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Research Protocol

Unmet Need for Family Planning and Associated Factors among Married Women of Reproductive Age Group in Hawassa Zuria District, Sidama Zone, South Ethiopia

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Abstract

Background: In spite of positive trends in Ethiopia in the last decade, demand for family planning exceeds uptake of contraceptive methods where 75% of married women wish to delay childbirth for at least two years or totally stop childbearing. The aim of this study was to assess magnitude of unmet need for family planning and its associated factors among married women of reproductive age group in Hawassa Zuria District, Southern Ethiopia.

Methods: Community-based cross-sectional study was conducted from March 15 - 30, 2017. Data on married reproductive women were collected using a pre-tested and interviewer administered structured questionnaire from 485 women using systematic random sampling technique. Bivariate and multivariable logistic regression was done to identify potential predictors of the outcome variable.

Result: One in five, 92 (19.1%; 95% CI: 15.6 - 22.7) women had unmet need for contraceptive. Maternal occupation (Adjusted odd Ratio (AOR) = 1.90, CI: 1.07, 3.37) and service decision maker (AOR = 2.89, CI: 1.59, 5.24), age at first pregnancy (AOR = 0.41, CI: 0.20, 0.81) and time taken to health facilities on foot (AOR = 0.49, CI: 0.28, 0.85) were identified factors of unmet need for family planning.

Conclusion: Unmet need for family planning was still high in the study area. Maternal occupation, service decision maker, number of alive births, age at first pregnancy and time taken to health facility were named as independent factors of unmet need in family planning. Decreasing unemployment, involving partners/husbands in family planning decision making, awareness on negative results of teenage pregnancy demand continuous effort in the society.

Keywords: *Ethiopia; Hawassa Zuria District; Married Reproductive Age Group: Unmet Need*

Abbreviations

AOR: Adjusted Odd Ratio; CI: Confidence Interval; EDHS: Ethiopian Demographic and Health Survey; HEW: Health Extension Workers; IUD: Intra-Uterine Device; KM: Kilometer; SD: Standard Deviation; SSA: Sub Saharan Africa; SPSS: Statistical Package Software for Social Sciences

Background

Globally, about 222 million women have an unmet need for family planning and 645 million women have their needs satisfied through utilization of modern contraceptive methods such as intra-uterine device (IUD), pills, inject able or sterilization. Every minute, nine children under age 5 die in Africa which resulted in death of 4.8 million children annually. Family planning could prevent many of these deaths by enabling women to bear children during the healthiest times for themselves and their children [1].

Nearly two in five of all births occurred globally in 2012 were unwanted posing hardships for families and jeopardizing the health of millions of women and children [2].

Almost, two fifth of unintended pregnancy, three million unsafe abortion and 1.7 million women who need medical care due to unsafe abortion would be reduced in SSA.

According to a scientific guess, in Ethiopia, within the last decade indicated that from the total pregnancy, close to twenty four million were unintended. Satisfying the need for family planning in Ethiopia, a success would be recorded in avoiding six million unintended pregnancies and 2 million abortions [3].

In Africa, in particular to SSA, in sub-Saharan Africa, one among four women who are married or in union demands for contraceptive either to space or stop pregnancy [4]. Satisfying women's demand for modern family planning in developing countries, it would avoid seventy nine thousand maternal deaths and more than a million infant deaths [5].

In Ethiopia, fertility rates and unmet need for family planning have traditionally been very high though modern contraceptive use for currently married women has steadily increased over the last 16 years in Ethiopia from 6% in 2000 to 35% in 2016. Unmet need for family planning declined from 34% in 2005 to 22% in 2016 and it was 13% for spacing and 9% for limiting [6].

In Southern Ethiopia, as per the 2016 Ethiopian Demographic and Health Survey (EDHS) report, the magnitude of modern contraceptive utilization was 40% and the unmet need for family planning was 20.9%. Despite positive trends were documented in utilization of family planning in the region, demand for family planning exceeds uptake of methods where 65% of married women of reproductive age wish to delay childbirth for at least 2 years or stop childbearing entirely [6].

Evidence from studies conducted in Southern Ethiopia: Misha district, Ethiopia: Butajira Northwest Ethiopia and Eastern Sudan showed that unmet in family planning was 26.5%, 52% 25.6% and 44.8%, respectively [7-10]. Previous studies from different parts of the globe indicated that maternal occupation, place of residence, educational status of women, counseling services, partner involvement [7,10,11]. Therefore, this study is designed to indicate the current status of unmet need for family planning and linked factors among married women of reproductive age group in Hawassa Zuria District, Sidama Zone, South Ethiopia.

