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Prevalence and Associated Factors of Modern Contraceptive Utilization among Married Women in Reproductive Age Group in Misha Woreda Hadiya Zone, South Ethiopia

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Abstract

Background: The continuing growth of the world population has become an urgent global problem. Ethiopia, like most countries in sub-Saharan Africa, is experiencing rapid population growth at a rate of 2.6%. Promotion of family planning in countries with high birth rates has the potential to reduce poverty and hunger and avert 32% of all maternal deaths and nearly 10% of childhood death.

Objective: To estimate prevalence and associated factors of modern contraceptive utilization among married women in reproductive age group in Misha Woreda Hadiya Zone, South Ethiopia.

Methods: A community based cross-sectional survey was conducted from May to June 2013. Multistage Stratified sampling technique was employed for the study. I interviewed 581 currently married women of reproductive age group (15-49) years. The collected data was entered and analyzed using EPI-INFO version 3.5 and SPSS version 16.0 statistical program. Crude and adjusted odds ratios from bi-variant and multi-variant analyses were used to measure association between modern contraceptive use and independent variables.

Results: The prevalence of modern contraceptive method was 23.924% with 95% CI (0.205%,0.273%). Final multiple logistic regression analysis showed that residence [(OR 2.86 with 95% CI (1.13,7.28)], possession of radio [(OR 3.43 with 95% CI (2.07,5.68)], income [(OR 5.00 with 95% CI (2.11,11.85)], knowledge [(OR 4.92 with 95% CI (3.05,7.93)] and communication with their partners [OR 3.3 with 95% CI (1.36,9.66)] were found significantly associated with utilization of family planning methods.

Conclusion: The utilization of modern contraceptive method was low. Contraceptive utilization was associated with some socio-economic, socio-demographic and socio-psychological factors like age, residence, family monthly income, knowledge and spousal communication. It is also associated with different sources of information.

Recommendation: One to five health development armies should be strengthen by Woreda health office, health facilities and health posts to improve modern contraceptive use to achieve Millennium development goals.

Keywords: Contraceptives; Women; Family planning; Reproductive health; Communication

Background

The world population will likely increase by 2.5 billion over the next 43 years, passing from the current 6.7 billion to 9.2 billion in 2050 [1]. Sub Saharan Africa faces the most serious population and reproductive health challenges, including the highest maternal mortality, population growth rate, total fertility rate and much unmet need for family planning in the world. In Sub-Saharan Africa, the uptake of family planning has been disappointing in particular. The level of contraceptive use has been estimated at 5-30%, even after developing population policies, the contraception prevalence rates are still low.

The unmet need has increased over the years. Low use of family planning has been attributed to inadequate access to services, value attached to children, unfavorable environment including strong opposition to family planning and lack of coherence between partners. This calls for a set target of 1.5 point increases per year on Contraceptive Prevalence Rate between 2010 and 2020 integrating sexual and reproductive health components, scaling up information, education and communication for behavioral change and tripling contraceptive supply [2].

The situation in Ethiopia is still much worse than most African countries. In spite of the fact that, family planning service delivery facilities and other supplies have increased much in number in the country; significant portion of the Ethiopian population is still living in poverty [3]. The total fertility rate in the country is 4.8, which is still

very high when compared with most other African countries. The contraceptive prevalence rate is about 29% among women of reproductive age. Fertility varies by residence women in urban areas have 2.6 children on average compared with 5.5 children in rural area. The MMR 676/100,000, the CMR 31/1000 and the IMR 59/1000 are also among the highest figures in Africa, the population growth rate is as high as 2.6% [4].

When human reproduction is left unchecked, it results into high birth rates, bringing about large family size with the negative effects on the health of the respective mothers and children. Consequently this leads to negative impact on the family, the community and the nation at large as a result of economic overload in covering the additional demand. Indeed, uncontrolled births can destroy a nation's development aspirations and prevent its people from enjoying an improved standard of living [5]. This calls for universal access to family planning information, services utilization and need to encourage and improve contraceptive use especially in the rural population and a collaborative effort by both local and international agencies/ institutions to promote the service.

Objectives of the Study

General objectives

- To assess prevalence and factors associated with modern contraceptive utilization among married women in reproductive age group in Misha woreda, Hadiya zone, South Ethiopia, 2013.

Specific objectives

- To determine the prevalence of modern contraceptive use among married women in reproductive age group.
- To identity factors associated with modern contraceptive use among married women in reproductive age group.

