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Research Article

Unmet need for family planning and associated factors among married women of reproductive age group in Aleta Wondo District, Sidama Region, Ethiopia, 2023

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Abstract:

Background: Globally about 222 million women have an unmet need for family planning where Sub-Saharan Africa continues in 2010 to be the region with the lowest level of contraceptive prevalence rate, 24% and highest level of unmet need 25%. However unmet need for family planning declined from 37% in 2000, to 22% in 2016, demand for family planning exceeds uptake of methods and still nearly 78% of married women of reproductive age wish to delay childbirth for at least 2 years or stop childbearing altogether.

Objectives: The aim of the study was to assess unmet need for family planning and associated factors among married women of reproductive age groups in Aleta wondo Woreda, Sidama Region, Ethiopia, 2023.

Method: Community based cross-sectional study was conducted with total of 636 married reproductive age group women. The study subjects were selected using systematic random sampling technique. Data were collected by trained data collectors using pre-tested and structured questionnaire. Data were checked, coded and entered Epi Info version 7 and exported to SPSS Version 25 for analysis. Bi-variable and multi-variable Logistic regression were used to identify potential associated factors for unmet need for family planning. A 95% confidence interval and p-value of less than or equal to 0.05 were used to declare weather a variable is significantly associated with the outcome variable or not.

Result: The study result showed that a quarter of currently married women among reproductive age group (95% CI: 22, 28.8) had an unmet need for family planning. In multivariate logistic regression analysis, age of respondent <25 year AOR =4, 95% CI (2.74, 8.72), desire number of children< 4 AOR=12.9, 95%CI (4.16, 40.3), those have ever use family planning AOR=0.61 (95%CI: 0.07, 0.88), those had been ever pregnant AOR=2.8 (95%CI:1.98, 12.5) and those with good knowledge about family planning AOR=0.03 (95%CI: 0.01, 0.14) were significantly associated with unmet need for family planning.

Conclusion and Recommendation: The result of current study indicated that unmet need for family planning among currently married women was higher compared to the national average.

Keywords: associated factors; family planning; reproductive health; unmet need

Introduction

Background: Family Planning is a key strategy in controlling population growth and promoting maternal and child health through an acceptable spacing of births and avoiding unwanted pregnancy. Contraceptive use has increased evidently in the recent years in most developing countries, due to desire for smaller families; however, millions of women still need to space or avoid pregnancy but are not using contraception to limit or to spacing their birth (1).

The primary aim of family planning programs is to meet up the demand for contraception and thereby reduce or eliminate unmet need. A well-organized family planning program having a substantial information, education, and communication component can, on average, reduce unmet need by 10% and raise contraceptive use by 22% (2)

The concept of unmet need also defines the gap between women's reproductive intentions and their contraceptive behavior. Couples who use contraception have the ability to control the number and spacing of their

children. Contraceptive use prevents unintended pregnancies, abortions and deaths related to pregnancy and childbirth (3).

Unmet need for family planning is defined as percentage of all fecund reproductive age women who are married and in consensual union and presumed to be sexually active but are not using any method of contraception, either do not want to have more children, "Limiter" or want to postpone their next birth for at least two years, "Spacer"(4).

The absolute number of women with unmet need, has increased from 127 million to 142 million, because of the growth of population. Asia accounts for 84 million women having unmet need in 2010, followed by sub-Saharan Africa at 32 million (5). Globally about 222 million women have an unmet need for family planning and 645 million women have their needs met through the use of a modern contraceptive method (6).

Among more than 220 million women with unmet need, three regions-sub-Saharan Africa, South Central Asia and Southeast Asia are dwelling to more than half of these women (7).

Sub-Saharan Africa continues in 2010 to be the region with the lowest level of CPR, 24% and highest level of unmet need 25%. Among the 35 countries in sub-Saharan Africa, 24 have unmet need of more than 20% (8).

The percentage of women having unmet need differs roughly across countries with the highest level of unmet need observed in Oceania and Sub-Saharan Africa. The level of unmet need in Latin America and the Caribbean ranges from 9% in Colombia to 35% in Haiti, in Asia ranges from 11% in Indonesia to 32% in Timor-Leste and in Africa, ranges from Egypt (12%) and highest in Sao Tome and Principe (38%) and in Ghana and Liberia (36% each) (7).

