



# **To Evaluate Knowledge, Attitude, Practice of Natural Family Planning Method and Associated Factors among Reproductive Age Group of Women's at Jimma Town, Jimma Zone, South West Ethiopia**

**Vinod V. Bagilkar<sup>1</sup>, Dheeraj Lamba<sup>2\*</sup>, Rebecca Moren<sup>3</sup>, Markos Mehertab<sup>4</sup> and Rinu J. George<sup>5</sup>**

<sup>1</sup>Department of Nursing, School of Nursing, Faculty of Health, Institute of Health, Jimma University, Jimma, Ethiopia.

<sup>2</sup>Department of Physiotherapy, Faculty of Medical Sciences, Institute of Health, Jimma University, Jimma, Ethiopia.

<sup>3</sup>Nursing Management, Institute of Health, Jimma University, Jimma, Ethiopia.

<sup>4</sup>Jimma University Medical Centre, Jimma, Ethiopia.

<sup>5</sup>Department of Child Health Nursing, Shri Shankaracharya College of Nursing, Bhilai, Chhattisgarh, India.

## **Authors' contributions**

*This work was carried out in collaboration among all authors. All the authors played a key role in carrying out the study to a fruitful outcome. Implementation of the research, and data collection were done by the authors VVB, RM, MM and RJG. Study design, data analysis, and interpretation with proof reading were done by the author DL. Authors DL, RM and RJG also contributed in conceptualization of the research, revisions of the article and final approval of the version to be published.*

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## **ABSTRACT**

**Background:** The high fertility rate leading to the rapid growth of country's population is a major hindrance towards the development of a nation. Sub-Saharan Africa has the highest fertility rate in the world, which is further promoted by the low utilization of contraceptive methods. Yet, many

communities claim to have natural methods of family planning that pre-date the introduction of modern contraceptives, implying that contraception is a culturally acceptable norm.

**Objective:** To Evaluate the Knowledge, Attitude and Practice towards Natural family planning among reproductive age women of Jimma town, Oromia, Ethiopia.

**Methods:** Across sectional community based quantitative study was done in Jimma town, among reproductive age group women from February to March; 2020. A total of 399 sample size is calculated using single population proportion formula with a proportion (P) of 50 %. Systematic random sampling technique issued to draw the study participants among the target population. The data was collected using structured questionnaire adapted from similar and the tools modified to fit the local context. The collected data was tallied and analyzed by using scientific calculator.

**Results:** From the total of 399 respondents who responded the questionnaire Majority, 90% of women in Jimma town had a good level of knowledge of natural family planning methods. A positive attitude towards natural family planning methods was seen in (68%) of the respondents.

**Conclusion:** A fair level of knowledge of natural family planning methods is seen among reproductive women in Jimma town, yet differences in knowledge of specific natural family planning methods exist. Therefore, physicians and other health care providers' limited knowledge of and experience with Natural family planning methods inhibits broader use as reproductive age women reported getting information about NFFP methods from health providers and friends, therefore, their level of knowledge will depend largely on the information received.

*Keywords: Knowledge, Attitude, Practice, Jimma town, Natural Family Planning (NFP).*

## 1. INTRODUCTION

Family planning is the means by which individuals space the process of conception, pregnancy and childbirth at intervals mutually determined by both husband and wife in order to have the desired number of children that they can conveniently maintain. Family planning is also a means of assisting women who are unable to become pregnant. People everywhere have developed various means of family planning methods in fertility regulation for reasons such as ensuring better maternal infant health, paternal care for children, reducing the burden of poverty, improving standards of living, and quality education [1].

Research studies show that only 20% of the world populations are using modern family planning methods although about 96.5% have knowledge on family planning, indicating that the remaining population practice NFP methods or none at all. Challenges associated with the introduction of modern methods of family planning led to the need for an alternative but the utilization of natural family planning methods as an alternative is low and has not been emphasized in the literature. Natural family planning methods are methods that are used to either plan or prevent pregnancy by observing the natural signs and symptoms that occur during the fertile and infertile days of the menstrual cycle [2].