Methods

Study setting and design

A community based cross sectional study was conducted from May 30th to June 30th, 2013 among randomly selected married women of childbearing age (15-49) in Misha Woreda. Misha Woreda is one of the districts in the Hadiya zone of southern Ethiopia. It has a total of 35211 women in the reproductive age group. There are seven health centers and thirty-five health posts, which provide contraceptive services to the community.

Study populations

The study populations consisted of sampled married women of childbearing age (15-49) who were residing in selected kebeles of Misha Woreda. Married women of childbearing age (15-49) who were living in selected kebeles for more than 6 months were included in the study. However, those who were unable to respond or very sick were excluded.

Sample size and sampling procedures

Sample size determination for 1st objective

The sample size was determined based on the single population proportion formula using Z^2 X p X q/d^2 with a 95% CI, 5% margin of error, and by considering contraceptive prevalence rate 25% in SNNPR [4]. Assuming a 10% non-response rate, a total sample size was 475.

For the second objective the required sample size

Was calculated on Epi-Info software using factors associated with modern contraceptive use by taking study findings from references [4,6,7] (Table 1).

Associated Factors	Expected Frequency among Unexposed	Ratio	OR	Sample Size	Non-Response Rate	Design Effect	Final Sample Size
Proportion of MC use among uneducated women	22%	01:01	2	352	10%	1.5	581
Proportion of MC use among women who have less than 2 children	34%	01:01	4.61	68	10%	1.5	112
Proportion of MC utilization among rural married women (not living in urban)	23%	01:01	2.3	236	10%	1.5	389

Table 1: sample size calculation for second objective.

Finally, we took the maximum sample size calculated using education as determinant factor which was 581. Selection of study subjects was carried out through a multistage sampling technique. In Misha Woreda there are a total of 35 kebeles with in seven catchment areas. These total kebeles was stratified into two urban and thirty three rural kebeles. In the first stage one kebele was selected using simple random sampling from the two urban kebeles. In the second stage systematic sampling procedures was employed to obtain required number of households from selected kebeles.

Finally, from each of selected household's one married woman aged 15-49 was selected by simple random sampling methods. From the rural area out of 33 kebeles 6 kebeles were selected by simple random sampling. The required number of households was obtained using systematic sampling procedure by calculating K value and the first household was selected by using lottery method, then at every kth intervals by dividing total households in the randomly selected Keble for the total sample size.

One married woman of reproductive age group was selected from each selected household by simple random sampling technique. In households if more than one married women of reproductive age group resides, one was selected at random using lottery method (Figure 1).