Global decreasing of unmet need would prevent around 30% of maternal deaths, reduce child mortality by 20%. It may also help women and couples to plan their families and improved access to contraceptive services to reduce unmet needs that would contribute reducing child mortality, improving maternal health and promoting women's empowerment and equality (4).

The EDHS indicated that Ethiopia with high level of unmet need for family planning among married women that is, 37% in 2000, 25% in 2011 and 22% in 2016. Reducing the unmet needs averts unsafe, secret abortion, and its outcomes greatly as the recent reports suggested that only 27% of the 382,000 induced abortions that occurred in 2008 were legal and Some 52,600 women were hospitalized for complications from unsafely induced abortion (5).

1.2 Statement of the problem

Worldwide in 2017, 12% of married women are estimated to have an unmet need for family planning. The level was higher in Africa (22%) and Oceania (15%) compared to other regions, where the unmet need for family planning is estimated to be at or below 10% for married or in-union women (9).

According to EDHS 2016, total demand for family planning among currently married women age has increased from 45% in 2000, to 58% in 2016. Met need for family planning has also increased over the same period from 8% in 2000, to 36% in 2016; most of the needs have been met with modern methods. Unmet need for family planning among married women has declined over time, from 37% in 2000 to 22% in 2016. However, unmet need for family planning for currently married women age 15-49 is higher in rural areas (25%) than in urban areas (11%). Unmet need for currently married women age 15-49 is lowest in Addis Ababa 11% and higher in Oromia (29%) (10).

Therefore, interventions have been planned aimed with reducing unmet need those targeted towards rural women and women with no or little education. Moreover, access to education, increased job opportunities and increased family planning practice will lead to a lower level of unmet need. Other areas of intervention include enforcing the law on minimum age for marriage and reducing infant as well childhood mortality. Moreover, providing all women with full access to family met need and low unmet need because most couples do not want to, or are unaware that they can, limit or space births (11).

In Addis Ababa use of family planning is high and unmet need is very low. SNNPR, Benishangul-Gumuz and Oromia are at a stage where unmet need arises. In Amhara, Dire Dawa, Harari, Gambela and Tigray contraceptive use has risen rapidly, while unmet need has declined (3).

Even though different strategies were undertaken to reduce the problems of unmet need of family planning among reproductive age groups, there is the gap of unmet need for family planning among married women in the region as well as in the study area. In Ethiopia unmet need for family planning for currently married women with the age 15-49 years is higher in rural area. Therefore, current study was designed to assess the magnitude of unmet need for family planning and associated factors among reproductive age groups in Aleta wondo woreda Sidama region, Ethiopia, 2023.

1.3 Significance of the study

Understanding the level of unmet need for family planning among married women of reproductive age groups and associated factors are actual important in undertaking the problem of unmet need for family planning particularly and it would have a significant contribution in the enhancement of the health status of women (10).

Therefore, current study was planned to provide timely information for the concerned bodies; Region health bureau, Zonal Health department, District health office, kebele health extension workers, NGo’s and others’ for the purpose of suggesting possible strategies that can improve institutional capacity towards improving unmet need for family planning and it would also become a base for decision making.