Natural family planning or fertility awareness refers to methods for family planning and preventing pregnancy by observing naturally occurring signs and symptoms of the fertile and infertile days of the menstrual cycles (If these methods are used to prevent pregnancy, the couple avoids intercourse on the days during menstrual cycle when the woman is mostly likely to become pregnant often called the fertile days. There are four types of fertility awareness methods and they include the following: the rhythm or calendar method: this is a method based on the fact that most women ovulate 12 to 16 days before each menstrual bleeding, no matter how long their menstrual cycle. The fertile phase identified by using a mathematical calculation to determine the fertile and infertile phases. Basal body temperature: This type of fertility awareness is based on the pattern of the body's temperature at rest. A woman's temperature rises slightly after ovulation and remains elevated during the rest of her cycle until menstruates. Monitoring the rise in temperature makes it possible to determine when the woman has ovulated and to calculate when her fertile days have passed. The woman using this method takes her temperature every day before she rises in the morning and carefully records it on the chart [3,4]. Some of the reasons for the low rate of contraceptive practice according to range from factors such as "fear of side effects, husband's objection, religious and cultural prohibition [4,5].

The socio demographic factors of the responders had varying influence on utilization of all three natural family planning methods studied. Rural dwellers practiced the lactational amenorrhea method significantly more often than urban dwellers. Significantly more Muslims than Christians with four children or more practiced coitus interrupts or the rhythm method, while the use of lactational amenorrhea method was significantly increased with the number of living children in both religious groups. There is a relatively low level of awareness of natural family planning methods in the study population, poor utilization and wrong use of methods. Therefore, improving the correct level of information on natural family planning methods is likely to improve the use of both natural family planning and modern contraceptive methods [6-8].

Records reveal that poor health status and poverty is largely linked to or associated with short intervals between births and large family size [9]. Research studies show that only 20% of the world population is using modern family planning methods although about 96.5% have knowledge on family planning, indicating that the remaining population practice NFP methods or none at all [10].

Worldwide, low utilization of NFP is a problem which indicates a need for a worldwide increase in health programs on NFP methods as the amount and quality of knowledge influences attitude and acceptance of NFP methods, which in turn influences its utilization [11].

In Nigeria study revealed that there is a low level of knowledge, wrong use and poor utilization of natural family planning methods in the population which also similar to a study by Kabonga et al which reveals that the problem of low utilization of NFP is worldwide and can also be related to low level of knowledge and negative attitudes towards its use [12-13].

There is scarcity of literatures in Ethiopia and particularly in the study set up, regarding knowledge, attitude and practice of natural family planning method and factors affecting among reproductive age of women. So the need of further study is unquestionable to assess knowledge, attitude and practice of natural family planning method and factors affecting among reproductive age of women.

### 1.1 Significance of the Study

- ❖ The findings from this study will add to the existing literature and is believed to

contribute important information for implementing better practice of maternal care that helps for minimizing the burden of maternal mortality.

- ❖ It will be also used as an input for researchers, health care providers and managers in improving the family planning services of patients.
- ❖ Information generated from this study can be used by health professionals, health care planners, managers and policy makers to save women's lives by improving the quality of family planning services provided.
- ❖ It is intended that this information will help or contribute to change policies and practices that will lead to improvements in improving family planning services.
- ❖ The information obtained from this study is expected to fill gaps seen on factors associated with natural family planning method which may vary among communities.
- ❖ The result of the study will also help to inform program managers to consider the important contributing factors for improving family planning coverage.
- ❖ The study will contribute for effective utilization of resources by coming up with relevant, evidence-based recommendations for addressing issues related with natural family planning method.

## 2. MATERIAL & METHODS

### 2.1 Study Area and Period

The study was conducted in Jimma town which is located 354KM South West of capital Addis Ababa. Based on the 2007 Census conducted by the Central Statistical Agency of Ethiopia (CSA), Jimma town has a total population of 120,960, of whom 60,824 are men and 60,136 women, Jimma has a population density of 2,394.30 all are urban inhabitants. A total of 32,191 households were counted in this Jimma town, which results in an average of 3.76 persons to a household, and 30,016 housing units. The study was conducted from February to March, 2020. Jimma is a multi-ethnic and biggest town in south west region of Ethiopia the outcome of the study would help better understanding the lacunae among smaller towns of south west Ethiopia

### 2.2 Study Design

A community based cross sectional study design.

## 2.3 Population of the Study

### 2.3.1 Source population

The source populations for this study were all reproductive age group women living in Jimma town.

### 2.3.2 Inclusion criteria

- ❖ Females with age group of 15-45 years
- ❖ Married, single mother or Divorced
- ❖ No underline past medical history
- ❖ Able to read and write
- ❖ Translator to make the questionnaire understand by the participant.