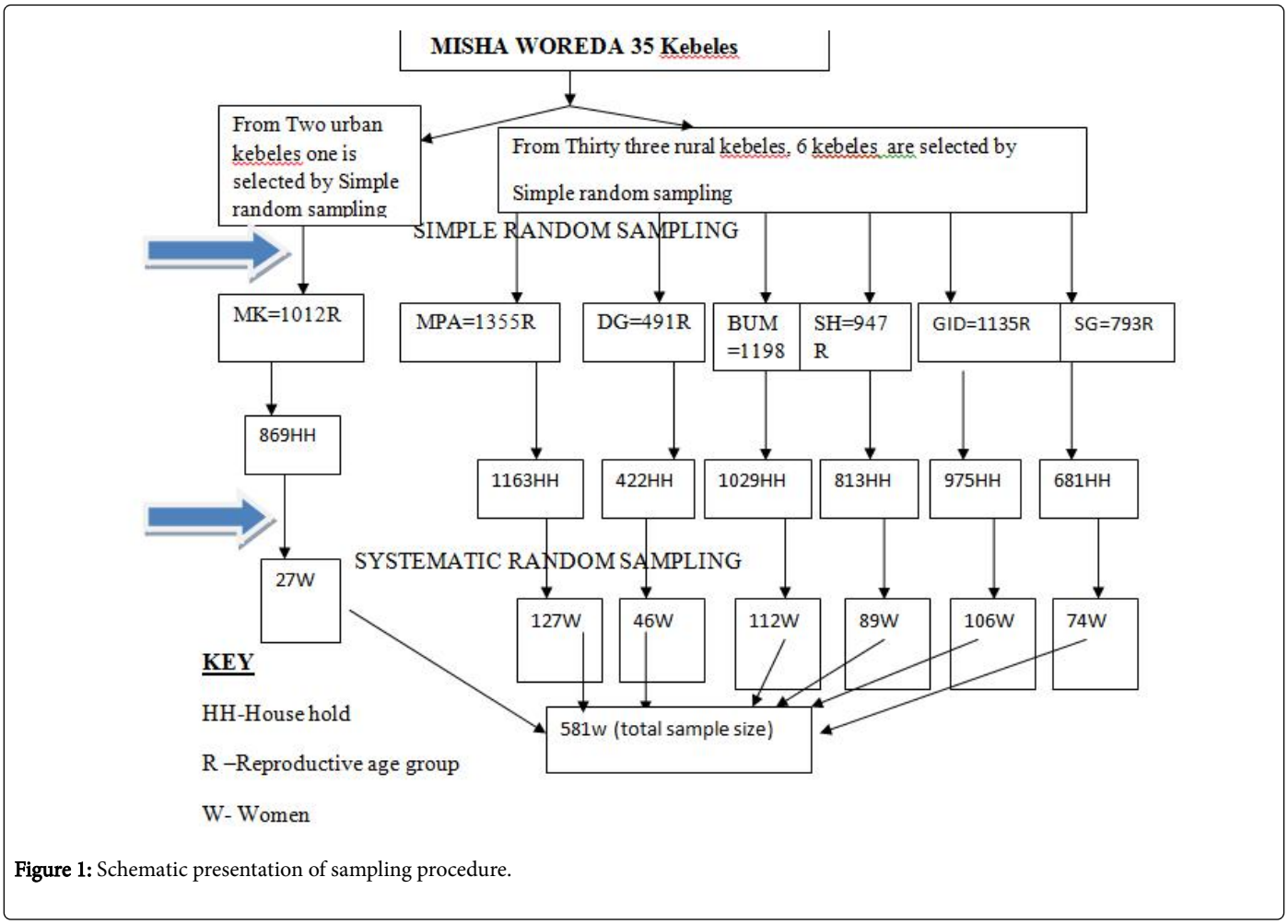

Figure 1: Schematic presentation of sampling procedure.

Data Collection

Pretested and structured questionnaire was used to collect quantitative data. The questionnaire was designed in English, and translated into Hadiyisa (a local language). In order to ensure that the original meanings of the items on the questionnaire were maintained, the Hadiysa version was translated back into English by a researcher conversant in both languages to English.

The two versions were examined to identify any inconsistency in the wording. The final Hadiyisa version was pre-tested on a sample of married women of reproductive age group in neighbor district or outside the study area.

The questionnaire consisted of items that assessed socio-demographic characteristics, reproductive factors, socio-psychological factors, Knowledge of modern contraceptives and modern contraceptive use.

Study variables

The outcome for this study, modern contraceptive utilization rate was assessed based on the report of women who received a contraceptive method for one year and above. Married women of reproductive age group who took any one of modern contraceptive methods (oral contraceptive pills, injectable, condoms, implants IUD's, diaphragm, vaginal foam and male and female sterilization) for one year and above were considered as users of modern contraceptives methods.

The independent variables include respondent's socio-demographic characteristics (age, educational status, occupation and income), media exposure, and reproductive factors: parity, sex composition of children, still birth, Socio-psychological factors: Desired numbers of children, inter spousal communication and Knowledge of modern contraceptive.

After scoring knowledge questions those respondents who respond above mean value were considered as good knowledgeable.

Statistical analysis

The collected data were entered and analyzed using EPI-INFO version 3.5 and SPSS version 16.0 statistical program. Crude and adjusted odds ratios from bivariate and multi-variate analyses were used to measure association between modern contraceptive use and independent variables. Furthermore, 95% CI and p-value were used to assess the degree of statistical significance.

Ethical considerations

Ethical clearance and approval for the study was obtained from the ethical committee of Wolaita Sodo University, college of health science. The research presents no more than minimal risk of harm to subjects.

Thus, oral consent was obtained from all the respondents after explaining of the purpose of the study, risk/discomfort, benefits to the subject, and confidentiality of records, right to refuse participation and terminate participation in the study at any time. The consent process was approved by the ethical committee of Wolaita Sodo University.

Results

In this study 581 married women in reproductive age group were participated. Twenty seven or 4.6% of the respondents were urban dwellers and the rest 554 (95.4%) were rural residents (Table 2).