1.4 Conceptual framework of unmet need for family planning

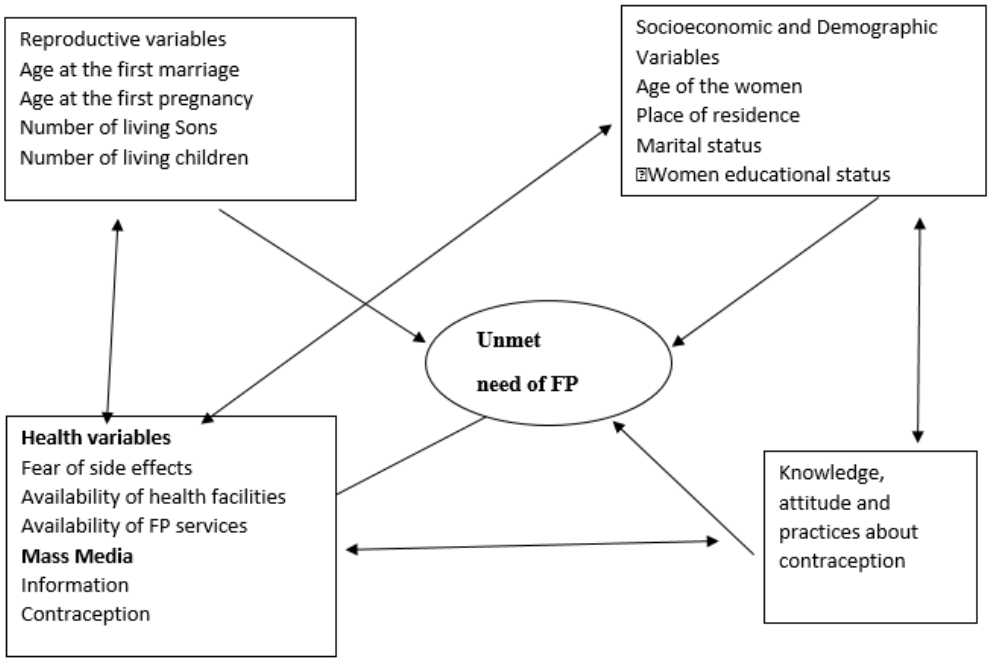

Figure 1: Conceptual Framework shows that the relationship between independent variables and the dependent variable. (Developed from reviewed literature1, 2, 8, 11)

Objectives

To identify the magnitude of unmet need for family planning in Aleta Wondo Woreda, Sidama, Ethiopia, 2023.

To determine factors associated with unmet need for family planning among currently married women of reproductive age group in Aleta wondo woreda Sidama, Ethiopia, 2023.

Methods:

3.1 Study area

The study was conducted in Aleta wondo woreda in Sidama Regional State of Ethiopia. It is located at a distance of 333 kilo meters south of Addis Ababa (the capital city of Ethiopia) and 64 kilo meters North East of Hawassa, Capital of Sidama Regional State. Aleta wondo woreda has 27 kebele and bordered with Dara districts to the south by on the West by Chuko, on the North by Dale and on the East by Bursa, and on the Southeast by Hula. The administrative center is Aleta wondo town. This woreda has estimated total population of 203,674 of whom 100,879 are men and 102,712 women, 47,455 are females of child bearing age (15–49 years) currently one primary hospital seven public health center and, 27 Health post providing, 9 private medium clinics providing family planning services for the population.

3.2 Study design and period: A community-based cross-sectional study was employed from April 20- June 30, 2023.

3.3 Source and study population:

The source population were all married women in reproductive age group in Aleta wondo woreda by the year 2023. The study population were selected currently married reproductive age group women in selected kebele in Aleta wondo woreda.

3.4 Sample size calculation:

The sample size is determined by using single population proportion formula with the following assumptions 95% confidence level (1.96), 4% margin of error (d), proportion (P) of unmet need in family planning is taken as 21.4% (0.214%) (19). Design effect = 1.5 and non-response rate is 5%. Then, using the following formal the total sample is 636.

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

$$n = \frac{(1.96^2)0.214(1-0.214)}{(0.04)2} = 404$$

Adding 5% for non-response rate and multiplying by 1.5 for deign effect then ample size were increased to 636 respondents.

The sample size for second specific objective is calculated based on a minimum detectable AOR, 5% level of significance and power of 80% by Open Epi info v7.as follows.

SN	Variable	CI	Power	Percentage in unexposed	AOR	Sample size	10% of NRR	1.5 of design effect	Final Sample Size
1	ANC follow up	95%	80%	41.6%	4.2	158	16	174	261
2	Husbands'edution status	95%	80%	39.4	9.8	183	18	201	302
3	Parity	95%	80%	10%	6.85	66	73	109.5	110

Table 1: Sample size determinations for second objective associated factor from different Literatures (11, 20).

Therefore, the sample size calculated for the first objective is larger and the final sample size of the study was taken as 636.

3.5 Sampling technique: Multi-stage sampling technique was used to recruit study subjects. Firstly, six kebele were selected from twenty-seven kebele (smallest administrative unit) using simple random sampling technique. Then the total sample size were proportionally allocated to the selected kebele after the total married women for each kebele were found from family folder upon request of health extension workers. Finally, systematic sampling technique was employed to select study participants.

The "K" value for skipping household was determined after the total women in reproductive age group was found. To select the first house hold, one of the houses which was included under the initial sampling interval of each kebele were selected by simple random sampling; lottery method. Then, the next house hold was selected through systematic sampling technique that is every Kth interval household which was calculated as number of total households divided in to two total sample size. i. e 8766/636= 13.78~14. Every 14th household was selected until fulfill the required sample size. If the household contained more than one candidate, one of them was taken randomly by employing lottery method.

