PHARMA COLLEGE SCHOOL OF
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MASTER OF PUBLIC HEALTH

UTILIZATION OF PRECONCEPTION CARE AND ASSOCIATED FACTORS AMONG NON PREGNANT REPRODUCTIVE AGE GROUP WOMENS IN SHEBEDINO WEREDA, WHO VISIT HEALTH FACILITIES, SIDAMA REGION ETHIOPIA, FACILITY BASED CROSS SECTIONAL STUDY 2023.

MPH THESIS

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HAWASA, ETHI

PHARMA COLLEGE SCHOOL OF PUBLIC HEALTH

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ATHESIS SUBMITTED TO THE SCHOOL OF PUBLIC HEALTH, PHARMA COLLEGE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH

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ADVISORS APPROVAL SHEET

Pharma college school of graduate students

This is to certify that

The thesis entitled UTILIZATION OF PRECONCEPTION CARE AND ASSOCIATED FACTORS AMONG NON PREGNANT REPRODUCTIVE AGE GROUP WOMENS In shebedinowereda health facilities submitted in partial fulfillment of the Requirements for the degree of Master with specialization in the Graduate Program of the Department/ School of Public Health, and has been carried out by SoduKasayeId.No, under my/our supervision. Therefore I/we recommend that the student has fulfilled the requirements and hence hereby can submit the thesis to the department.

Name of major advisor Signature Date

APPROVAL BY THE BOARD OF EXAMINATION

This thesis by Sodu Kasaye acceptedinitspresentformbytheboardofexaminersas satisfying **t h e** thesis requirement for the degree ofmaster's in_____.

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ACRONYMS AND ABBREVIATION

PCC preconception care

AOR adjusted odd ratio

CHD cardio vascular heart disease

CHD cardio vascular heart disease

HCW Health care worker

SIT sexually transmitted disease

HIV human immune deficiency virus

SPSS social science for statistical analysis

WHO World health organization

ABSTRACT

Background: Preconception care can contribute to reducing maternal and childhood mortality and morbidity in both high and low income countries. Even though PCC could address a full range of women's, and couple's health needs to produce healthy new born, family and a community at large, in Ethiopia, the pooled prevalence of an adequate level of knowledge and utilization of preconception care among Ethiopian women was 30.95%.

Objective: To assess the utilization of preconception care and associated factors among non-pregnant women who visits health facilities during data collection period, in shebedinowereda,Sidama Region Ethiopia.

Method: facility based cross-sectional study was conducted among reproductive age group women visiting health facilities in shebednowereda,from April 1-31, 2023. Datawere collected using structured face-to-face interviewer administered questionnaires. Descriptive analysis was used to present the frequency and percentage of the main findings. The association between independent variables and knowledge variables that had p-value ≤0.25 binary logistic regression were fitted. And data were further analyzed with a multivariate logistic regression model. Finally value<0.05 is considered statistically significant and presented by adjusted odds ratio (AOR) with 95% CI.

ResultThis study included 380 participants with 95.4% response rate. And only 13.9% of respondent was utilized preconception care. Educational status of respondent , (AOR= 2.28: CI 95 %,((2.71, 7.2)), educational status of husband (AOR= 11.4, CI 95 %,((2.07, 6.16)), having known health problem (AOR=10.4, CI: 95 % (2.62, 17.7)) and received counseling(AOR=12.2, CI 95 % (18.2, 24.25)) and heard about preconception care (AOR=4.3, CI 95 % (9.1, 19.2)) and challenge in accessing health facility (AOR=2.5, CI 95 % (1.09, 5.69)) were all significantly associated with utilization of preconception care.(P value <0.005).

ConclusionThe present study revealed that only 13.9% respondent utilizes preconception care in shebedinowereda.Educational status of women, educational status of husband, having known health problem, receiving counselling about PCC and heard about PCC were significantly associate with utilization of preconception care. In light of this finding, there is a need to strengthen screening of women who attend health facility to know their status. Strengthen health education program to bring knowledge and to increase awareness about preconception care, and integrating the preconception concept in all service areas.

Key words; preconception care, utilizati

1.INTRODUCTION

1.1. Background

Preconception care was defined as the provision of biomedical, behavioral and social health interventions to women and couples before conception occurs. Preconception care provides a full range of effective interventions, focused primarily on the health of women of reproductive age, and their partners, prior to or between pregnancies, that promote the opportunity for safe motherhood and the birth of a healthy infant with the expectation of healthy longevity[1].

According to WHO head quarter, Geneva meeting report preconception care have At least three overlapping terms are used in the reviews tabled at the meeting: preconception care – provision of preventive, promote or curative health and social interventions before conception occurs;[2]

Further, an emphasis on preconception care could reinforce the notion that the focus of all efforts to improve the health of girls and women should be at improving maternal and child health outcomes rather than at improving the health of girls and women as individuals in their own right. In addition, blanket approaches to preconception care could be seen to imply that all girls and women will inevitably become mothers. Every effort must be made to prevent preconception care efforts from harming girls and women.[2]

According to WHO Geneva meeting ,There is a menu of effective interventions to address the following health problems, behaviors and risk factors in the preconception period that increase the likelihood of maternal and childhood mortality and morbidity: nutritional deficiencies and disorders ,vaccine-preventable infections ,tobacco use , environmental risks ,genetic disorders ,early pregnancies, unwanted pregnancies, and pregnancies in rapid succession, sexually transmitted infections (STIs), including human immunodeficiency virus (HIV) infertility and subfertility, female genital mutilation , mental health disorders, including epilepsy , psychoactive substance use .[3]

provision of preconception care interventions in the period extending from 3 months before to 3 months after conception occurs; Interconnection care – provision of these interventions between two pregnancies.[3]

Preconception care brings attention to the missing component in the existing health system for addressing the needs of adolescents, young women and their partners before pregnancy is planned or occurs. The main goals are to improve birth outcomes in future pregnancies through health education, risk assessment and appropriate interventions wherever needed [4]

Preconception care can contribute to reducing maternal and childhood mortality and morbidity in both high and low income countries. , in addition to Optimizing general preconception health and risk awareness of the population as a whole, it can address the relatively high levels of maternal and childhood mortality and morbidity in pockets of socially marginalized and economically deprived families and communities.[5] Even if maternal health has significantly improved in the twenty first century, but too many women continue to die or suffer severe pregnancy complications every year[6].

The association of folic acid supplementation with other congenital malformations such as CHD, Studies suggest that maternal preconception folic acid supplementation decreases the risk of CHD. Based on these studies, organizations have stated the importance of preconception folic acid supplementation to try to decrease the risk for CHD and neural tube defects [7].

1.2. Statement of the problem

In Ethiopia, utilization on preconception was low. Identifying factors related to PCC with women's is an important step for the development and implementation of successful preconception utilization. According to study done meta-analysis in Ethiopia The pooled prevalence of knowledge and utilization of preconception care among women in Ethiopia was 30.95% and 16.27%[8]

Preconception care is a neglected but a critical component of maternal and child health care services Therefore, in settings where there is low awareness of preconception care, promotion of preconception care among reproductive age group women is important to boost maternal health care services and to reduce complications during antenatal care, institutional delivery and post-natal care. However, family planning, utilization, and factors associated with it have not been well understood in resource limiting settings like Ethiopia.[9]

Therefore, the main aim of this study will be to describe the level of women's awareness regarding to preconception care which will help in estimating the preconception care needs of reproductive age group women and which in turn could help to prepare the necessary resources and flourish programs for better reproductive health services. The other main purpose of this current study will be for addressing the knowledge gap with regard to factors associated with awareness in preconception care among reproductive age group women. Understanding the factors benefit in a way that women as well as care givers intervene on those factors. This study is also believed to benefit many concerned stakeholders in decision making and policy development.