Socio-Economic and Demographic Factors		Frequency	Percentage (%)
Respondents' age in years	15-19	7	1.2
	20-24	30	5.2
	25-29	183	31.5
	30-34	200	34.4
	35-39	126	21.7
	40+	35	6.02
Ethnicity	Hadiya	476	81
	Gurage	94	16.2
	Others	11	1.9
Religion	Protestant	435	74.9
	Orthodox	138	23.8
	Catholic	8	1.3
Education	Illiterate	147	25.3
	Read and write	54	9.3
	Primary school	254	43.7
	Secondary school	110	18.9
	Above secondary	16	2.8
Occupation	House wife	526	90.5
	Government employee	17	2.9
	Others	38	6.6
Marital status	Married	581	100
Family monthly Income	<200	77	13.3
	200 and above	504	86.7
Possession of Radio	Yes	357	61.4
	No	224	38.6
Possession of Television	Yes	16	2.8
	No	565	97.2

Table 2: Socio-economic and demographic characteristics of married women in the reproductive age group, Misha woreda, 2013 [n=581].

Knowledge of modern contraceptives was inquired in this study; the most mentioned methods were injectable, oral pills, condom, Norplant and IUCDS 92.4%, 88.8% 56.5%, 49.1% and 20.3%, respectively.

After the scoring of knowledge questions those who respond above mean value were considered as good knowledgeable 566 (97.2%). Among the respondents 139 (23.92%) had used modern contraceptive methods for one year and above.

The main source of information for the respondents were public health institutions 529 (91.0%), mass media 159 (27.4%) and the remaining source was from partners 74 (12.7%) respectively.

The respondents were also asked about decision on the use of family planning and interposal communication, (81.2%) decided jointly, (46.5%) discuss usually.

The most important reasons for a woman not to use contraceptive methods were side effects (75.4%), sex preference (7.4%), and husband dominance (6.0%) respectively. Three of them were not pregnant through out of their life.

With Regard to number of pregnancies, 155 (76.73%) of contraceptive users and 266 (70.18%) of non-users had history of one to five pregnancies, and 47 (23.26%) of the contraceptive users and 110 (29.02%) of non-users had six and more pregnancies, 162 (80.19%) of users and 289 (76.25%) of non-users have had five and less children; whereas 40 (19.80%) of users and 87 (22.95%) of non-users have had six and more number of children.

About 164 (81.18%) of users and 288 (75.98%) of non-users had history of one to five live births and 38 (18.81%) of users and 88 (23.21%) of non-users had history of six or more live births. About 17 (8.42%) of contraceptive users and 36 (9.49%) of non-users have had history of stillbirth and 27 (13.36%) of users and 60 (15.83%) of non-users have had history of abortion.

The mean, minimum and maximum numbers of pregnancies of surveyed women were found to be 4.3 ± 1.98, 1 and 10 respectively. The mean number of live births of the study population is 4.01 ± 1.85 and the range is between 1 and 9 live births.

The mean number of living children was found to be 4.02 ± 1.85. The mean age at first pregnancy was found to be 20 ± 2.12 years.

Among all respondents three of them were not pregnant through out of their life.

Factors affecting utilization of modern contraceptive methods

Significant variables in bivariate analysis were subjected to Binary Multiple Logistic Regression Analysis, a multivariate analysis to remove confounding effects.

Results were presented below. The effect of those variables included in the model, indicating they were robust predictors of current use of modern contraceptives in a study population with ($P<0.05$).

Residence [OR 2.86 with 95% CI (1.13,7.28)]. Possession of radio [OR 3.43 with 95% CI (2.07, 5.68)], income [OR 5.00 with 95% CI (2.11,11.85)], knowledge [OR 4.92 with 95% CI (3.05, 7.93)] and communication with their partners [OR 3.63 with 95% CI 1.36,9.66)] were found significantly associated with utilization of family planning methods (Table 3).

Variables		Crude OR 95%CI	Adjusted OR 95%
Residence	urban	4.02 (1.77, 9.13)	2.86 (1.3, 7.28)*
	Rural	1	1
Possession of Radio	yes	4.75 (3.13, 7.19)	3.43 (2.07, 5.68)**
	No	1	1
Income	≥ 2004	68 (2.28, 9.61)	5.00 (2.11, 11.85)**
	<2004	1	1
Knowledge	Good	7.11 (4.84, 10.99)	4.92 (3.05, 7.93)**
	Poor	1	1
Communicate with partners usually		4.52 (1.85, 10.99)	3.3 (1.36, 9.66)*
Have intention to discuss		1	1

Table 3: Multivariable analysis of factors associated with use of family planning methods among currently married women of reproductive aged (15-49 years) in, Misha Woreda, South Ethiopia 2013 [P*<0.05, P**<0.01].

Discussion

Family planning is acknowledged in most low income countries to be an effective way of improving the health of mothers and children and has important implication in population issues. But use of contraceptive method is still very low in Ethiopia.