No	Name of selected *Kebele*	Total population	HHs	Sample units
1	Balesa	9088	1855	135
2	Barego	4275	872	63
3	Wich	8763	1788	130
4	Homacho waenno	7647	1561	113
5	Titera	7023	1433	104
6	Wotto	6160	1257	91
	Total sample size		**8766**	**636**

Table 2: Shows proportional allocation of total sample size to each selected HHs

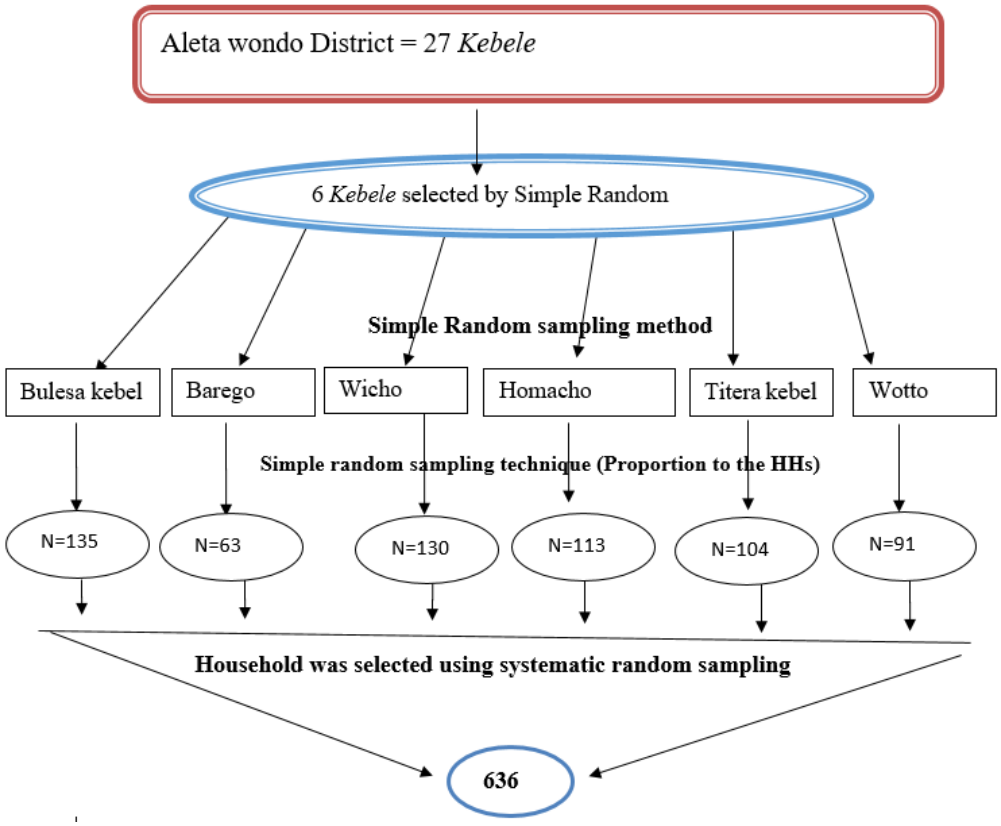

Figure 2: Schematic presentation of sampling procedure of the study

3.5 Inclusion and exclusion criteria

All currently married women who lived in the area with greater than 6 months were included in the study. All currently married women who were seriously ill during data collection were excluded from the study

3.6 Study variables:

Dependent variable (outcome variable)

- ✓ Unmet need for family planning
- o **Independent variables/Exposure variables/ Socio economic and demographic factors:** Age of the women, marital status, Ethnicity, Religion, educational status of the women and the partner, women occupation, residence, Husbands occupation, Household's Monthly income, family size, Sex of child, number of live children etc.
- ✓ Reproductive History and health factors: age at the first marriage, age at the first pregnancy, history of pregnancy, parity, desired number of children, side effect of contraception.

Knowledge, attitude and practices of family planning use, exposure to family planning messages via the media

3.7 Operational definition and terms

Unmet need for Family planning: is referring to those women who prefer to space or

limit childbearing but she is not using any effective modern contraceptive to fulfill its desire or Women are defined as having an unmet need if they are fecund, married or living in union, but not using any contraception.

Knowledge of contraception: awareness for at least one method of contraception (mention at least the name of one modern contraception methods) (21).

Favorable attitude: A woman who has cumulative sum value for 6 attitudinal statements response was lower than summed mean score value of all women (21).