Methods

Study setting and period

The research was conducted in the southern part of Ethiopia in Hawassa Zuria District, Sidama Zone. Hawassa Zuria District is one of the 23 districts found in Sidama Zone. It is located at a distance of 300 Km from Addis Ababa; capital city of Ethiopia and 25 Km from Hawassa City; Capital city of Southern Ethiopia. The total population of the district is 153, 190, with 76,901 females and among the total females 35, 693 are found in their reproductive age. The district has 23 rural kebeles (kebele is the smallest administrative unit in Ethiopia). It has a total of five functional health centers and 23 health posts rendering preventive, promotive, curative and rehabilitative services [12].

Study design and populations

A population-based analytical cross-sectional study was applied. The source populations for this study were all married women in their reproductive age group and the study populations were all sampled married women of reproductive age group. Women who were unable to communicate on data collection and living in the study area for less than six months were excluded from the study.

Sample size and sampling procedure

Sample size was calculated using single population proportion formula taking into account the following premise: 95% confidence level, 5% margin of error and proportion of unmet need in family planning 17.3% [11], design effect = 2 and non-response rate = 10%.

$$n = \frac{\left(Z_{\left(\frac{\alpha}{2}\right)}\right)^2 P(1-P)}{d^2} = 485$$

Sampling procedure

Four kebeles were taken using simple random sampling technique from the 23 kebeles in Hawassa Zuria district. Households with married reproductive age women were listed out from family folder of the health extension workers (HEW). Study subjects were allocated proportionally to each kebele based on the number of married reproductive age women in selected kebeles. Households with reproductive age women were selected using simple random sampling technique. Lottery method was used to choose one reproductive age women whenever there were more than one reproductive age women in the chosen household.

Operational definition

Unmet need for contraception: Proportion of women who (1) are not pregnant and not postpartum amenorrhoeic and are considered fecund and want to postpone their next birth for 2 or more years or stop childbearing altogether but are not using a contraceptive method, or (2) have a mistimed or unwanted current pregnancy, or (3) are postpartum amenorrhoeic and their last birth in the last 2 years was mistimed or unwanted.

The study variable is unmet need in family planning and dichotomized as presence of unmet need (1 = yes) and absence of unmet need (0 = no). The independent variables include; socio economic and demographic factors (age of women, marital status, ethnicity, religion, educational status (women and partner), mothers and partner occupation, household monthly income, family size, number of live children, Reproductive history (age at marriage, age at pregnancy, history of pregnancy, parity, desired number of children).

Data collection tool and procedure

Interviewer-led questionnaire prepared based on literature review was applied. Pretest was administered before the commencement of the actual data collection time. The questionnaire was prepared in English language and interpreted to local language (Sidamigna) and back to English to keep the substance of the data Diploma nurses were recruited to collect the data. Training was imparted to data collectors for two days. Five master's degree holders monitored the overall data collection and check for filled questionnaire for consistency and completeness. Throughout the data collection period, questionnaires were went over and assured for whether filled correctly or not.

Statistical analysis

Following the data collection, data were edited and cleaned ahead of analysis, each questionnaire was checked for completeness and code was provided before data entry. Data was cleaned and entered into computer using EPI Info version 3.5.3 and the analysis was made using c version 20.0.

Descriptive analysis was used to calculate mean, standard deviation, percentages and frequencies. Multiple logistic regressions was applied to name factors associated with unmet need in family planning. Variables with p-value ≤ 0.2 in the bivariate analysis were taken as potential variables for multivariable logistic regression analysis to check confounding variables. p-value of less than 0.05 were considered to bear significant association between the outcome and the explanatory variables and adjusted odds ratios were calculated to assess the strength of the associated variables.

Results

Socio demographic and economic characteristics

Four hundred eighty one (99.2%) married reproductive age group (15 - 49 years) women were admitted in the study. Almost, three in five, 278 (57.8%) study participants were in the age group 25 - 34 years. The mean age of the study subjects was 28.78 years (± 6.89, standard deviation (SD)). Four among five 385 (80%) and nearly all, 467 (97.1%) study participants were protestant and Sidama by religion and ethnicity. Of the total women, 58 (12.1%) were leaders of the household and more than half, 251 (52.2%) decided family planning utilization jointly (wife and husband).

