Long-Acting Reversible Contraceptive among Women of Reproductive Age Group in Debre Tabor Town Visiting Health Institution, North-West Ethiopia 2018. An Institutional Based Study

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ABSTRACT

Introduction: Long acting reversible contraceptive (LARC) allows women to prevent pregnancy for many years at time, offering young women in particular a valuable opportunity to post pone childbearing safely and effectively. However, use of LARC method remains relatively low across the developing world, especially among young women.

Objective: To assess prevalence of long acting reversible contraceptive methods among women of reproductive age group in Debre Tabor Town, North West Ethiopia, 2017.

Methods: The study was conducted in Debre Tabor Town, South Gondar zone, Amhara region, Ethiopia. Debre Tabor is the zonal town in north central Ethiopia located approximately 100 km from Bahir Dar and 666 km north east Addis Ababa. Institutional based cross sectional study design was conducted. Here in the study 223 subjects was sampled with systematic sampling technique. The data was collected through structured questionnaires. The collected data was analyzed manually using scientific calculator after it was edited, stored, organized and checked for completeness.

Results: The response rate of this study was 98.7%. Most of the respondent's age was from 18-35 years 197 (89.5%). The median and the mean age with the standard deviation (SD) of the participants was 28 and 29.03 ± 5.8 years, respectively. Majority of the respondents were orthodox 211 (95.9%), Amhara 214 (97.2%) and Married 170 (77.3%). Most of respondents 130 (59.1%) were use injectable contraceptive family planning. Majority of respondents 198 (90%) were satisfied with they used FP and 117 (53.2%) were use of first choice FP.

Conclusion and recommendation: The overall prevalence of long acting reversible contraceptives among reproductive age group women in Debre Tabor Town was 60 (27.3%). Debre Tabor Town health institution staffs shall give health education for reproductive age group women about family planning especially on long acting family planning. Researchers shall conduct additional research which will investigate associated factors to show the gaps for Debre Tabor Town health institution to reduce the factors.

Keywords: Contraceptive, Reproductive age group, Long acting reversible contraceptive (LARC), Young women

INTRODUCTION

The family planning and reproductive health needs of young people in sub-Sahara Africa remains under studied and insufficiently understood. As growing numbers girl's age in to adulthood, sustained efforts are needed to ensure that all receive access to the family planning counseling and services they want and need [1].

Long acting reversible contraceptive (LARC) allows women to prevent pregnancy for many years at time, offering young women in particular a valuable opportunity to post pone childbearing safely and effectively. However, use of LARC method remains relatively low across the developing world, especially among young women [2].

In Ethiopia, young women often begin sexual activity many years before marriage or child bearing is desired, highlighting the need for safe and effective ways of delaying pregnancy for relatively long period of time. However,

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knowledge and use of LARC methods among young women remains relatively low in the country. For family planning program and policies to meet the needs of young women, greater attention must be paid to the delivery of LARC services to these women [3].

Demand for family planning satisfied with modern methods" has emerged as a key indicator of contraceptive availability and use. The indicator measures the population of women who want to delay or limit child bearing and who are using modern methods of contraceptive. Family planning experts have urged countries to strive for meeting at least 75% of demand with modern methods. Over the past two decades, a significant number of less developed countries have seen increases in the share of demand satisfied with modern methods, but many countries remain far below the proposed 75% benchmark. They will need to accelerate progress over the coming decades, so that increased contraceptive use can translate in to improve maternal and child health, slower population growth, increased economic well-being and environmental sustainability [6].

STATEMENT OF THE PROBLEM

Currently, the world population growth is increasing through time to time in fastest manner. Such kinds of problems are much significant in developing countries like that of Ethiopia. This is true because currently Ethiopia is one of the most populated countries in Africa [1].The world population in the year 1987 GC was 5 billion and it became 6 billion in year 2000 GC. Thus, it is increasing by 1.4% per year approximately. Therefore, if this rate of growth continues in such manner, the population will be 10 billion in 2035 [2]. If the population growth continues in this rate in such manner, it will result economically, socially and health crisis throughout the world.

Unable to use modern contraceptives leads to unwanted pregnancy which intern results economic and social problem in the family. If the mother is giving birth frequently without enough gaps in between, she is stayed at home rearing her children. This problem prevents her from being active participant in the country and she will draw from social activity, it causes famine and makes the ecosystem unfavorable [3]. In terms of Health crisis unplanned pregnancy is known to represent a serious problem in Ethiopia today although only limited empirical data are correctly available. But the 2005district hospital finding show more than 20-40% death of mothers is due to the complication of unsafe abortion. Most victim of unplanned pregnancy was adolescent. Giving birth at extreme age, i.e., at early adult hood age and near to Menopause periods has health burden for both the mother and the neonate [4].