### 2.3.3 Exclusions criteria

- ❖ If the mother was unable to give enough information
- ❖ Uncooperative subjects

## 2.4 Data Collection Instrument

The Data was collected using structured questionnaire adapted from different studies and modified to fit the local context. The questionnaire was focus on socio-demographic, Knowledge, Attitude and practice.

## 2.5 Sample Size and Sampling Technique

The sample size was determined by using single population proportion formula with the following assumptions: proportion of reproductive age group women who have knowledge towards natural family planning method is 50 %( $p=0.5$ ) to get maximum sample size, 95% confidence interval ( $Z=1.96$ ) and margin of error ( $d=0.05$ ).The study subjects were selected using systematic random sampling techniques.

## 2.6 Variables

### 2.6.1 Dependent variable

- ❖ Knowledge
- ❖ Attitude
- ❖ Practice of natural family planning method

### 2.6.2 Independent variables

- ❖ Age
- ❖ Ethnicity
- ❖ Marital status

- ❖ Educational status
- ❖ Monthly family income
- ❖ Occupation
- ❖ Preferred family size
- ❖ Previous Obstetric conditions like parity, gravidity, previous preterm, stillbirth, pregnancy induced hypertension

## 2.6.3 Natural family planning method

- ❖ **Good Knowledge:** Mothers who respond 75% and above of knowledge questions on natural family planning are knowledgeable
- ❖ **Poor Knowledge:** Mothers who respond below 75% questions on natural family planning
- ❖ **Positive attitude:** Mothers who respond 50% and above attitude questions on natural family planning
- ❖ **Negative attitude:** Mothers who respond below 50% attitude questions on natural family planning
- ❖ **Good Practice:** Mothers who respond below 50% practice questions on natural family planning
- ❖ **Poor practice:** Mothers who respond below 50% practice questions on natural family planning
- ❖ **Natural contraceptive method:** any of the methods including Rhythm method, coitus interrupts, and the like.

## 2.7 Data Collection Tools and Procedures

### 2.7.1 Data collection instrument

The Data was collected using structured questionnaire adapted from different studies and modified to fit the local context. The questionnaire was focus on socio-demographic, Knowledge, Attitude and practice. The questionnaire was used for a pilot study on 20 participants (5% of the target population) which were not the part of the actual sample size of the study.

### 2.7.2 Data collection process

Data was collected by data collector through face-to-face interview methods using structured questionnaire. The questionnaire was prepared in English language and was translated to local language. Data collector was trained for one day about objectives, questionnaires, and interview technique before the go to data collection. The number of data

collectors were 4 and one supervisor were allocated to closely supervise the process of data collection.

**2.7.3 Data processing and analysis**

The data was collected, analyzed and tallied manually by using scientific calculator. The collected data was described, analyzed and interpreted using tables, graphs and charts by descriptive analysis.

**2.7.4 Data quality control**

The questionnaire was pre-tested by four data collectors and one supervisor was recruited as well as training was given. At the end of each day, the questionnaire was checked for completeness and consistency by the supervisors.

**2.8 Dissemination Plan**

At the end of data collection, processing and analysis, the result was disseminated to CBE Coordinating office, School of Nursing and concerned bodies in the study area by using hard copy.