Unfavorable attitude: A woman who has cumulative sum value for 6 attitudinal statements response was greater than or equal to the summed mean score value of all women (21)

3.8 Data collection process and tool:

Data were collected using pretested, structured questionnaire. The questionnaire were initially prepared in English and translated to local language (Sidaamu afoo) and then back to English to check any inconsistency in the meaning of the words and/or concepts. The Sidaamu afoo version were used to collect data after pre-testing five percent of the actual sample size in other similar settings to ensure that respondents understand the questions and to check the wording, logic and skip order of the questions in a sensible way to the respondents. Amendments were don accordingly after the pre-tet has done.

The structured questioner were comprises three parts, Part I: demographic and socio-economic characteristics such as sex, age, ethnicity, marital status, educational status, place of residence and occupation. The Part II: Reproductive history and Part III is Knowledge and practice of Family planning methods. Each data collection session is expected to last between 30 to 45 minutes.

3.9 Data Quality Control

The tool was pre-tested where outside the study site before actual data collection and necessary modifications were done on items which could mislead and/or difficult to understand for respondents. One day training was given to all data collectors and supervisors to have common understanding on the data collection tools and process. After data collection, questionnaires were reviewed and checked every day for completeness and consistency of responses by the supervisors. The investigator also gave the necessary feedback for the data collectors immediately.

The investigator and supervisors were made an exhaustive check before receiving the filled questionnaire from each data collectors and in the meantime, they were randomly select the questionnaire to cross check its completeness and errors on spot.

3.10 Data processing and analysis

Data were checked, coded and entered to Epi Info version 7 and exported to SPSS Version 21 for analysis. The results of the analysis were presented in the form of tables, figures and summary statistics. For categorical variables, frequencies, percentages and figures were used in the socio-demographic part and for continuous variables after checking their normality using figures like histograms, box plot or scatter plot, mean and standard deviation for normal distributions and for those that are not normally distributed median and inter quartile range were used. Simple binary logistic regression analysis for each independent variable was performed against the dependent variable to see the impact of each factor on the pattern of unmet need for family planning, the dependent variable in the sampled observations, without adjusting for the effect of other variables.

Goodness of fit model also tested by diagnosing correctness formulation of the models by using Hosmer-Lemeshow test and the one which is found to be greater than the significance level (p value =0.05) was accepted.

4. Result:

4.1 Socio demographic characteristics of participants

A total of 636 married women were interviewed and making a response rate 100%. The mean age of the respondents was 31.5 ± 9.24 years and the age ranges from 15 to 49 years. The highest proportion of the respondents 240 (37.7%) were in the age group 26–35 years. The majority of respondents 445(70.0%) were protestant in religion. Half of the participants 319(50.2%) were primary school and more than half of husbands 372(58.5%) were college and above. 487(76.6%) of participant were house wife and 258(40.6%) of her husband was government employee. Half of the respondents (50.2%) earn > 3500ETB.

Characteristic of respondents	Category	Frequency	Percent (%)
age	<=25 years	239	37.6
	26-35	240	37.7
	36-45	86	13.5
	>=46	71	11.2
Religion	Protestant	445	70.0
	Orthodox	120	18.9
	Catholic	55	8.6
	Muslim	16	2.5
Mother Educational status	Unable to read and write	79	12.4
	Able to read and write	60	9.4
	Primary school	319	50.2
	Secondary school	60	9.4
	College and above	118	18.6
Husband Educational status	able to read and write	14	2.2
	Primary school	113	17.8
	Secondary school	137	21.5
	College and above	372	58.5
Women occupational status	House wife	487	76.6
	Government employee	100	15.7
	Merchant	25	3.9
	Farmer	24	3.8
Husband occupational status	Government employee	258	40.6
	Nongovernment employee	20	3.1
	Self employed	160	25.2
	Merchant	79	12.4
	Farmer	119	18.7
Income	<1500	159	25.0
	1500-3500	158	24.8
	>3500	319	50.2

Table 3: Socio demographic characteristics of married women of reproductive age group in Aleta wondo woreda, Sidama, Ethiopia, 2023

4.2. Reproductive and health related factors

The mean age of women at marriage was 20.0 ± 2.75 SD years. Majority 517 (81.3%) of the respondents experienced at least one and above pregnancy. 197(31.0) women were with four and more number of pregnancies. More than half 338(53.1) were with two and less than two gap between pregnancies. Seventy-two percent of women had a desire to have less than five children.