Demographic health survey conducted in Sub Saharan African countries from 2003-2005 showed that more than 20% of women in 9 of 11 countries surveyed do not want any more children. However, in each of the 9 countries less than 7% of women are using long acting methods [5]. Though the CPR near doubled from 15% in 2004/2005 to 29% in 2010/2011, it is still very low [7]. According to the 2011 EDHS report, modern contraceptive use which is dominated by short-term methods among married women was reported as 29%. Similarly, the overall prevalence of long acting and permanent contraceptive methods (LAPMs) in Ethiopia was 12.3% [8].

There was limited and no recently done research in the study area. This research project used for the concerned body to create awareness of family planning, increasing family planning service provision and again reducing the cost of family planning service by showing the prevalence of LAFP. To assess prevalence of long acting reversible contraceptive methods among women of reproductive age group in Debre Tabor Town, North West Ethiopia, 2017.

OBJECTIVE

To determine utilization of long acting family planning method.

MATERIALS AND METHODS

Study area

The study was conducted in Debre Tabor Town Health facilities. Debre Tabor is the capital of South Gondar Zone which is located 666 km north-west of Addis Ababa, the capital city of Ethiopia and 103 km South-West of the Capital city of Amhara National Regional state, Bahir Dar. As the information obtained from South Gondar Zone department, Debre Tabor has a total population of 87,627 from these 45670 are females and 41957 are male (2010 EFY). Total reproductive age group women are 14462. The town is divided by 6 kebeles and has 3 Health Posts, 3 Private Clinics and has 3 Governmental Health Center and 1 Governmental General Hospital.

Study design and period

Institutional based cross-sectional study design was conducted from October 2017-January 2018.

Population

Source of population: All reproductive age group women who were visit family planning unit of health facilities found in Debre Tabor Town.

Study population: All reproductive age group women who were visit family planning unit of health facilities found in Debre Tabor Town during the study period.

Study unit: Individual reproductive age group woman from FP user who were interviewee.

Inclusion criteria

All reproductive age group women who were visit family planning unit of health facilities found in Debre Tabor Town.

Exclusion criteria

Women who lived less than six months in Debre Tabor Town.

Sample size determination

The Sample size was determined by using single population proportion formula by assuming, confidence/Z-level of 95%, marginal error of 5%, proportion of LARCs from previous study (p=0.156) [12].

$$n=\frac{Z^2p(1-P)}{d^2}$$

Where;

d=Error of margin which is 5%/0.05

n=sample size for Long acting reversible family planning

z=is confidence level of 95% (1.96)

N=total population of reproductive age group women in Debre Tabor Town=14462

Then the sample size was: $n=\frac{(1.96)^2\times0.156(1-0.156)}{(0.05)^2}=202$

Then adding 10% nonresponse rate $n=202+202\times\frac{10}{100}=223$

Therefore, the final sample size was **223**.

Sampling procedure

Systematic sampling technique was used for 223 FP use women in Debre Tabor Town health facility institution. Both public and private health facilities were providing family planning services in the town. The study participants were selected by using systematic random sampling method from family planning service users who visit the health institutions during the data collection period every k^{th} value (K=N/n=14462/223=65) (K=N/n=14462/223=65). The first client in each health facility was selected by lottery method. All subjects shall listen and understand the Amharic language. The interview questionnaires and the subject number were recorded on each page to insure proper data tabulation.

Study variables

Dependent variables: Long acting family planning utilization.

Independent variables: Demographic and socioeconomic variables: Age, marital status, ethnicity, educational status, occupational and religion of the respondents, family monthly income, occupation and educational status of husband, distance of house from the health center.

Variable related with reproductive history: Number of pregnancies, history of birth, plan and plan for future fertility.

Operational definition

Family planning: The use of birth control to determine the number of children there will be in a family and when those children will be born.

Long acting reversible family planning: A family panning that used for three to twelve years' birth control and return to birth when last the duration of birth control or remove from the body.