1.3. Significance of the study

Even if maternal health has significantly improved in the twenty-first century, but too many women continue to die or suffer severe pregnancy complications every year [10]

It has been acknowledged that 41% of all women report their pregnancies as unplanned, highlighting a significant necessity for preconception good health, and a call for providing

the needed health interventions for both the woman and her partner before their decision to have a child [11].

Multiple studies in the 1990s demonstrated that the use of folic acid supplementation in the preconception period decreased the risk of neural tube defects in offspring [7]

Studies revealed that only one fourth of women in reproductive age group in SSA countries and conducted world-wide utilized preconception care. This finding was consistent with a systematic review and meta-analysis. Although there have been reports about poor policies and guidelines and low media coverage for PCC in SSA, the similarities in the findings between utilization of PCC between worldwide and SSA evidence might be[11]

The World Health Organization (WHO) has recommended a package of interventions for PCC: maternal nutrition such as micronutrient supplementation (iron, folic acids and others), vaccination, cessation of tobacco and excessive alcohol use, prevention of interpersonal violence, sexuality education, and protection from environmental hazards, genetic counseling, and support for mental health. Adolescence is a prime – though not the only – window of opportunity to deliver these interventions [11]

Even though PCC could address a full range of women's, and couple's health needs to produce healthy newborn, family and a community at large There is insufficient evidence regarding many PCC interventions and the best methods of integrating them into primary health care (PHC) Based on current best available evidence, women of childbearing age planning a pregnancy should take 0.04 mg folic acid daily, commencing at least one month before conception and continuing it throughout the first trimester of pregnancy.[4]

2. LITERATURE REVIEW

2.1 Magnitude of preconception care utilization

According to systematic review and meta-analysis done among women in Ethiopia the pooled prevalence of PCC utilization in Ethiopia was 16.27%[8].A study done, in Ethiopia Hosanna among women who were pregnant previously, about 4.3% received or utilized preconception care services from health facility during any of their previous pregnancies. The most commonly received preconception care services were being screened and treated for chronic medical diseases and HIV counseling & testing[12]. In a research done in Adet, Gojamnorthern Ethiopia, The study revealed that the overall knowledge of preconception care was 27.5% [9]. A study done in Kiambu County, kenya more than threequartersof the participant 80.2% never used folic acid before conception. According to a study conducted in northern Ethiopia: only 18.2% mothers had utilized at least one component of the World Health Organization package of PCC services before their last baby [13]. A literature found from Mekelle, tigray, Ethiopia 4.5% of the mothers were ever had taken folic acid before they become pregnant and 25(67.6%)In the research done in Debreberhancentral Ethiopia, Utilization of preconception care Fifty five 13.4% women's was utilized preconception care services According to a study conducted in West Shewa zone, Ethiopia Only 14.5% women have utilized PCC services, [14]

2.2. Factors associated with utilization of PCC

2.2.1 Socio demographic factors

According to a meta-analysis done in sub Sharan Africa ,The greater a woman's age and parity, the more likely she will use PCC[15]. This study showed that the utilization of PCC among women in Ethiopia was significantly associated with age (> 30 years) and knowledge of PCC. According to this meta-analysis, two primary studies identified that older age (> 30 years) was significantly associated with the utilization of PCC women who were older (> 30 years) were approximately two and a half times[8]. A study in west Gojam found a result that Women whose age is above 25 years were 2.38 times more likely to know pre-conception care than their counterparts)[9].

According to a study conducted Utilization of preconception care and associated factors among reproductive age group women in DebreBirhan town, North Shewa, Ethiopia Women whose age is 34–49 years were 3.6 times more likely to utilize preconception care than women whose age is 15–24 years (Accordingly,[10]

A literature found West Guji Zone, Oromia, Ethiopia, states that mothers who attained secondary education were 4.46 times more likely to utilize preconception care compared to mothers who had no formal education. Those mothers who were college and above in educational status were 5.51 times more likelihood of utilizing preconception care compared to mothers who had no formal education[16].

A study conducted among reproductive age group women in West Shewa zone A woman who had a better educational status were three to four times more likely to have good knowledge than women who had lower educational status[14]. According to a study conducted in Adet, west Gojjam, northwest Ethiopia When compared with those who are not able to write and read, women who attended more primary education were more than three times more likely to know preconception care. And in this study found that 8.3% of respondents had utilize PCC because of a chronic health problem.[9]

2.2.2 Health service related factors on PCC

A study done in sub Saharan countries states that Regular screening of the patient's reproductive life plan is associated with PCC practice among HCWs [15]. A literature in Debrebrhan, Women who mentioned there is an available unit for preconception care were 14 times more likely to utilize preconception care than women who don't know the availability of unit for preconception care Also, women who mentioned that there is no available unit for preconception care delivery were 10 times more likely to utilize[10].ANC early and having antenatal and postnatal contact Women who are visit specific healthcare facilities while pregnant have a higher level of knowledge than others were factors[15]. A study that was done on, Level of Healthcare Providers' Preconception Care (PCC) Practice and Factors Associated with Non-Implementation of PCC in Hawassa, Ethiopia states that, when health professionals asked to propose who should provide PCC, the participants of the study chose out of the eight options indicated on the self-administered questionnaire. They were also given the chance to write other than the lists. The study participants did not write anything other than the given options. More than half, (51.9%), gave their opinion that all health care providers, i.e. medical doctors, nurses, midwives, public health officers and health extension workers should provide PCC. The remaining participants indicated specific healthcare providers [17].The above study states that there is absence of standardized and consistent PCC practice which indicates that PCC is not well introduced to the area.

2.2.1 Knowledge about PCC

A meta-analysis done in sub-Saharan Africa women with a higher level of education or professional background and higher family incomes use PCC more than their counterparts[15].According to a study done in sirilanka preconception care done, The mean preconception health knowledge score in the study sample was 60.4%, University graduates had the highest mean score of 77.9%, and those with an educational level of <grade 05 had the lowest mean score of 28%.[4] On the same study, Knowledge regarding pregnancy planning, Awareness of PCC, effects of pre pregnancy weight on fertility, folic acid supplementation, fertile period and birth spacing were unsatisfactory. A study conducted Mzuzu City, Malawi knowledge of women was about 57.7% demonstrated a good level of knowledge of preconception care[18]. According to a study done in southern Ethiopia, the level of women's knowledge about preconception care was (45.5%) [19].