**3. RESULTS**

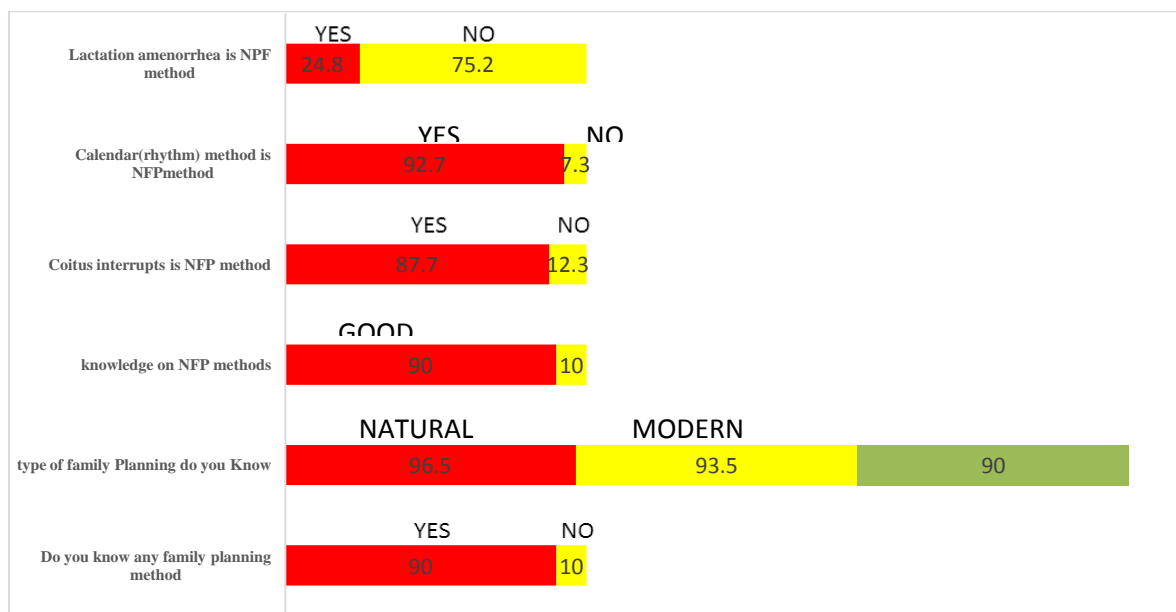
Above Table 1 shown as, from the total of 399 respondents who responded the questionnaire (response rate 100%) in the kebele, 40% were age of 15 to 24 and majority of respondents were from Oromo 60%. About religion 60% of respondents were Muslims and 48.8% of respondents attended Higher education. Majority of them work as Merchant which counts about 47.6% and 57.6 were single. 60% of respondent's place of birth was urban. (Table 1).

**Table 1. Socio demographic characteristics of reproductive age women in Jimma town**

	Characteristics	Number	%
Age	15-24	160	40
	24-33	145	36.4
	33-45	94	23.6
	Total	399	100
Ethnicity	Oromo	240	60
	Amhara	60	15
	Tigre	34	8
	Others	65	16
	Total	399	100
Religion	Muslim	240	60
	Orthodox	65	16
	Protestant	60	15
	Catholic	34	8
	Total	399	100
Occupational Status	House Wife	25	6
	Government Employee	150	37.6
	Merchant	190	47.6
	Daily laborer	34	8.5
	Total	399	100
Level of Education	Illiterate	34	8.5
	Primary education	25	6
	Secondary	145	36.3
	Higher	195	48.8
	Total	399	100
Place of birth	Rural	159	40
	Urban	240	60
	Total	399	100
Marital status	Married	139	34.8
	Single	230	57.6
	Divorced	30	7.5

**Table 2. Knowledge of Natural family planning method among reproductive age women in Jimma town**

Sl .no	Characteristics	Answer	No.	%
1	Do you know any family planning method	Yes	360	90
		No	39	10
2	Which type of family Planning do you Know	Natural	385	96.5
		Modern	373	93.5
		Both	360	90
3	How do you rate your knowledge on natural family planning methods?	Good	360	90
		Poor knowledge	39	10
4	Coitus interrupts is Natural family planning method	Yes	350	87.7
		No	49	12.3
5	Calendar(rhythm) method is natural family planning method	Yes	370	92.7
		No	29	7.3
6	Lactation amenorrhea is natural family planning method	Yes	99	24.8
		No	300	75.2