Only 38 (7.9%) and 101 (21.0%) women and their husbands attended secondary and above school. Nearly seven among ten women 322 (66.9%) and three in five, 290 (60.3%) of their counterpart were house wife and farmer by occupation. Three-fourth, 362 (75.3%) of the study participants obtained a monthly income of < 1000 Ethiopian birr (Table 1).

Variables	Category	Frequency (n)	Percentage (%)
Age at interview	15 - 24	109	22.7
	25 - 34	278	57.8
	> = 35	94	19.5
Mean ± SD of age for women 15 - 49 years		28.78 ± 6.89	
Religion	Protestant	385	80
	Muslim	48	10
	Catholic	40	8.3
	Orthodox	8	1.7
Ethnicity	Sidama	467	97.1
	Wolaita	6	1.2
	Kembata	8	1.7
Family size	< = 4	178	37
	> 4	303	63
Mean ± SD of family size		5.52 ± 2.32	
Role in the family	Leader	58	12.1
	Member	423	87.9
Decision makers to use contraceptive	Wife	131	27.2
	Husband	99	20.6
	Jointly	251	52.2

Maternal education	No formal education	214	44.5
	Primary education	229	47.6
	Secondary and above	38	7.9
Husband education	No formal education	127	26.4
	Primary education	253	52.6
	Secondary and above	101	21.0
Maternal occupation	Housewife/Unemployed	322	66.9
	Employed	159	33.1
Husband occupation	Governmental employed	36	7.5
	NGO employed	19	4
	Merchant	136	28.3
	Farmer	290	60.3
Monthly income	< = 1000	362	75.3
	1001 - 2000	78	16.2
	> 2000	41	8.5
	Mean ± SD of monthly income 1024 ± 909.5		

Table 1: *Socio demographic and Socioeconomic characteristics of among married women of reproductive age group (15-49) in Hawassa Zuria Distict, Southern Ethiopia, 2017.*

Socio demographic and economic characteristics

Two hundred fifty six (53.2%) women married before the age of 18 years and nine among ten women got their first pregnancy (90.1%) and birth (91.4%) after the age of 18 years. About 35% (164) and 153 (35.3%) of women in their reproductive age had more than four pregnancy and alive children. One hundred fifty six (36%) of the women aged 15 - 49 years responded that they want to have any more children in the future. One hundred nine (22.7%) women were currently pregnant. Of the total pregnancies, 62 (56.9%) and 30 (27.5%) were mistimed and unwanted and nearly half of the pregnancy were occurred due to contraceptive failure, 52 (47.7%).

On the other hand, magnitude of current utilization of contraceptive among reproductive age group women was 238 (49.5%). The most widely used method of contraceptive was injectable (Depo-Provera) (51.3%) followed by implant (32.3%). Nearly three fourth of women mentioned spacing as a main reason for current utilization of contraceptive. Almost one among five, 92 (19.1%) women in reproductive age group had unmet need for contraceptive and 62 (12.9%) had unmet need for spacing. Of the total women, not using contraceptive currently, 204 (84%) had intention to use in the future. Two hundred fifty seven (53.4%) responded less than 30 minutes walking distance is needed to access contraceptive (Table 2).

Variables	Category	Frequency	Percentage
Age at marriage (years)	< 18	256	53.2
	> = 18	225	46.8
History of pregnancy	Yes	464	96.5
	No	17	3.5
Age at first pregnancy (years) (n = 464)	< 18	46	9.9
	> = 18	418	90.1
Total pregnancy (n = 464)	< = 4	300	64.7
	> 4	164	35.3
Age at first birth (years) (n = 464)	< 18	40	8.6
	> = 18	424	91.4
Total alive children (n = 433)	< = 4	280	64.7
	> 4	153	35.3