According to a study done Meta-analysis, in sub Saharan Africa the Pooled prevalence of knowledge level of PCC among women in reproductive age group in Sub Sahara Africa was 33.27%. And Subgroup analysis for knowledge level of PCC based on the regions of Sub Saharan Africa showed that 29.93% in Eastern Africa and 41.52% in Western Africa.[11] In this study shows that there is a strong association between knowledge and preconception care. Regarding women's knowledge on preconception health and behavioral risk factors; alcohol consumption (33.9%), cigarette smoking (33.4%) and STIs including HIV/AIDS are most frequently mentioned issues, whereas gender based violence (15.6%), and genetic problem (13%), were the least mentioned issues [9] A study done in west Gojam, women who attended college and above education were nearly seven times more likely had better knowledge than those who had no formal education[9].

According to a study conducted women in DebreBirhan town, North Shewa, Ethiopia ,women who have good knowledge of preconception care services were 6.2 times more likely to utilize preconception care than that of poor know- ledge)[10].

A study done in west Gojam, women who attended college and above education were nearly seven times more likely had better knowledge than those who had no formal education[9]

According to systematic review meta-analysis done in Ethiopia The overall pooled prevalence of an acceptable level of PCC knowledge among women in Ethiopia was 30.95%[8]

2.2 Conceptualframe work

A Conceptual framework has been drawn from various studies which reported variables utilization of PCC, socio demographic factors, utilization of PCC availability of health facility Knowledge of preconception care and health service related factors.[10,20][9]

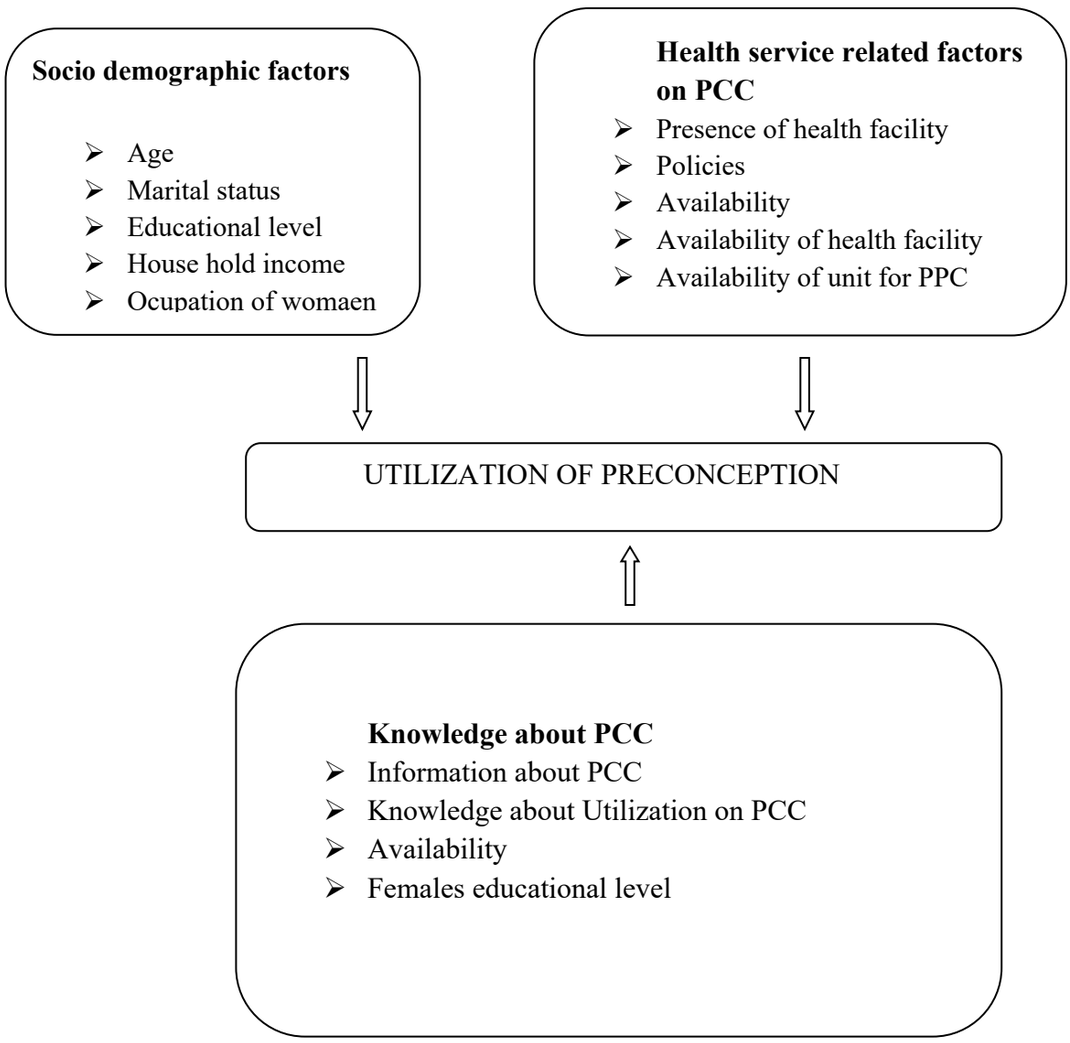

Figure 1Conceptual frame work for the utilization of preconception care and associated factors among non-pregnant women who visits health facilities in shebedinoweredasidama region Ethiopia, 2023

3. OBJECTIVE

3.1. General objective

- To assess the, magnitude and factors associated with utilization of preconception care among non-pregnant reproductive age group women who visits health facility, in Shebedinowereda, sidama region Ethiopia

3.2. Specific objectives

- To assess utilization of preconception care among non-pregnant reproductive age group women who visits health facility in Shebedinowereda.
- To determine associated factors for utilization of preconception care among non-pregnant women in who visits health facility in Shebedinowereda.

4. METHODOLOGY

4.1 Study area and period

The study was conducted among women'swho were visiting health facility in shebedinowereda. The wereda was located 25 km from Hawassa.The wereda have 6 health center and 1 general hospital. According to the wereda health office estimated number of women reproductive age group was47,676.

4.2 Study design

Facilitybased cross sectional study was conducted.

4.3. Population

4.3.1. Source population

The source populations for this study wereall non-pregnant women who visits health facilities in shebedinowereda .

4.3.2. Study population

All reproductive age non pregnant women who visited health centers found in Shebedinowereda during data collection period were study population.

4.4. Eligibility criteria

4.4.1 Inclusive criteria

Non-pregnant mothers who visited health facilities found in shebedinowereda during data collection period.

4.4.2. Exclusive criteria

Critically ill at the time of data collection and unwilling to respond were excluded from the study.

4.5. Sample size determination

4.5.1. Sample size for objective one

A sample size was determined using single population proportion formula, prevalence of preconception care utilization of 40% found from a previous study done in Addis Ababa Town, [21] Confidence level (CI) of 95%, and marginal error (d), 5% and 10% nonresponse rate was 10%.

$N= z^2\underline{p(1-p)}$

$Z=1.96^2$

- 0.40
- $1.96^2 * \underline{0.04(1-0.04) =} 362$

0.05^2

Non response rate 10% = 36

Total sample size were**398**

4.5.2. Sample size determination for second objective

Sample size for the second objective was determined by using double population proportion formula Then, sample size was calculated based on Epi Info 7.2 software by sample size and power for a cohort or cross-sectional study by taking confidence level = 99%, power = 80%, ratio (unexposed; exposed) taken as 1 and summarized under(Table 1).

Table 1Sample size determination for utilization of preconception care and associated factors among non-pregnant reproductive age group who visits health facility in shebedinowereda, Sidama region Ethiopia, 2023.