Three hundred ninety-seven (62.4%) women were using contraceptives and 277(43.3) have been using contraceptive at the time of data collection, out of which 177 (63.9%) and 100(36.1%) of the women were using contraceptives for limiting and spacing purposes, respectively. The most commonly used method of family planning was implants 100(36.1%) followed by injectable 85(30.6%) and pills 54(19.49%). IUCD accounted of 30 (10.8%) and condoms accounted of 8(2.8%).

Variables	Category	Frequency	Percent
Age of first marriage	<=25	239	37.6
	26-35	240	37.7
	36-45	86	13.5
	>45	71	11.2
Have you ever been pregnant	Yes	519	81.3
	No	119	18.7
Year of consecutives pregnancy	<=2year	338	85.1
	>2year	59	14.9
Number of children you wants in her life time	<5children	458	72.0
	>=5children	178	28.0

Have you ever use FP	Yes	397	62.4
	No	239	37.6
Currently use of FP	Yes	277	43.6
	No	359	56.4
Reason for use of FP	Spacing	100	36.1
	Limiting	177	63.9

Table 4: Reproductive characteristics of married women of reproductive age group in Aleta wondo woreda, Sidama, Ethiopia, 2023

4.3 Unmet need for family planning

According to the result, total unmet need for contraceptives in Aleta wondo woreda was found to be 159 (25.0%) of which 119 (18.7%) for spacing and 60 (6.3%) for limiting.

The total demand for contraception was 277(46.3%) (For spacing 100(36.1%) and for liming 177(63.9%).

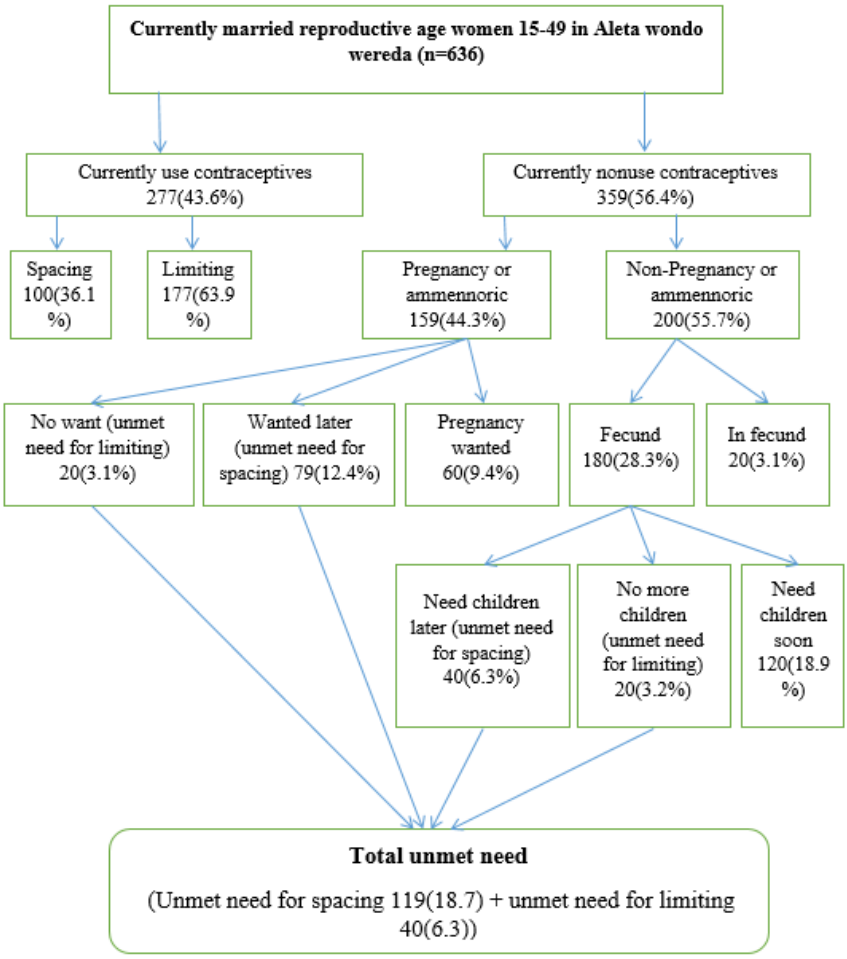

Figure 3: Unmet need of family planning among currently married women of reproductive age group in Aleta wondo woreda, Sidama, Ethiopia, 2023

4.4 Factors associated with the unmet need for family planning

In the multivariate logistic regression analysis, age of respondent, income, desire number of children, those had ever used FP, had been ever pregnant, distance of home from health facility and knowledge of the respondent were significantly associated with unmet need for FP.