Desire for another child (n = 433)	Yes	156	36.0
	No	277	64.0
Currently pregnant (n = 481)	Yes	109	22.7
	No	372	77.3
Type of pregnancy (n = 109)	Intended	17	15.6
	Mistimed	62	56.9
	Unwanted	30	27.5
Reason for current pregnancy (n = 109)	Pregnancy wanted	17	15.6
	Partner disapproval	27	24.8
	Contraceptive failure	52	47.7
	Little perceived risk of pregnancy	13	11.9
Birth spacing (n = 109)	<36months	75	68.8
	> = 36months	34	31.2
Use of contraceptive	Yes	238	49.5
	No	243	50.5
Type of method used (n = 238)	Pill	26	10.9
	IUCD	13	5.5
	Injectable	122	51.3
	Implant	77	32.3
Current users reason (n = 238)	Spacing	178	74.8
	Limiting	60	25.2
Type of unmet need	Spacing	62	12.9
	Limiting	30	6.2
	No unmet need	389	80.9
Intention to use method for non-users (n = 243)	Yes	204	84.0
	No	39	16.0
Time taken to health facility (on foot)	< 30 minutes	257	53.4
	> = 30 minutes	224	46.6

Table 2: *Reproductive and family planning characteristics among married women of reproductive age group (15-49) in Hawassa Zuria Distict, Southern Ethiopia, 2017.*

Predictors of unmet need

In the multivariable logistic regression analysis: maternal occupation, service decision maker, number of alive births, age at first pregnancy and time taken to health facility (on foot) were identified as independent predictors of unmet need in family planning among married women of reproductive age group.

The study showed that the probability of unmet need in family planning was 90% more likely to occur among unemployed women compared to employed women (AOR = 1.90, CI: 1.07, 3.37).

In the present study, it was revealed that unmet need in family planning showed early three times increase among married reproductive age group women who decided utilization of contraceptive by themselves than women who decided jointly with their husbands (AOR = 2.89, CI: 1.59, 5.24).

Other important predictors were the total number of live children and age at first pregnancy. It was found that unmet need in family planning was 60% less likely to occur among women who had a total four or less alive children (AOR = 0.41, CI: 0.20, 0.81). Women who got pregnancy before the age of 18 years were four times more likely to have unmet need likened with women who go pregnancy in 18 years or above (AOR = 4.27, CI: 1.65, 11.05).

Other important predictors were the total number of live children and age at first pregnancy. It was found that unmet need in family planning was 60% less likely to occur among women who had a total four or less alive children (AOR = 0.41, CI: 0.20, 0.81). Women who got pregnancy before the age of 18 years were four times more likely to have unmet need likened with women who go pregnancy in 18 years or above (AOR = 4.27, CI: 1.65, 11.05).

On the other hand, unmet need was 50% less likely among women who travelled less than 30 minutes to health facilities for utilization family planning (AOR = 0.49, CI: 0.28, 0.85) (Table 3).

Variables	Categories	Unmet need		COR (95% CI)	AOR (95% CI)	P-value
		No	Yes			
Maternal education	No formal education	174	40	1.95 (0.66,5.82)	1.18 (0.24,5.83	0.274
	Primary education	179	50	2.25 (0.76,6.66)	1.27 (0.27,5.92)	0.347
	Secondary and above	30	8	1		
Husband education	No formal education	111	16	0.58 (0.29,1.20)	0.28 (0.08,1.32	0.075
	Primary education	191	62	1.15 (0.65,2.04)	0.86 (0.33,2.22)	0.751
	Secondary and above	81	20	1		
Maternal occupation	Unemployed	248	74	2.34 (1.34,4.07)	1.90 (1.07, 3.37)	0.027
	Employed	135	24	1		
Service decision maker	Wife	93	38	2.44 (1.46,4.09)	2.89 (1.59, 5.24)	0.000
	Husband	75	24	1.91 (1.07,3.41)	2.23 (1.16, 4.30)	0.017
	Jointly	215	36	1		
Desire for another child	Yes	112	44	1		
	No	229	48	0.36 (0.14,0.91)	0.40 (0.12,1.52)	0.185
Age of women	15-24	81	28	2.13 (1.03,4.40)	2.30 (097,5.47)	0.060
	25-34	222	57	1.58 (0.82,3.04)	1.30 (0.61,2.76)	0.496
	> = 35	80	13	1		
Total alive children (n = 433)	< = 4	230	50	0.54 (0.34,0.86)	0.41 (0.20, 0.81	0.010
	> 4	109	44	1		
Total pregnancy	≤ 4	248	52	0.54 (0.34,0.85)	0.53 (0.24,1.1.17)	0.115
	> 4	118	46			
Age at first pregnancy	< 18 years	33	13	1.54 (0.78,3.05)	4.27 (1.65, 11.05)	0.003
	> = 18 years	333	85	1		
Time taken to health facility (on foot)	< 30 minutes	212	45	0.69 (0.4,1.07)	0.49 (0.28,0.85)	0.011
	> = 30 minutes	171	53	1		

Table 3: *Factors associated with unmet need for family planning in in Hawassa Zuria Distict, Southern Ethiopia, 2017.*

Discussion

In the present study, the magnitude of unmet need in family planning among married reproductive age group women was found to be 19.1%. This finding is nearly in adjacent with the studies in Southern Ethiopia (20.8%), Pakistan (19%) and Northern Ethiopia (21.4%), respectively [6,13,14].