Variable	Power	%Ratio unexposed with outcome	AOR (CI)	Ratio of unexposed with exposed	Total sample size	Reference
Knowledge on preconception care	80%	6.4	0.18	1	256	[20]
ANC visit	80%	0.157	3.1	1	32	[9]
Place of delivery	80%	6.6	1.21	1	250	[14]

4.6. Sampling technique and procedure

The study population consists of reproductive age group females who visit all health facilities in Shebedinowereda. From these visitors, proportionally allocated based on the number of female non pregnant women who visits during data collection period. The principal investigator (PI) was utilizedplan of OPD visit for sampling.

Sampling technique and procedure

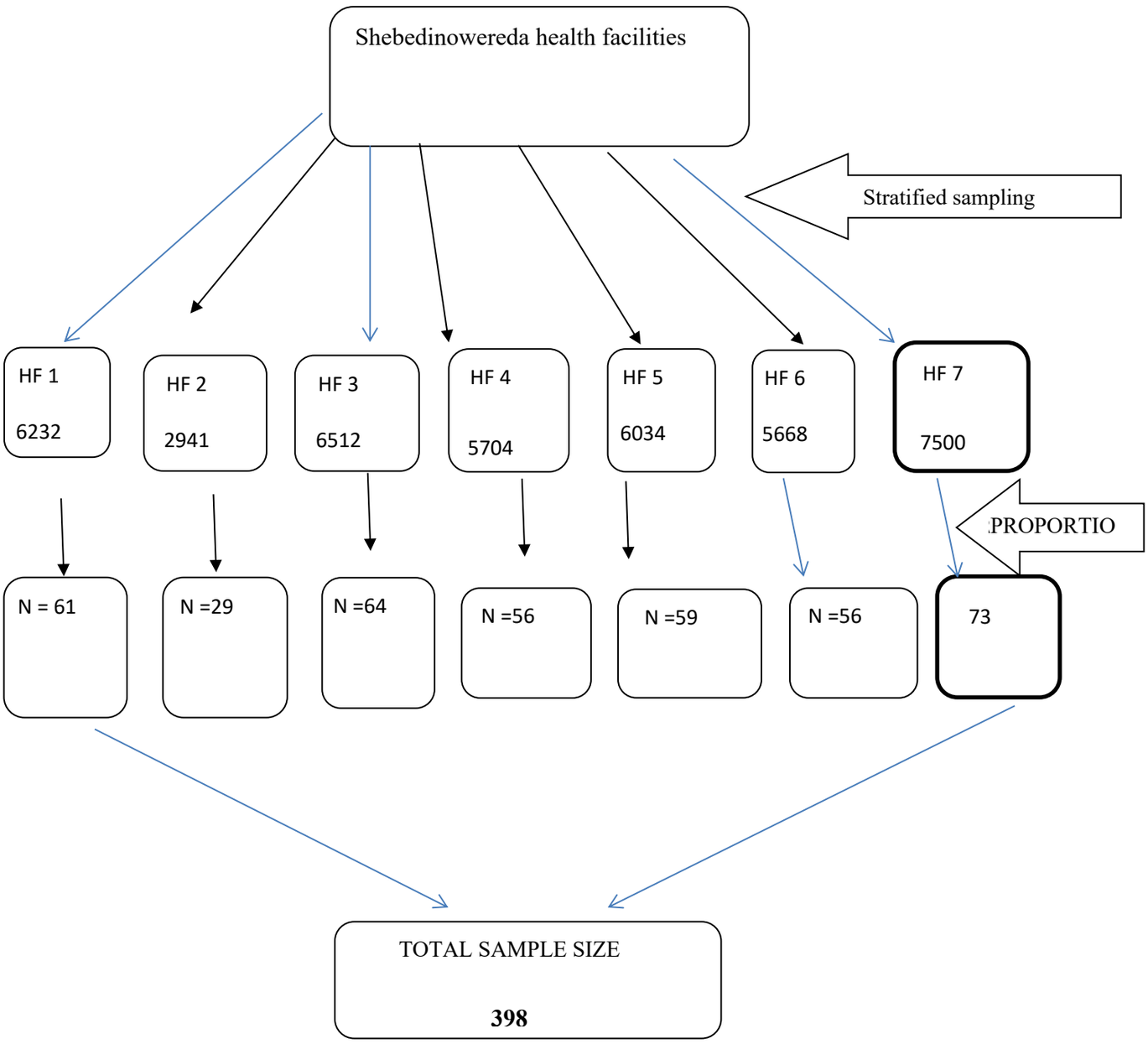

Figure 2Sampling techniqueand procedure for utilization of preconception care among reproductive age women who visits health facility in shebednowereda,sidama, 2023

4.8. Variables

4.8.1. Dependent variables

Utilization of preconception care

4.8.2. Independent variable

- Socio demographic characteristics,
- Health service related factors on PCC,
- Knowledge on PCC

4.9. Operational definition

Preconception care: Any interventions either advice or treatment, and lifestyle modification women received regarding components of preconception care before being pregnant [10].

Preconception care utilization: If women received any interventions either advice or treatment, and lifestyle modification regarding components of preconception care at least once before being pregnant.

4.10. Data collection technique

Data were collected using by a face to face interview questionnaire. The tool was translated to Amharic and local languageSidama. Data were collected by four data collectors and 2 supervisors, after two days of training, before the actual data collection, a pretest was done in 5% of the sample in oneof Tullahealth center which is not included in the study.And inputs from the pretest were used to modify the questionnaire more suitably to generate the desired data. Data extraction check list (tool) has prepared by principal investigator from different literature and, based on available information which assessed during starting proposal writing. The methods of data extraction from documents are by reviewing the document and filling into prepared check list.

4.11. Data quality and management

The quality of data was ensured during the time of data collection as well as during data entry. Primarily, training was given for data collectors and supervisor for two days. Participants in data collection were (diploma nurses) and a supervisor beone (bachelor) and Principal investigator was checked data on daily bases, the supervisor evaluates the sample data completeness, consistency, and accuracy. Data was rechecked and evaluated before entering in to software. And regular meetings werebe held between the data collectors, supervisors, and principal investigator. Moreover, consistency werechecked before, during, and after entering the data into the computer.

4.12. Dataentry and analysis

Data were entered in to Epi-data version 4.6.0 and then exported toSPSS windows version 20. Descriptive analysis the descriptive data analysis was presented as frequency, summary statistics, graph, and table. Bivariate analysis were be used to check which variables are associated with dependent variable individually. To limit the number of variables only

variables with p value < 0.25 in the bivariate analysis further entered into multivariate logistic regression model. Finally, P value <0.05 will consider as statistical significant and will present by adjusted odds ratio (AOR) with 95% CI.

4.13. Ethical consideration

Ethical clearance was obtained from research and ethical committee (REC) of department of public health, Pharma College, Hawasa, campus**.** And Entrance and support letter from shebedinowereda health office. ForEach health facility , written informedconsent was obtained fromwereda.To ensure the confidentiality of respondents, their names were excluded from the questionnaire**.**

4.14. Dissemination of the result plan

The result of this study was present to the department of Public Health, Pharma College, Hawassa campus, as partial fulfillment of a master's degree in public health. In addition, the result of this study was discussed with shebedinowereda health office. Anddiscuss with Sidamaregional health. Finally result was be publishing in reputable journals.