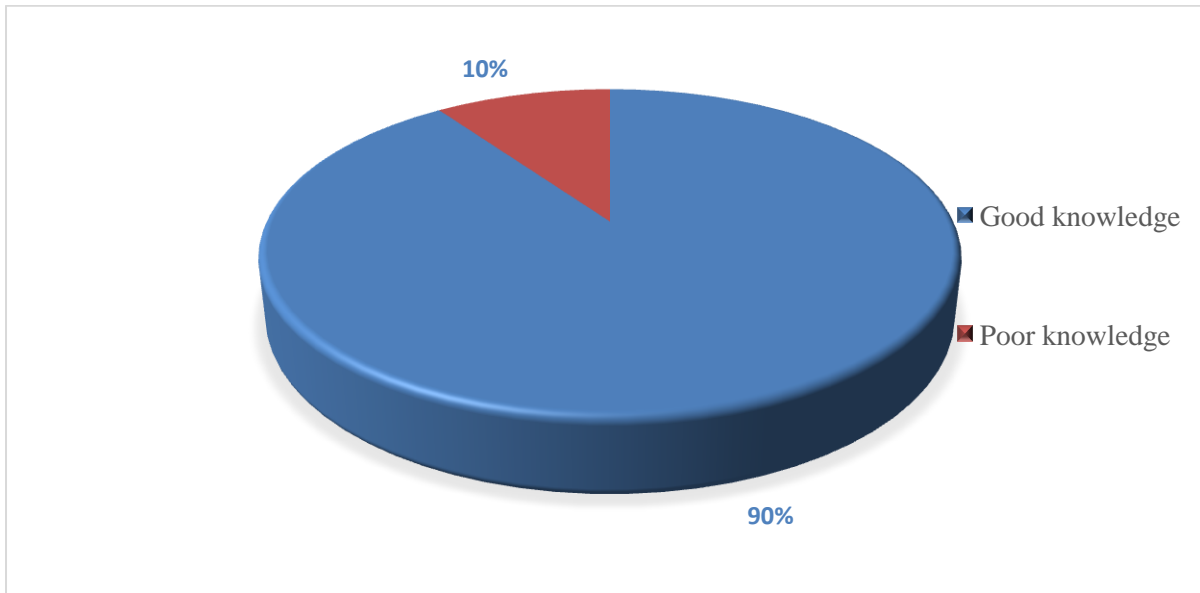


**Fig. 1. Explain about Knowledge of Natural family planning method among reproductive age women in Jimma town**

Table 2 and Fig. 1 replicates about Knowledge of Natural family planning method among reproductive age women in Jimma town in which, Majority of respondents 360 (90%) know about family planning method. Majority 373 (93.5%) of the respondents know modern and 385(96.5%) know natural type of family planning method. Majority 360 (90%) of respondents know both type of family Planning (natural & modern). Majority of respondents 360 (90%) rate Good knowledge on natural family planning methods. Most of respondents 350 (87.7%) stated Coitus

interrupts is natural family planning method, Majority 370 (92.7%) responded Calendar (rhythm) as natural family planning method and 900 (75.2%). Lactation amenorrhea as Natural family planning method.

As the cumulative score of knowledge question is  $\geq 75\%$  based operational definition 90% of respondents were knowledgeable on natural family planning methods and 10% had poor knowledge.



**Fig. 2. Magnitude of knowledge on natural family planning method among reproductive age women in Jimma town**

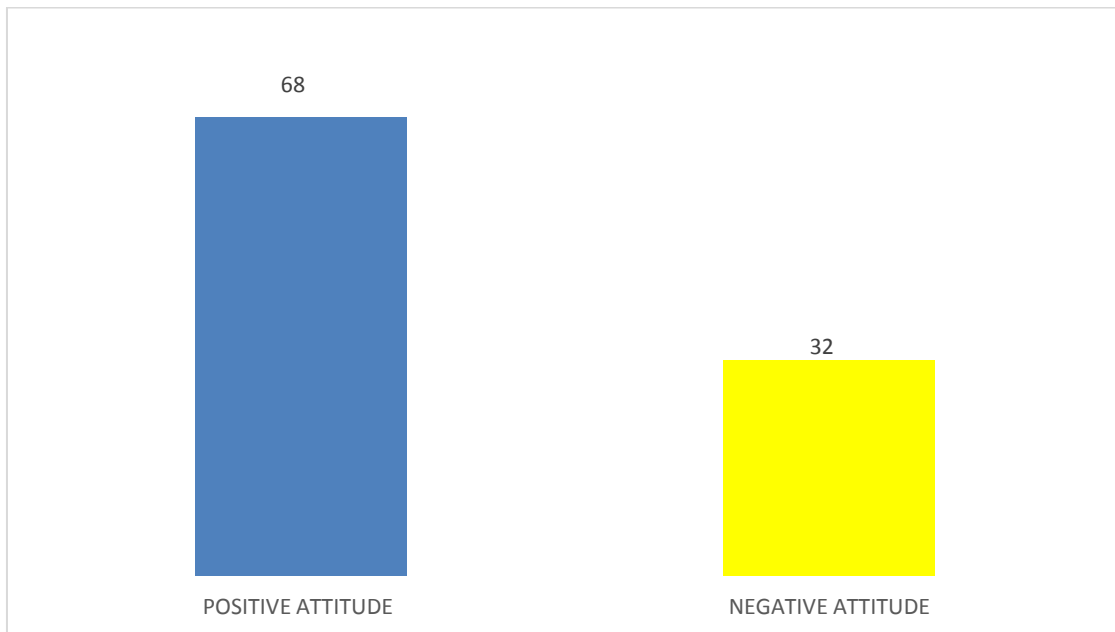
**Table 3. Attitude of towards Natural Family Planning method among reproductive age women in Jimma town**