On the contrary, the magnitude of the current finding is lower than the findings in Southern Ethiopia: Misha district (26.5%), Ethiopia: Butajira (52%), Northwest Ethiopia (25.6%), Eastern Sudan (44.8%) and India (27.3%), respectively [7-10,15].

This difference observed might be due to expansion of health facilities and increased health service coverage in the district and the on-going implementation of health extension program. The other possible explanation might be governmental concern of reducing maternal mortality by allocating line item budget for family planning.

The study demonstrated that significant association was observed with maternal occupation. It was figured out that unmet need in family planning was less likely to increase among employed women. This finding is congruent with studies in Eastern Sudan and Awsi zone: Northern Ethiopia [10,11]. It might be explained as women who had their own income generating activities would have a positive attitude about family planning utilization by having frequent health facility contact to access the service with payment though it is provided free of charge in Ethiopia and more likely to have better access for information.

On the other hand, total number of children and jointly (husband and wife) deciding service utilization plays significant role on in decreasing unmet need in family planning. Unmet need in family planning among married reproductive age group with four and less children was less likely to occur compared to women having greater than four children. This finding is in line with the study conducted in Nepal and North Gondar [16,17]. This might be due to that women who had limited number of children could have awareness about the consequences of repeated pregnancy and child birth so that they would have better awareness about family planning and utilize contraceptive in order to limit the number of their family size.

Women who decided jointly about utilization of family planning had lesser unmet need in family planning. This could be explained as husband-wife communications on family planning allows for an enabling environment for women to decide their fertility desire and to use their own choice of contraceptive. This study is congruent with previous studies in Southern Ethiopia: Misha district, Northwest Ethiopia, Northern Ethiopia and North Ethiopia: North Gondar [7,9,14,17].

Women who gave birth after their 18 years birthday were less likely to have unmet need in family planning. This finding is alike with the study conducted in Northwest Ethiopia [9]. This could be due to as elder women not only possess better awareness and information about family planning but also they are psychologically and physically geared up to determine the number of children compared to women who gave birth before the age of 18 years.

Limitations

Since this study is based on a sample of only married women of reproductive age groups to assess the unmet need and associated factors, possible selection bias needs to be considered since it did not address the main characteristic of the general population in the study. Information bias (recall bias) could be occurred to questions that need previous events like age at first marriage and pregnancy, desired number of children.

Conclusion

Despite, the present results have promising implications for reduction of unmet need, unmet need for family planning was found to be still high in the study area. Maternal occupation, service decision maker, number of alive births, age at first pregnancy and time taken to health facility (on foot) were identified as independent predictors of unmet need in family planning among married women of reproductive age group in the study area.

Decreasing unemployment, involving partners/husbands in family planning decision making, awareness on negative results of teenage pregnancy demand continuous effort in the society.

Declarations

Ethics Approval and Consent to Participate

Ethical clearance was obtained from the ethical clearance Institutional Review Board (IRB) of Hawassa University, College of Medicine and Health Sciences. Official letter was taken from Hawassa Zuria district Health Office. The study participants were informed about the purpose of the study and informed verbal consent was taken.

Consent to Publish

Not applicable.

Availability of Data and Materials

The data that support the findings of this study will be available from the corresponding author upon reasonable request in the form of statistical package for social sciences (SPSS) spread sheet.

Competing Interests

The authors declare that they have no competing interests.

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Authors' Contributions

Desalegn Tsegaw Hibstu (DTH) took part in planning the study, monitoring data collection process and analyzing the data, writing the result and the manuscript. Teshome Abuka Abebo (TAA), Dawit Jember Tesfaye (DJT), Yadessa Tegene (YT), Birhanu Jikamo Bago (BJB) participated in data collection process and writing the manuscript. All authors read and approved the final manuscript.

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