5. RESULT

5.1. Socio-demographic characteristics of respondents

Out of the total sample size of 398, 95.4% (n=380) of the respondents voluntarily completed the study. The mean (+SD) age was 28.57 (±5.379) years, with a range of max 45 and minimum of 18. Concerning respondents,

Educational level, 18.2 % (n=69) Illiterate, 14.2 % (n=54) of respondents had read and write only, 10.3% (n=39), elementary school, 24.5% (n=93) were secondary school and 32.9% (n=125) were diploma and above. Regarding marital status of respondents majority of them were married which were 97.6% (n=370). Concerning to place of living 59.5 %,(n=226) were live in rural and 40% (n=154) in urban. Regarding to time taken to nearby health facility to 76.8%, (n=292) were take <30 minute and the rest 23.2% (n=88) travel more than 30 minute to find health facility. From total participants only 14.5%, (n=55) were received counseling on life style modification from a facility, but the majority 85.5%, (n=325) didn't receive. Regarding family planning utilization 86.6%, (n=329) respondent utilize family planning in their nearest health facility (Table 2)

Table 2 sociodemographic characteristics of utilization of preconception care and associated factors among non-pregnant reproductive age group who visits health facility in Shebedinowereda, Sidama region Ethiopia, 2023.

variable	Response	Frequency	Percentage
age	18-24	90	23.7
	25-31	213	56.1
	32-38	57	15.0
	39-45	20	5.3
Educational status	Illiterate	69	18.2
	Read and write	54	14.2
	Elementary	39	10.3
	Secondary school	93	24.5
	Diploma and above	125	32.9
marital status	Married	370	97.6
	Divorced	5	1.3
	Single	5	1.3
occupational status	Government employee	81	21.3
	Merchant	58	15.3
	Farmer	97	25.5
	House wife	107	28.2
	Own work	37	9.7
place of living	Urban	226	59.5
	Rural	154	40.5

5.2. Health service related factors on preconception care

Majority of women 76.9%, (n=292) resided within <30 minute traveling to health facility and the rest 23.2%, (n=88) of health facility > 30 minute. Thirty four 86.6%, (n=329) utilize family planning in their nearest health facility and only 13.4%, (n=51) were not utilized family planning service.Regarding to challenge in accessing the nearest health facility were 30.5%, (n=116) have easily accessing challenge to get nearest health facility, but the majority were 69.5%, (n=264) have accessing this health facility. (Table 3)

Table 3 Health service related factors of preconception care and associated factors among non-pregnant reproductive age group who visits health facility in Shebedinowereda, Sidama region Ethiopia, 2023.

Variable	Response	Frequency	Percentage
ever received counseling on life style modification from a facility previously	Yes	55	14.5
	No	325	85.5
utilize family planning in the nearest health facility	Yes	329	86.6
	No	51	13.4
time taken to nearest health facility	<30 Minute	292	76.8
	> 30 Minute	88	23.2
availability of unit of preconception care in your nearest health facility	Yes	185	48.7
	No	195	51.3
Have a challenge in accessing this health facility?	Yes	116	30.5
	No	264	69.5

5.4. Knowledge of mothers on preconception care

Among the total of 380 participants, the majority of respondent 63.9% (n=243) weren't heard about preconception care before. On the other hand those who have heard about preconception were only 36.1%, (n=137). Regarding the importance of PCC needed majority of respondents were 70% (n=266) were answered that was important. (Table 4)

Regarding to importance of PCC 42.9%, (n=163) respondents said that it was important for females only, those who respond for both 31.3% (n=119) and 25% (n=95) responds that they don't know about it.

Table 4showing knowledge of preconception care and associated factors among non-pregnant reproductive age group who lives in in Shebedinowereda health facilities, Sidama region Ethiopia,, 2023 (n=380)

riable	esponse	equency	rcentage
Heard about preconception care	Yes	137	36.1
	No	243	63.9
Preconception care important	Yes	266	70
	No	114	30
when preconception care services are provided	Immediately before pregnancy	38	10.0
	Du ring first 2 months of pregnancy	7	1.8
	During delivery	4	1.1
	When the women/couples Ready to conceive	46	12.1
	At any time couples plan to get pregnant	43	11.3
Frequently need PCC services to be provided	Sometimes	108	28.4
	Usually	43	11.3
	Continuously	72	18.9
	I don't know	157	41.3
Life style or behavioral or environmental conditions can maintain during PCC	Drinking alcohol	91	23.9
	Smoking cigarette	94	24.7
	Taking illicit drugs	34	8.9
	I don't know	161	42.4

5.5. Utilization of preconception care

From the study participants 53, (13.9%) (95% CI: (10.8, 17.4) women's was utilized preconception care services **(Figure 4).** Among those 4.2% (n=16) were screened & treated for chronic medical diseases, 7.6%, (n=29) were testing diagnosed & treated for infertility/sub-fertility, and 2.1%, (n=8) were utilized iron folic supplementation. (Table5)

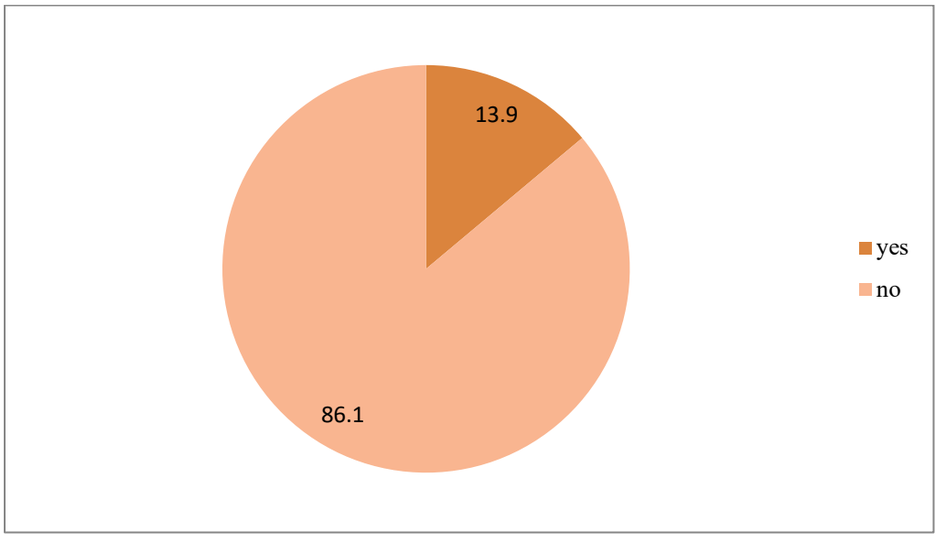

Figure 3 Preconception utilization among reproductive age group who visits health facility in Shebedinowereda, Sidama region Ethiopia, 2023

Table 5 utilization of preconception care and associated factors among non-pregnant reproductive age group who lives in in shebedinoweredahealth facilities, Sidama region Ethiopia, 2023 (n=380)

variable	Response	Frequency	Percentage
Screened& treated for chronic medical diseases	Yes	16	4.2
	No	364	95.8
Screened & treated for chronic medical diseases	Yes	16	4.2
	No	364	95.8
screened & treated for STIs	Yes	4	1.1
	No	376	98.9
diagnosed & treated for infertility/sub-fertility	YES	29	7.6
	NO	351	92.4
Taking folic acid supplementation	Yes	8	2.1
	No	372	97.9

5.6. Factors associated with utilization of preconception care

In the bivariate analysis, educational status of respondent, educational status of husband, Occupational status of respondent, Having known health problem, ever received counseling about PCC, have challenge accessing this HF and heard about preconception care were significantly associated with utilization of preconception care.However, Educational status of respondent, Educational status of husband, Having known health problem, ever received counseling about PCC, have challenge accessing the Health facility and heard about PCC were found to be significantly associated in the multivariable logistic regression analysis.