Data collection procedure and instruments

Data was collected through face to face interview with structured questionnaires. The questionnaires were included Socio demographic characteristics, educational status. Interview was conducted after participants took contraceptive method at the service delivery units. As the study was conducted at all health institution in town which found at different kebele the principal investigator recruited four health profession female data collectors and two health profession supervisors to facilitate the data collection process. In order to collect data, the data collectors were use structured questionnaire, pencil, pen and paper.

Data quality control measures

First structured English questionnaire translate to local language which, was Amharic to facilitate communication and avoid confusion. The Amharic language questionnaires translated back to English to check the consistency of the translations.

Furthermore, researcher also gives attention on the supervisor repeated check up on the data collection process to increase the validity of the research. Questionnaire was checked manually for their completeness and consistency when end each interview immediately.

The data collectors were had an hour training how to collect and handle data as well as how to interview. In addition, the questionnaire was pre-tested at FinoteSelam Town with 5% of the sample size.

Data processing and analysis

The collected data was analyzed manually using scientific calculator after it was edited, stored, organized and checked for completeness. The data was analyzed using descriptive statistics to describe frequencies and percentages. Tables, pie chart, graph and other necessary methods were used to describe the result.

Ethical considerations

The support or cooperation letter was obtained from DTU, College of health Sciences, and Department of nursing. Then the respective administrative organization was writing the respective permission letter to Debre Tabor Town health institutions administrative organ. Oral consent was obtained from subjects. During data collection the data collectors was assured about the confidentiality and respect the cultural and

social values of the community under study. Participants was also had informed that they had full right to discontinue or refuse to participate in the study.

Plan for dissemination of findings

The results of the study will be shared to Debre Tabor University, College of Health Science, Department of Nursing and Debre Tabor Town Health Institutions.

RESULTS

Socio-demographic variables of respondents

A total of respondents were participated with a response rate of 98.7%. Most of the respondent's age was from 18-35 years 197 (89.5%). The mean age with the standard deviation (SD) of the participants was 29.03 ± 5.8 years. Variance age of the respondents was 33.68 years with range of 22 years. Most of 211 (95.9%) of the respondents were orthodox Christian in religion. Almost all 214 (97.2%) of participants were Amhara in ethnicity and majority 179 (81.4%) Of respondents were married. Most of respondent's 115 (52%) of family monthly income was greater than 2500ETB **(Table 1)**.

Table 1. Socio-demographic variables of respondents to assess prevalence of LARCs among reproductive age group women (n=223) in Debre Tabor Town, October 2017.

Variables		Frequency	%
Age	18-35	197	89.5
	>35	23	10.5
	Total	220	100
Religion	Orthodox	211	95.9
	Muslim	6	2.7
	Protestant	3	1.4
	Total	220	100
Ethnicity	Amhara	214	97.2
	Oromo	3	1.4
	Tigray	3	1.4
	Total	220	100
Marital status	Unmarried	41	18.6
	Married	179	81.4
	Total	220	100
Respondent's Education	Illiterate	40	18.2
	Elementary	66	30
	Secondary	55	25
	College/university	59	26.8
	Total	220	100
Respondent's Occupation	Merchant	21	9.5
	Housewife	101	45.9
	Civil-servant	51	23.2
	Other	47	21.4
	Total	220	100
Husband's Education	Illiterate	18	8.2
	Elementary	64	29.1

	Secondary	138	62.7
	Total	220	100
Husband's Occupation	Daily labor	23	10.5
	Civil servant	81	36.8
	Merchant	110	50
	Other	6	2.7
	Total	220	100
Family monthly income	<1500	55	25.3
	1500-2500	50	22.7
	>2500	115	52
	Total	220	100

Other include student, NGO and private

Obstetric related condition

Almost all 200 (97.6%) of respondents' the age of first marriage was between 18 and 35 years. And also, majority 142 (64.5%) of mothers were gave their first baby by the age of 18-35 years **(Table 2)**.

Table 2. Obstetric related condition of respondents to assess prevalence of LARCs among reproductive age group women (n=223) in Debre Tabor Town, October 2017.

Variables		Frequency	%
Age at first marriage	<18	5	2.8
	18-35	174	97.2
	Total	179	100
Previously Had birth	Yes	146	66.4
	No	74	33.6
	Total	220	100
Age at birth of first baby	<18	1	0.7
	18-35	142	97.3
	>35	3	2
	Total	146	100
Para	Null	74	33.6
	Prime	40	18.2
	Multi	106	48.2
	Total	220	100
Number of child you want have	≤ 4	101	45.9
	>4	50	22.7
	I do not know	69	31.4
	Total	220	100

Family planning use of respondents

Majority of respondents 130 (59.1%) were use injectable contraceptive family planning **(Figure 1)**.