Variable	Frequency	Percent
Natural family planning method is safe?		
Agree	29	7.3
Disagree	370	92.7
Neutral	0	0
No birth control method is effective		
Agree	53	13.4
Disagree	290	72.7
Neutral	55	13.9
NFP is too difficult to use.		
Agree	128	32.1
Disagree	246	61.6
Neutral	25	6.3
My husband and I cannot abstain from sex during the fertile period		
Agree	215	53.9
Disagree	148	37.1
Neutral	36	9
My culture disapproves Natural family planning methods	Agree	
Disagree	94	23.5
Neutral	170	42.6
	135	33.9
My husband does not support NFP methods.		
Agree		
Disagree	157	39.4
Neutral	153	38.4
	89	22.2
Periodic abstinence will interfere with my sex-life		
Agree	269	67.3
Disagree	36	8.9
Neutral	94	23.8

Above Table 3 show as, Majority 370 (92.7%) of the respondent Disagree on natural Family planning method is safe. More than half 290(72.7%) of the respondent Disagree on No birth control method is effective. More than half 246(61.6%) of the respondent not agree on NFP is too difficult to use. About half 215 (53.9%) of the respondent agree on my husband and I cannot abstain from sex during the fertile period. Lower than half 170(42.6%) of the respondent disagree on my culture disapproves Natural family planning methods. Lower than half

170(42.6%) of the respondent disagree on my culture disapproves Natural family planning methods. Lower than half 157(39.4%) of the respondents agree as their husband does not support NFP methods. More than half 269(67.3%) of the respondent agree on Periodic abstinence will interfere with my sex-life.

As the cumulative score of attitude question is  $\geq$  50% based operational definition more than half 271(68%) of respondents has positive attitude and 128(32%) has negative attitude.



**Fig. 3. Magnitude of attitude on natural family planning method among reproductive age women in Jimma town**

**Table 4. Practice of Natural Family Planning method among reproductive age women in Jimma town**

Characteristics		Number	%
Have you ever used natural family planning before	Yes	49	12.3
	No	350	87.7
	Total	399	100
If yes, was it effective?	Yes	30	61.2
	No	19	38.8
	Total	49	100
Have you ever Practice of Rhythm/calendar method?	Yes	40	10
	No	359	90
	Total	399	100
Have you ever Practice of Coitus interrupts	Yes	9	2.2
	No	390	87.8
	Total	399	100
Have you ever Practice of Lactation amenorrhoea in the last delivery	Yes	20	5
	No	379	95
	Total	399	100



Characteristics		Number	%
Would you recommend natural family planning to another client	Yes	25	6.2
	No	374	93.8
	Total	399	100
Are you currently using any Natural family planning method?	yes	9	2.2
	No	390	97.8
	Total	399	100