Following this respondent whose educational status, secondary school was more likely utilizePCC than diploma and above2.28 (AOR=2.28, 95% CI: (2.71, 7.2).And also respondents whose husband can read and write were 11.4 (AOR=95% CI: (2.07, 6.16) utilize PCC than respondents whose husband have diploma and above educational status.Women who had known health problems were ten times more likely to utilize PPC compared to women without any known health problems[AOR=10.4; 95% CI (2.62, 7.7)].

Respondents who received counseling about PCC were 12.2 (AOR= 95% CI: (18.2, 24.25) time utilizes PCC than who did not received counseling.Those respondent having no challenge accessing their Health facility were 10.4(AOR 95% CI: 2.62, 7.7)) utilize PCC than those who have problem in accessing their health facility and respondent who heard about PCC were 4.3(AOR=95% CI: (9.1, 19.2)) utilize PCC than from not heard about PCC.

Table 6Showing factors associated with utilization of preconception care among non-pregnant women who visited health facilities in shebedinowereda, (n=380) who visited health facilities in shebedinowereda, (n=380)

variables	Utilization of Preconception care			
	Yes	No	COR (95%CI)	AOR (95%CI)
educational status of respondent				
Illiterate	6	63	1	1
read and write	10	44	0.23 (.079, .69)	7.0 (1.46, 14.4)
Elementary	9	30	0.42 (.15, 1.18)	5.1 (1.215, 11.72)
Secondary school	8	85	0.63 (.22, 1.78)	14.4 (1.7, 15.5)
Diploma and above	20	105	0.43 (.20, .94)*	2.28 (2.71, 7.2)*
ducational status of husband				
Illiterate	5	49	0.49 (.165,1.487)	0.24 (1.04, 2.29)
Read and write	9	10	5.57 (2.068, 9.0)**	.4 (2.07, .16)**
Elementary	4	16	1.5 (.48, 4.9)	5.6 (0.63 , 5.67)
Secondary school	10	90	0.68 (.32, 1.49)	1.58 (0.52, 4.76)
Diploma and above	26	161	1	1
:cupational status of respondent				
government employee	9	72	0.18 (2.07, .476)**	0.29 (1.5, 2.63)
Merchant	3	55	0.08 (.021,.304)**	0.61 (2.01, 4.07)
Farmer	21	76	0.40 (.179,.916)	0.34 (3.21, 10.7)
house wife	5	102	0.72 (.24,.219)**	2.28 (3.71, 7.27)
Owen work	15	22	1	1
aving known health problem				
Yes	29	133	1.763(1.2, 3.16)*	10.4(2.62, 17.7)**
No	24	194	1	1
Have you ever received counselling about PCC				
Yes	48	5	9.3(24.8, 28.31)**	12.2(18.2, 24.25)**
No	5	322	1	1
Availability of_ PCC				
Yes	45	140	7.51(3.43,16.44)**	5.820(1.91,17.72)
No	8	187	1	1
have challenge accessing this HF				
Yes	29	87	1	1
No	24	240	3.33(1.84 , 6.02)**	2.5(1.09,5.69)**
heard about PCC				
Yes	46	91	15.3(9.1, 22.2)**	4.3(9.1, 19.2)**
No	7	236	1	1

NB, *=p<0.05, **=P<0.001, COR= Crude Odds Ratio, AOR= Adjusted Odds Ratio, CI= Confidence interval, 1= Reference, Hosmer and Lemeshow= 0.468

6. DISCUSSION

In this study, the proportion of respondent utilization of preconception was only 13.9% this indicates that the overall utilization of preconception care among non-pregnant women was regarded as extremely low. This was consistentwith a study done in Debrebrhan, which was 13.4% [10], and 14.5% ina study conducted in West Shewa zone[14].The recent study result is lower than the existing literature found in West Guji Zone, Oromia, Ethiopia, which was 22.3% [16].This might be due to study setting. the level of utilization of preconceptioncare among respondent in this study was found higher than in the previous study conducted inHosaena town with percentage of 4.3%, [20]. The observed discrepancy might be due to thestudy setting.

The present study showed that respondents with educational status of diploma and above were 2.28 more likely of utilizing PCC than illiterate ones. This study result is consistent with a previous study conducted in West Shewa zonewhich was 4.12[14]This might be due to the fact that education is important for increasing respondents' level of understanding of health information.Educated women have better access to health service information and understand thehealth messages easily to utilize health services. In addition, educated women havegreater confidence to make decisions to use health care services.

In this study women who received counselling on preconception care previously were 12.2 times more utilize than from those not received counselling previously. This is similar with a study conducted in in Hosanna Town, Southern Ethiopia[20].Whichwere women who received counselling on preconception care previouslywere utilizedPCC 2.82times.

This study shows that women who have challenging access health facility were 2.5 times less likely utilize (AOR= 2.5, CI: 95 %(1.09, 5.69) preconception care than those who had no challenge to access the health facility. This was consistent with a study conducted in Mizan-Aman town, Bench Sheko zone, Southwest Ethiopia which was respondent who had traveling more than 2 km were less likely utilized 0.56 PCC than from those travelling less than 2 Km[22]

Women who had known health problems were ten times more likely to utilize PPC compared to women without any known health problems. (AOR= 10.4, CI: 95%(2.62, 17.7)). This finding were similar with a literature found in Mekele city Northern Ethiopia which was mothers who have known health problem were 5.69 more likely utilized PCC [13]. This similar result may be due to the fact that having knowing health problem leads to utilize PCC.

7. LIMITATION

The study's cross-sectional design prevented it from demonstrating the true cause-and-effect link between the elements it uncovered

8. CONCLUSION

According to the current study, only 13.9% of respondents in ShebedinoWereda use preconception care. Preconception care is significantly associated with factors including the educational status of the woman, the educational status of the husband, having a known health issue, receiving counselling about PCC, and learning about PCC. Due to this discovery, screening of women entering health facilities needs to be strengthened in order to determine their status. Boost preconception care knowledge and awareness by strengthening the health education program and incorporating the preconception idea into all service areas. Advocacy techniques to use the preconception care services.

9. RECOMMENDATION

To increase the utilization of preconception care, this study recommended that, providing counselling about PCC to the community especially women, during visiting health facility, during family planning service and linking the program to all services. And health education at health facility level, providing knowledge to assess women health status.

10. STRENGTH

Research done at weredasettings may be able to identify all the variables that affect how preconception care is used.