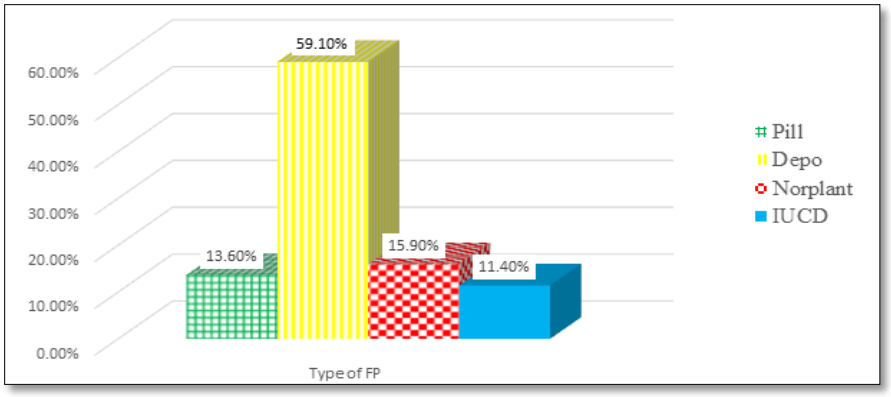

Figure 1. Family planning use of respondents to access prevalence of LARCs among reproductive age group women (n=223) in Debre Tabor Town, October 2017.

Majority of respondents 108 (49.1%) were use contraceptive 1-3 years duration. Most of respondents 198 (90%) were satisfied with they used FP and 117 (53.2%) were use of first choice FP. 150 (68.2%) of respondents first choice were depo contraceptive **(Table 3)**.

Table 3. Family planning use of respondents to assess prevalence of LARCs among reproductive age group women (n=223) in Debre Tabor Town, October 2017.

	Total No. of Variables		Frequency	%	
Cause of not use first choice FP		Duration of FP use	<1 year	48	21.8
	Had no 1st choice		1-3 years	108	49.1
	Disagreement of husband		>3 years	64	29.1
	Health profession counsel		Total	220	100
	Other	Satisfaction with used FP	Yes	198	90
	Total		No	22	10
First choice FP	Pill		Total	220	100
	Depo	Cause of not satisfied	Not 1st choice	6	27.3
	Implant		Short term FP	12	54.5
	IUCD		Side effect	4	18.2
	Total		Total	22	100
Shift of FP method	Yes	Use of first choice FP	Yes	117	53.2
	No			75	34.1
	Total			220	100
Reason of shifting	First is not comfortable				
	New is comfort			37	25.5
	Side effect			24	16.6
	Need of long term FP			24	16.6
	Total			60	41.3
				145	100

DISCUSSION

This study revealed that utilization of long acting reversible family planning is 27.3%. The finding of this study is higher than studies done in different countries like Mini EDHS-2014, 4.2% [10], in Mekelle City 16.4% [12], in Adigrat town, Tigray Region, 19.5% [13], in Jimma town, 16% [14], in Arba Minch Town, 13.1% [15], in Debre Markos Town 19.5% [16], in Fartaworeda, 76 (15.6%) [19] and in Debre Tabor Town 9.2% [20]. This difference may be due to the gap of the study period and socio-economic variation. The result of this study is similar with studies done in Debre Berhan Town 27.3% [18]. However; this finding is lower than studies done in different countries like Lubaga division, Kampala district, Uganda 31.7% [9], in Addis Ababa 34.8% [11], and in Debre Markos town 33.3% [17].The possible reason for this discrepancy may be the result of the geographical land and cultural variation.

The strength of this study is data collectors were well trained and health profession and one of the limitation of this study was that did not assess the potential or associated factors that risk factor for not use of long acting reversible family planning.

CONCLUSION

The overall prevalence of long acting reversible contraceptives among reproductive age group women in Debre Tabor Town was60 (27.3%).This coverage is low even if it is better when compare to the majority of previous study.

RECOMMENDATIONS

- Amhara regional health bureau shall support the health institution to give attention for family planning.
- Debre Tabor Town health office shall give training for health profession about family planning.
- Debre Tabor Town health institution staffs shall give health education for reproductive age group women about family planning especially on long acting family planning.
- Researchers shall conduct additional research which will investigate associated factors to show the gaps for Debre Tabor Town health institution to reduce the factors.

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