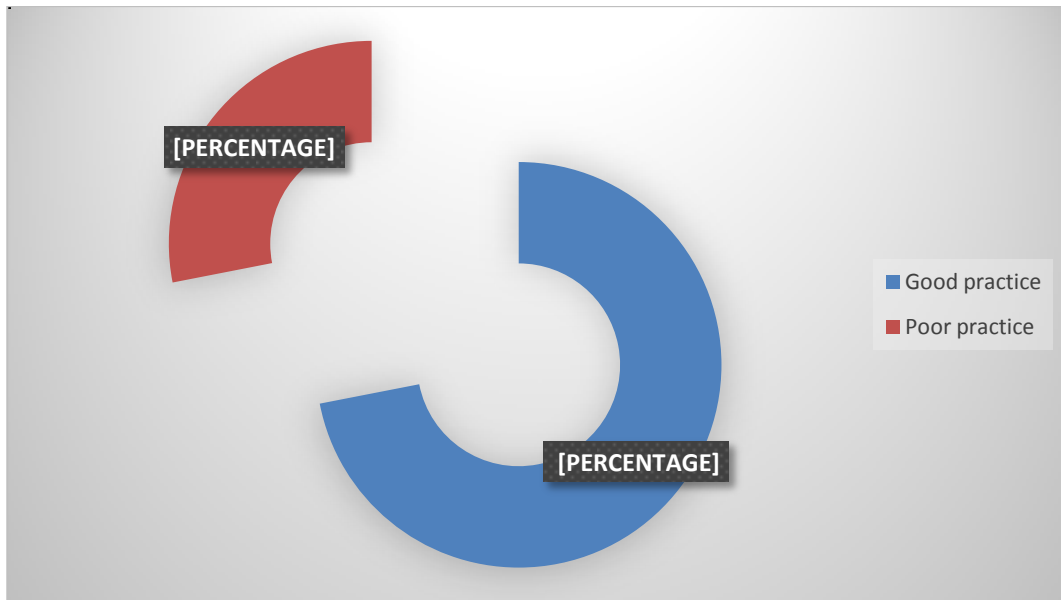


Fig. 4. Magnitude of practice on natural family planning method among reproductive age women in Jimma town

Table 5. Association between Knowledge, Attitude and Acceptance of NFP and the Use of Natural Family Planning Methods

	Practice	Knowledge	Attitude
Pearson Correlation	1	.393*	-0.017
Utilization Sig. (2-tailed)	51	0.013	0.904
N	.393*	39	51
Pearson Correlation	0.013	1	.460**
Knowledge Sig. (2-tailed)	39	60	0
N	0.357	.377**	60
Pearson Correlation	0.068	0.003	0.057
Acceptance Sig. (2-tailed)	51	60	0.596
N	-0.017	.460**	89
Pearson Correlation	0.904	0	1
Attitude Sig. (2-tailed)	51	60	89
N			

\*Correlation is significant at the  $P < 0.05$  level in multivariate analysis (2-tailed). \*\*Correlation is significant at the 0.01 level in multivariate analysis (2-tailed).

Most of respondents 350 (87.7%) never used natural family planning before and 359 (90%) of them never Practice Rhythm/calendar method, 390 (87.8%) never Practice Coitus interrupts and 379 (95%) never practice Lactation amenorrhea in the last delivery. Majority of 374 (93.8%) never

recommend natural family planning to another client and 390 (97.8%) currently were not recommend for natural family planning.

As the cumulative score of practice question is  $\leq 50\%$  based operational definition 287(72%) of

respondents had good practice and 112(28%) has poor practice.

Table 5 replicates about correlation, 2-tailed test was conducted with Karl Pearson correlation formula. Correlation of Knowledge with attitude was significant associated at 0.01 level, knowledge with practice was significant associated at 0.01 level. Attitude with practice was significant associated at 0.05 level.

#### 4. DISCUSSION

Socio-demographic data of respondents revealed that majority of the respondents are within the ages of 24-33 years which different from study stating Socio-demographic data of respondents revealed that majority of the respondents are within the ages of 39-47 years.

Our result shows that majority, 90% of women in Jimma town had a good level of knowledge of natural family planning methods which is contradicted with study stating that majority, 63% of respondents had a moderate level of knowledge of natural family planning methods study stating low level of awareness and low utilization of natural family planning methods among the African population [5,14-15]. This corroborates the results from other studies that revealed a low level of awareness about natural family planning methods as well as minimal or incorrect knowledge of natural family planning among the general population [16,17-18]. In line with findings of this study was a research conducted by Ikechebeluet al. [19] in Maiduguri, Nigeria which shows a high level of knowledge among (80%) among study participants, also contradicting this study Wilcox A Jet al reported a high level (95.8%) of awareness of family planning methods among the respondents but a lower knowledge of natural family planning methods by the few who practice family planning [20].

The study revealed the overall modern FP utilization among the study participants was 18.4%. This finding is consistent with the study conducted in Bale zone, Southeast Ethiopia (20.8%), but much higher than that of Afar Region, Eastern Ethiopia (8.5%). The variation might be due to the study population, as the first study was conducted among the pastoralist community. Our study finding is relatively higher than that of Dembia District (78.1%), Northwest Ethiopia, and Afar Region (62%), Eastern Ethiopia, but lower than studies from Uganda

(98.1%), Tanzania (98.8%), and Butajira (99%) in Central Ethiopia which reported almost universal knowledge of modern FP methods. The difference may be attributed to the wide variation in culture and socioeconomic characteristics of study participants [21].

This results showed that a positive attitude towards natural family planning methods was seen as majority(68%) of the respondents has positive attitude which is similar with study stating a positive attitude towards NFP methods was seen as majority (73.4%) of the respondents agreed that NFP is not difficult to use; they could abstain from sex during their fertile period with their husbands; that their culture does not disapprove it, their husbands support the method and periodic abstinence will not in any way affect their sex life [22]. This finding is also supported by Leonard et al., [23] who reported that NFP methods are easy to use and periodic abstinence does not in any way affect sex life but increases relationship satisfaction.