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12. ANNEX

12.1 ANNEX -1: Information sheet and Consent form

Title of the research project: **utilization of preconception care and associated factors among reproductive age group womens who visits health facility in shebedinowreda. sidamareagion Ethiopia,**

Name of principal investigator: **SoduKasaye**

Name of the organization: **Pharma Health Science College**

Name of the sponsor: **principal investigator (self sponsor)**

Introduction: -this information sheet is prepared for shebedinowereda health facility reproductive age women's who participated in the study, The aim of the form is to make the above concerned offices clear about the purpose of the research work, data collection procedure and get permission to undertake the research.

Purpose of the research project: - **utilization of preconception care and associated factors among reproductive age groupwomen's who visits shebedinowereda health facilities sidamareagion Ethiopia,**

Procedures: -In order to achieve the above objective, the method follows interviewing health facility visiting women.

Risk and discomfort: -By participating in this research project, there is no risk that comes to the house hould and the individual participant. And strong participation is needed.

Benefit: -The research has no direct benefit to those who have participated in this project. But the indirect benefit of the research for the participant and the entire reproductive age groupes.and participants program is great. As identifying area of improvement and taking appropriate decision helps to improve the service, increase access and overall knowledge and associated facters of the program.

Confidentiality: -To keep the confidentiality the name of client will not be mention rather code number will be use and no unauthorized access to the information is allowed

Right to Refusal or Withdraw: - all the right to refuse to participate in this study and shall have stopping the process at any steps of the data collection process.

Person to contact: -This research project will be reviewed and approved by the institutional review department of public health, post graduate program, Pharma College.

If at any case you want to know more information about the research and its undertakings, you can contact the committee through the address of advisor and /or principal investigator.

12.2 .ANNEX -II: English version questioner

Study participant consent form

Dear participant! Study on **"**utilization of preconception care and associated factors among non-pregnantreproductive age groupwomens who lives in leku town, sidamareagion Ethiopia**,"**

Greeting, first of all I would like to thank you for your time.Good morning /Good afternoon, I am_____ _____working as data collector in this study.Dear respondents here are lists of questions with different sections, which are designed for research work to be conducted in partial fulfillment of master Degree in public health by Sodukasaye with collaboration of Pharma College. The main purpose of the study is to assess **"**utilization of preconception care and associated factors among non-pregnantwomens who visits health facility in shebedino,sidamareagionEthiopia.**"**There are no anticipated problems but in case some questions make you feel uncomfortable; you are free to express your discomfort or decide not to respond. If you choose not to participate or withdraw from filling the questionnaire at any point, will not be affected in any way.If you are willing, enter the questionnaire

1.Yes **2. No**

Questionnaire Instruction

This questionnaire has **four sections**. Please read each section's instruction and questions properly before you answer the question. If you have unclear instruction or question you can ask data collectors or investigators.

Questioner code _____

Please encircle your choice code among the given alternatives below

<u>Section 1:</u> Socio-demographic related questions

sn	variables	Response	Skip remark
1	Age of mother in full number	_____	
2	Marital status	1. Single 2. Married 3. Divorced 4. Widowed	
3	Educational status of women	1. no formal education 2. read and write 3. primary education 4. secondary education 5. diploma and above	
4	What is your monthly income of household in birr?	_____	
5	What is your husband's level of educational status?	1. No formal education 2. Read and write 3. Primary education 4. Secondary education 5. Diploma and more	
6	What is your Occupation?	1. Government employee 2. Merchant 3. Farmer 4. House wife 5. Daily laborer 6. Others (specify)…….....	
7	What is source of information at home	1. Television 2. Radio 3. Internet 4. others	
8	Do you have known existing health problem?	1. Yes 2. No	

SECTION 2: Health service related factors on pcc

sn	variables	Response	Skip remark
1	What time is taken from home to health facility on foot?	1. < 30 minute 2. >30 minute	
2	Have you ever received counseling on life style modification from a facility previously	1. Yes 2. No	
3	Do you utilize family planning in your nearest health facility	1. yes 2. no	
4	Is there availability of unit of preconception care in your nearest	1. yes	

	health facility	2. no	
5	Do you have a challenge in accessing this health facility?	1. Yes 2. No	

SECTION 3: Knowledge of mothers on preconception care

sn	variables	Response	Skip remark
1	Do you heard about preconception care?	1. Yes 2. No	
2	IsPreconception care needed?	1. Yes 2. No	If answer is no go to.Q 1
3	If your response is yes for Q 2 for whom is useful PCC?	1. For men, only 2. For women, only 3. For men and women 4. Don't know	
4	Do you know PCC is important	1. Yes 2. No	
5	Do you know the Preconception care is important?	1. Yes 2. no	
6	If your answer is yes for whome is PCC important	1. For baby, only 2. For mother, only 3. For baby and mother 4. 4. Don't know	
7	Do you know where preconception care was got?	1. Home 2. Health institution 3. Home and health institution 4. Don't know	
8	Who is the appropriate person for providing preconception care?	1. Doctor 2. Health Officer 3. Midwife 4. Health extension worker 5. All are appropriate 6. I don't know	
9	How frequently need PCC services to be provided?	1. Sometimes 2. Usually 3. Continuously 4. I don't know	
10	Do you know when preconception care services are provided in general?	1. Immediately before pregnancy 2. During first 2 months of pregnancy 3. During delivery 4. When the women/couples ready to conceive 5. At any time couples plan to get pregnant 6. Between pregnancies	

		7. I don't know	
11	Which life style or behavioral or environmental conditions can maintain during PCC? (Multiple answers possible)	1. Smoking cigarette 2. Drinking alcohol 3. Taking illicit drugs 4. Being over-weight/under-weight 5. Exposure to radiation or chemicals 6. Being victim of gender based violence 7. I don't know	

Section 4: Utilization of preconception care

sn	variables	Response	Skip remark
1	Have you ever received preconception care service from health facility during any of your previous before pregnancy?	1. Yes 2. no	
2	If yes for Q. 24, which preconception care services have you received?	1. Being screened & treated for chronic medical diseases 2. Being screened & treated for STIs 3. HIV counseling, testing 4. Being diagnosed & treated for infertility/sub-fertility 5. Getting vaccination for tetanus 6. Taking folic acid supplementation 7. Had follow up and care for preexisting chronic medical condition before getting pregnant 8. Had follow up and care for previous adverse pregnancy & birth outcomes before getting pregnant 9. Weight management 10. Diet modification 11. Avoiding smoking & drinking alcohol 12. Avoiding illicit drugs	
3	When did you receive preconception care service in the last ?	1. When I planned to get pregnant 2. 3 months before being pregnant 3. During the first 3 months of pregnancy	

		4. Between pregnancies 5. Others (specify)……	
4	Where did you receive the preconception care service in the current pregnancy?	1. Public hospital 2. Health center 3. Health post 4. Private clinic 5. Others (specify)……	