Age less than and equal to 25 years were 4 times more likely to have unmet need for FP than age more than 45years (AOR [95% CI] 4.0(2.74, 8.72)).

Women want of children < 5 were 12 times more likely to unmet need for FP compare to want of children >= 5 (AOR [95% CI] 12.9(4.16, 40.3)).

Women who were pregnant in life time were 2.8 times more likely associated with unmet need for FP compare to non-pregnant their life time (AOR [95%CI] 2.8(1.98, 12.5)). Women who use of family planning were 39% less likely for unmet need for FP compared to nonuse of family planning with (AOR [95%CI] 0.61(0.07, 0.88)). good knowledge of women for FP were 99.7% less likely for unmet need for FP compared to poor knowledge for FP.

	Category	Unmet need	COR (95%)	AOR (95%)	p. value

Characteristic of the respondent		Yes	No			
Age of the respondent	<=25	188	51	0.49(0.26, 0.92)	4.0(2.74, 8.72) *	0.009
	26-35	163	77	1.27(0.71, 2.28)	8.0(0.96, 10.02)	0.76
	36-45	71	15	0.77(0.37, 1.58)	5.0(0.92, 27.13)	0.43
	>45	55	16	1	1	
Income	<1500	110	49	9.06(5.2, 15.7)	2.23(0.6, 8.27)	0.06
	1500-3500	95	63	14.9(8.6, 25.9)	3.7(0.85, 17.0)	0.08
	>3500	272	47	1	1	
Distance of home from health facility	<30min	54	205	0.11(0.07, 0.18)	1.16(0.38, 3.50)	0.23
	30-60min	17	161	1.17(1.01, 12.1)	1.19(0.28, 4.91)	0.44
	>=60min	88	111	1	1	
Desire number of children	<4 children	106	352	0.54(0.37, 0.79)	12.9(4.16, 40.3) *	0.00
	>=4 children	53	125	1	1	
Have you ever use FP	Yes	111	286	3.5(0.98, 12.4)	0.61(0.07, 0.88) *	0.00
	No	48	191	1	1	
Have you ever pregnant	Yes	124	393	0.62(0.4, 0.95)	2.8(1.98, 12.5) *	0.03
	No	35	84	1	1	
Knowledge for FP	Good	72	346	0.08(0.05, 0.13)	0.03(0.01, 0.14) *	0.00
	Poor	87	131		1	

Table 5: Factors associated with unmet need for family planning among currently married women of reproductive age group in Aleta wondo woreda, Sidama, Ethiopia, 2023

5. Discussion

The study showed that a quarter of currently married women among reproductive age group (25%, 95% CI: 22, 28.8) had unmet need for family planning at the current study area, of which 119(18.7%) showed that women had an unmet need for spacing and 40(6.3%) of them had an unmet need for limiting. Age of respondent women, household income, distance from health facility, desired number of children, use of FP and pregnancy in life time were showed statistically significant associated with an unmet need for family planning.

The result of unmet need for family planning in the current study area showed similar finding with the earlier results obtained from Bishoftu town eastern Ethiopia (26%), Tiro Afeta District South West Ethiopia (26.1%) and Misha District southern Ethiopia (26.5%) (21, 23, 24). The similarity could be due to unmet need for family planning might be contextual variations including health services coverage, knowledge and attitudes towards family planning services and socio-demographic and economic factors.

However, the result was lower than study result found in Butajira district (52%) and Oromia regional levels (28.9%) (25, 26). This result was also far from the national target of reducing the level of unmet need for FP to 10% by 2020(27). This indicates that even though there was improvement in contraceptive prevalence among currently married women in the district; achieving the target and maximizing the benefits of FP requires dedication to provide FP to those women with the identified unmet need.

The odds of unmet need for family planning among younger age group (25years) of currently married women were 4 times more likely than the older age group women(>45years). This finding was comparable to the results obtained from other parts of the world as well as studies done in different parts of Ethiopia (21, 28-33). This might be due to that the older women are mature and can decide better on their health including the use of family planning services compared to younger women. Besides, older woman had less desire to children compared to younger women, which increases the need to use family planning methods. As the consequence of this a younger age groups of women should be targeted for family planning services in the study area.