The study results show that most 72% of the respondents approve the practice of natural family planning which is similar with study results show that most, 69.7% of the respondents approve the practice of natural family planning because they find it safer and effective and will choose natural family planning methods over artificial methods [22]. This finding is supported by Ikechebulu et al [24] who reported that traditionally, Nigerian women prefer the use of natural family planning methods. Also supporting this view, Leonard et al [23] stated that most women of reproductive age are interested in the use of natural family planning.

Findings revealed that most of the respondents currently use natural family planning methods and most of the respondents have used natural family planning methods in the past, frequently used natural family planning methods during their fertile period which signifies that the utilization of natural family planning methods among the study population is high. This is contradicted by a study by Uchimura et al [18] which showed a low actual use/utilization because of the lack of information by health professionals about the real effectiveness and applicability [25].

Result revealed that there is a statistically significant relationship between knowledge, acceptance, and utilization of natural family planning, while no significant relationship exists between attitude and utilization of natural family

planning among women of Jimma town which implies that the level of knowledge of natural family planning methods among women of Jimma town and their acceptance of these methods will affect their utilization of natural family planning methods. This is in line with various research studies which reveal that knowledge of natural family planning methods and acceptability of these methods directly affects its utilization [27]. The lower the level of knowledge and acceptance, the lower the utilization of natural family planning methods or the poorer its utilization [17]. Moreover, the finding revealed that the level of knowledge of natural family planning methods is a predictor of natural family planning utilization. This finding is in line with the study of Uchimura et al [18] who reported that there is a correlation between level of knowledge and the utilization of natural family planning methods.

## 5. CONCLUSION

The analysis of this study provides information on the knowledge, attitude, and practice of natural family planning methods among reproductive women in Jimma town. Results demonstrate a fair level of knowledge of natural family planning methods among reproductive women in Jimma town, yet differences in knowledge of specific natural family planning methods exist, revealing that the problem of low to good level of knowledge of natural family planning methods is still a global problem, particularly in Jimma town. Substantial proportion of reproductive age women had positive attitudes and practice towards NFP methods and approved of it, hence more room for increasing NFP method usage in the study population.

## 6. LIMITATIONS AND RECOMMENDATION

As the study indicated information from health care providers and friends as the major sources where reproductive age women learn about natural family planning methods, the Jimma town should improve on the existing strategies in propagating the practice of natural family planning. This can be done by the encouragement of male involvement alongside their wives; hospital/health center should be organized, such that both men and women can receive services on reproductive health issues for effective practices of natural family planning

to be achieved. There should be training and re-training programs for health care providers about NFP methods and in other areas necessary and educational forums should be set up for workers within various institutions where they will receive useful and correct teachings about NFP methods, types of these methods, including correct use and effectiveness rates. Various posters including leaflets can be made available in family planning clinics and even distributed in institutions to workers to create understanding and awareness among the general population. Furthermore, in as much as people cannot be made to disregard the importance of culture and religion in reproductive health issues, community and religious leaders should be encouraged and involved by government to teach messages that will encourage, enlighten and change the resistant behaviors people have on reproductive health issues. Physicians and other healthcare providers' limited knowledge of and experience with NFP methods inhibits broader use as reproductive age women reported getting information about NFP methods from health providers and friends, therefore, their level of knowledge will depend largely on the information received. As such, factors for solving this problem are hospital and community-related and it requires social measures and conduction of educational programs to give a lasting solution, that is, improve the level of knowledge, which will in turn improves the attitude, acceptance, and utilization of NFP methods.

## DATA AND MATERIALS AVAILABILITY

All data associated with this study are present in the paper.

## CONSENT

Written and Oral informed consent was obtained from all individual participants included in the present study. Finally, respondents were requested for their verbal consent to participate in the study after informing their participation is entirely based on their willingness to do so. After which detailed explanation was given on the purpose of the study including the benefit of the study. Moreover, confidentiality was assured for the information provided by using coding system rather than stating the name of study participants.

## ETHICAL APPROVAL

Ethical clearance was obtained from Department of Nursing, Institute of Health Sciences, Jimma University through a letter of permission prior to the initiation of data collection.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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