12.3.Annex III Amharic version questioners

ክፍል1.ግለ-ታሪክመረጃንየሚዳስሱጥያቄዎች

ተቁ	ጥያቄዎች	ምላሽ	ዝለል
1	እድሜዎስንትነው (በሙሉቁጥር)		
2	የጋብቻሁኔታ	1. ያገባች 2. ያላገባች 3. የፈታች 4. ባልየሞተባት	
3	የትምህርትደረጃዎ	1. መደበኛትምህርትያልወሰደ 2. ማንበብእናመጻፍየሚችል 3. ጀመሪያደረጃትምህርትያጠና 4. ሁለተኛደረጃትምህርትያጠናቀቀ 5. ዲፕሎማእናከዛበላይ	
4	የትዳርአጋርዎየትምህርትደረጃ	1. መደበኛትምህርትያልወሰደ 2. ማንበብእናመጻፍየሚችል 3. የመጀመሪያደረጃትምህርትያጠናቀቀ 4. ሁለተኛደረጃትምህርትያጠናቀቀ 5. ዲፕሎማእናከዛበላይ	
5	የሥራመስክዎምንድንነው	1. የመንግስትሰራተኛ 2. ነጋዴ 3. ገበሬ 4. የቤትእመቤት 5. ዕለታዊሰራተኛ 6. ሌሎች (ይግለጹ)	
6	የመኖሪያቦታዎየትነው?	1. ከተማ 2. ገጠር	
7	የታወቀየጤናችግርአለቦትወይ?	1. አዎን 2. አይ	

ክፍል 2ከጤናተቋማትጋርበተያያዘየሚመለከቱጥያቄዎች

ተቁ	ጥያቄዎች	ምላሽ	ዝለል
1	ከቤትዎወደጤናተቋምየሚወስድብዎጊዜምንያህልነው	3. < 30 ደቂቃ 4. >30 ደቂቃ	
	ከዚህቀደምበጤናተቋምበጤናማየአኗኗርዘይቤማሻሻያላይምክርአግኝተውያውቃሉ	1. አዎን	

		2. አይ	
3	በቅራቢያዎበሚገኝየጤናተቋምውስጥየቤተሰብምጣኔንይጠቀማሉ	1. አዎን 2. አይ	
4	በአቅራቢያዎበሚገኝየጤናተቋምውስጥየቅድመጽንስአገልግሎትመስጫክፍልአለወይ?	1. አዎን 2. አይ	
5	ይህንንጤናተቋምለማግኘትየሚያስቸግርነገርአለዎትወይ?	1. አዎን 2. አይ	

ክፍል 3፡ በቅድመፅንስእንክብካቤላይየእናቶችእውቀትየተመለከቱጥያቄዎች

ተ ቁ	ጥያቄዎች	ምላሽ	አስተያት
1	በጽንስበፊት(ከማርገዝ) ስለሚደረግክትትልሰምተውያውቃሉ?	1. አዎ 2. አይ	
2	የቅድመጽንስክትትልያስፈልጋልብለውያምናሉ?	1. አዎን 2. አይ	መልስዎአይከሆንወደ አራተኛጥያቄይለፉ
3	ለ 2ተኛ ጥያቄመልስዎአዎንከሆነክትትሉለማንያስፈልጋልብለው ያምናሉ?	1. ለወንዶችብቻ 2. ለሴቶች, ብቻ 3. ለወንዶችእናለሴቶች 4. አላውቅም	
4	ከጽንስበፊትስለሚደረግክትትልጥቅምአለውብለውያስባሉ ?	1. አዎን 2. አዎን	
5	ከማርገዝበፊትስለሚደረግቅድመክትትልበጣምአስፈላጊነው ብለውያስባሉ?	1. አዎን 2. አይ	መልስዎአይከሆነወደ ጥያቄሰባትይለፉ
6	መልሰዎአዎንከሆንለማንያስፈልጋልብለውያስባሉ?	1. ለጽንሱብቻ 2. ለእናትብቻ 3. ለእናትናለህጻኑ 4. አላውቅም	
7	የቅድመጽንስክትትልየትእንደሚገኝያውቃሉ?	1. በቤትውስጥ 2. በጤናተቋም 3. አላወቅም	
8	የቅድመጽንስክትትልለመስጠትትክክለኛውአካልማንነውብለ ውያምናሉ?	1. ዶክተር 2. የጤናመኮንን 3. አዋላጅነርስ 4. የጤናኤክስቴንሽንባለሞያ 5. ሁሉምባለሞያዎችይሰጣሉ 6. አላውቅም	
9.	የቅድምጽንስክትትልበየስንትጊዜይሰጣልብለውያስባሉ?	1. አልፎአልፎ 2. ሁልጊዜ 3. በተከታታይነት 4. አላውቅም	
10	የቅድመጽንስክትትልአገልግሎትበአጠቃላይመቼእንደሚሰጥያ ውቃሉ?	1. ወዲያውኑከእርግዝናበፊት 2. በሁለትወራትየእርግዝናጊዜያትውስጥ 3. በወሊድጊዜ 4. ባለትዳሮችለማርገዝዝግጁሲሆኑ 5. በማንኛውምጊዜጥንዶችለማርገዝሲፈልጉ 6. በእርግዝናዎችመካከል	

		7. አላውቅም	
11	በቅድመጽንስክትትልወቅትየትኛውንየአናኗርዘይቤወይምባህሪወይምአካባቢያዊሁኔታዎችንመጠበቅይቻላል? (ከአንድበላይመልስመመለስይቻላል)?	1. አልኮሆልመጠጣት 2. ሲጋራማጤስ 3. አደንዛዥዕፅመድሃኒቶችንመውሰድ 4. ከመጠንበላይክብደትመጨመርእናከመጠንበላይክብደትመቀነስ 5. ጾታንመሰረትያደረጉጥቃቶችሰለባመሆን 6. አላውቅም	

ክፍል 4.የቅድመጽንስእንክብካቤአጠቃቀምንበተመለከተ

ተ ቁ	ጥያቄዎች	ምላሽ	ዝለል
1	ከዚህቀደምከማርገዝዎበፊትየቅድመጽንስክትትልከ ጤናተቋምአድርገውያውቃሉ?	1. አዎን 2. አይ	መልስዎአይደለምከሆን ወደጥያቄቁጥር 3 ይለፉ
2	ለአንደኛውጥያቄመልስዎአዎንከሆነየትኛውንየቅድመ ክትትልአገልግሎትወስደዋል?	1. ለታወቀየጤናችግርምርመራናህክምናተመርምሬናታከሜአለሁ 2. የአባለዘርህመምምርመራእናህክምና 3. ኤችአይ ቪ ኤድስምክርናምርመራአገልግሎት 4. የመካንነትምርመራ 5. የቴታነስክትባት 6. የአይረንታብሌትወስጃለሁ 7. ለታወቀህመምህክምናወስጃለሁ 8. ከዚህበፊትከእርግዝናጋርተያይዘውለተ ከሰቱችግሮች 9. ክብደትንለማስተካከል 10. አመጋገብንማስተካከል 11. መጠጥናሲጃራማቆምንበተመለከተ 12. አደንዛዥእጾችንለማቆም	
3	የቅድመእርግዝናክትትልወስደውከሆነየትነውአገልግ ሎቱንያገኙት?	1. ለማርገዝከማቀዴበፊት 2. ከማርገዜከሶስትወርበፊት 3. በሶስትወራትየእርግዝናጊዜያትውስጥ 4. በእርግዝናዎችመካከል 5. ሌላካለይግለጹ	
4	የቅድመጽንስእንክብካቤአገልግሎቱንያገኙትየትነ ው?	1. የመንግስትሆስፒታል 2. ጤናጣቢያ 3. ጤናኬላ 4. የግልክሊኒክ	

13.4.Annex IV Sidama version questioners