The prevalence of modern contraceptive method use among married women of reproductive age (15-49 years) in Misha woreda was found to be 23.92% with 95% CI (0.205%,0.273%). This finding was in line with EDHS 2011 findings in SNNPR but different from EDHS 2011 of the country and studies in other countries [4,8-10].

The most popular methods in this study were injectable (used by 16.52% of currently married women) and pills (4.3%) while the least method used by married women was implant (3.09%) which was different from study done in Cambodia, Kassala Eastern Sudan and EDHS 2011 finding in Ethiopia [4,11,12]. Age of the women was one of the important determinants of contraceptive use in this study. The contraceptive utilization was very low in the age category of 15-19 (2.87%) and 40-44 (1.98%) but high in age of 30-34 (50%) this was almost similar with EDHS 2011 findings [4,13].

The study conducted in Nigeria showed the relationship between religion and family planning has been documented by previous studies and religion has been recognized as a very important determinant of contraceptive usage but in this study done in Misha woreda not affect contraceptive utilization this might be religious variation [14].

Education was found one of the important determinant factors in this study and women educated up to high school level and above were four times more likely to use modern Contraceptives as compared to illiterates. This agrees with studies done in this country and elsewhere in Kenya, Rwanda, Uganda and Tanzania. Literacy helps in increasing contraceptive knowledge, change attitude towards use and contraceptive use itself. Education increases women's access to information of different sources. Education also help women to get better jobs to be in a better of position economically, changes their outlook of fertility and imparts them sense of trust in scientific explanations and use of technology [4,5,15,16].

The study done in Qatari and Angola women showed family planning was more common among women with higher household income, and the respondents comprising the richest women were 8.7 times more likely to use contraceptives than the poorest women which agrees with this study done in Misha Woreda those women with higher house hold income were high likely to use modern contraceptive methods [17,18].

Among women age 15-49 community events are the most common source of family planning messages, at 37%. Radio is the second most common at 34%. Another common source is television, with 18% of women reporting exposure to family planning messages via television but in this study the most common sources of information were health institutions, mass media and partners respectively [4].

Knowledge of family planning is considered the first stage toward the adoption of contraceptive method in most countries outside of sub-Saharan Africa. In sub-Saharan Africa, the percentage of women knowing multiple methods of contraception has increased substantially in all countries except Rwanda. For example, in Uganda knowledge of three or more methods increased from 47% in 1988 to 92% in 2000, and knowledge of five or more methods increased from 17 to 77% over the same period. The most popular methods known by respondents are the pill and inject able contraceptive, which accounted for 95% and 83% respectively.

The condom is the third most popular method cited by respondents, followed by the IUCDS. In similar way knowledge of modern contraceptive in this study was significantly associated with its use but the most popular methods known were injectable (92.4%), pills (88.8%), condom (56.6%), implant (49.1%), IUCDS (20.3%) respectively (10,12). Interpersonal communication had positive effects on contraceptive utilization in this study which was similar with studies conducted in Nepal by Mona Shara and Thomas W. Valente that couples who communicate about family planning tend to adopt contraceptive use and studies done in other areas [10,17,19].

Limitations of the Study

- Male partner were not included in the study as they are influential of women's reproductive health.
- Social desirability bias may overestimate the utilization of modern contraceptives because the data was collected by self-report.

Conclusions and Recommendations

Regarding modern contraceptive prevalence rate, although there was some improvement compared to the past national averages; however, the current figure for prevalence rate is still low when compared to the national target of MDGS. Educational status at primary school, secondary school and above secondary school was positively associated with current contraceptive utilization. Also knowledge of contraceptives and Interpersonal communication were significantly associated with utilization of modern contraceptives.

Based on findings of this study, to enhance contraceptive use by married women of reproductive age in a study population it is recommended that:

Policies and strategies should be reoriented to encourage the adoption of family planning services and, to alleviate the underlying

condition of ill health and poverty through empowerment of women by policy makers. Enhancing information, education and Communication activities regarding family planning services using mass media and health institutions. One to five health development armies should be strengthened by Woreda health office, health facilities and health posts to improve modern contraceptive use to achieve MDGS. Also further qualitative study should be conducted in this area.

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Author Contributions

Tadesse Hamdalla conceived, designed the study, participated on collection and interpretation of data, analyzed the data and drafted the manuscript. Abinet Arega and Terefe Markos participated in designing the study, data analysis, interpretation of data, revised, and edited the manuscript. All authors read and approved the final version of the manuscript.

Competing Interests

The authors declare that they have no competing interests.

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