Desire to have children was also factor that contributes the unmet need for family planning among currently married women. The odds of an unmet need for family planning was more likely among women who desired to have fewer children (<4 children) than those who desired to have more children (more than 4 children). As the number of children increases, the probability of using family planning services would increase. This finding is consistent with results obtained from other studies (21, 28, 30, 32, 34, 35).

Women's previous use of family planning was also found to be an independent factor of unmet need for family planning. The odd of having an unmet need for family planning among currently married women who used FP methods before was 39% less likely than the odds of unmet need for FP among married women who never used family planning before (AOR: 0.61, 95% CI: 0.07–0.88). This result aligned with the findings obtained from Tiro Afeta District, Debre Markos and Uganda (23, 36, 37). This tells us ever users of family planning have had an awareness to accept contraceptives and they were less likely to have had an unmet need for family planning.

Knowledge of at least one method of contraceptive was 99.7% less likely associated with unmet need for contraceptive compared to those do not know about family planning. Level of awareness about contraceptive method is in line with other similar studies (24, 38). The reason may be due to health extensions are vigorously working in increasing awareness of contraceptive methods.

Strengths of the study

- Training was given and intensive supervision conducted to ensure data quality
- It was conducted as community base

Limitation of the study

- Social desirability bias and recall bias might be introduced. Because, those pregnant and post-partum amenorrhea women were asked about their current and recent pregnancy respectively.
- This study was limited for married women only and it will not be generalized to unmarried women yet with unmet need for family planning.
- Due to its cross-sectional nature of study, it was difficult to known temporal relationship,

Conclusion

The current study indicated that the unmet need for family planning among currently married women was higher compared to the national average and slightly lower than the regional average. unmet need for FP was associated significantly with age of respondent, income, desire number of children, have you ever use FP, have you ever pregnant, distance of home from health facility and attitude of the respondent.

Recommendations:

According to the result of this research we recommend the following:

Regional health bureau should focus on strength, weakness and opportunity and threat (SWOT) analysis and use various family planning studies in order to plan short and long term family planning services to fill the gap and address most disadvantaged areas and groups.

Zonal health department and district health office should conduct awareness creation strategies for women on family planning.

Health extension workers should promote the minimal risk or side effects associated with contraceptive methods compared to health problems and maternal health incurred by unwanted pregnancies. Focus on men as well as women and also encouraging communication between couples and ensure men's engagement in family planning to improve unmet need.

Researchers should conduct further research to identify the extent of unmet need of different population groups, including unmarried women and couples together

List of abbreviations

CSA Central statistical agency

CPR Contraceptive prevalence rate

EDHS Ethiopia Demographic and Health Survey

FP Family Planning

HHs House Holds

KAPs Knowledge, Attitudes and Practices

MCH Mother and Child Health

STI Sexual Transmitted Infection

SNNPR South Nations Nationalities People Region

TFR Total Fertility Rate

UN United Nations

UNICEF United Nations Children Fund

WHO World Health Organization

Declarations

The research team declare that research entitled in "to assess magnitude of unmet need for family planning and associated factors among married women of reproductive age group in Aleta wondo woreda, Sidama, Ethiopia." is the original work and has not been presented in any other University or in specific areas of study and all sources of materials used for this thesis have been appropriately acknowledged.

Ethical clearance and consent to participate

Ethical clearance: The research proposal of the current study was submitted and approved by Research Ethics Committee of Pharma College, School of Public Health. The institutional permissions were obtained from the Sidama Regional Health Bureau and Aleta Wondo District. Similarly, an informed consent was obtained from each respondent.

Availability of data and materials

The datasets produced and/or analyzed throughout the current study are not openly accessible due to institutional regulation but would be obtainable from the authors for reasonable request.

Competing interests

All authors declare that they have no competing interests.

Funding

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Authors' contributions

AM: Elaborate in the initiation of the research question, prepared the research proposal, carried out the research, did the data entry and analysis.

DD: Conducted edition, advising all steps proposal development and thesis writing, cooperatively prepared research tools and develop the manuscript.

ES: conducted edition, advising each steps of thesis writing.

All authors have read and approved the final manuscript.

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Supplementary files:

Supplementary files attached separately those addresses the following areas

Supplementary file 1: Participant information sheet and informed consent form

Supplementary file 2: Data collection tool of current study

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