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Assessment of Knowledge, Attitudes and Practices on Preconception Care among Postnatal Women in Kamrup Rural District, Assam

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Abstract

This study assesses the knowledge, attitudes and practices on preconception care among the postnatal women in a selected rural community of Assam. A comprehensive structured interview schedule for knowledge, structured rating scale for attitude and semi-structured interview schedule for practices were designed to collect the primary data from the interviewee. A simple random sampling technique was used to select 400 women who were fulfilling the sampling criteria. The findings of the present study suggest that, in general, the majority of respondents (71.17%) considered for this possesses poor knowledge regarding preconception care. A similar qualitative trend for attitudes was also obtained among the entire population. The study found only 28.5% interviewee to have positive attitudes on preconception care. Furthermore, with regard to the practices, it was found that a vast majority (84%) of the respondents did not use preconception care, which reflects a gross poor awareness regarding this fundamental issue. This observation is supported by unsatisfactory responses by the respondents in several key parameters of the three realms of preconception area covered by this work: knowledge, attitude and practice. Modifications for the risk behavior in relation to preconception care were not felt need by the majority of the surveyed respondents. Only few respondents of this study went for preconception health checkup, only because they had pre-existing health disorder.

Keywords: Assessment, Preconception Care, Postnatal Women.

1. Introduction

Preconception care is a fundamental component of reproductive health of a woman which primarily focuses on identification and evaluating the factors that are potential to invoke any ill effect on her and her pregnancy outcomes when she becomes pregnant (Pillitteri, 2010; WHO, 2013)[1, 2]. This component implies to a set of interventions that identify and modify bio-medical, behavioral and social risks to woman's health and future pregnancies which are aimed at both the partners in achieving optimum health prior to conception. Preconception care is particularly undertaken to promote the health of women attaining reproductive age before conception including maintain normal Body Mass Index (BMI) and folic acid supplementation (0.4 to 1 mg/ day) starting at least 4 (four) weeks prior to conception (Dean, et al., 2014; David, et al., 2015; Konar, 2023)[3, 4, 5]. It is aimed at preventing or

reducing the pregnancy related difficulties, such as low birth weight, premature birth, and infant mortality (Konar, 2023)[5]. Preconception phase is the time duration to identify any risk factors that could potentially affect the perinatal outcome adversely.

A methodical approach of preconception health care promotion that is backed by evidence-based practices can bring considerable positive effect on a range of health outcomes. Preconception care can play important role on various aspects of maternal and new born mortality and morbidity. For example, it reduces or prevents maternal and child mortality, unintended pregnancies, complications during pregnancies and delivery, still births, preterm birth and low birth weight, birth defect, neonatal infections, underweight and stunting, vertical transmission of HIV/STIs, the risk of some form of childhood cancers, the risk of type 2 diabetes and cardiovascular disease later in life (WHO, 2013; Withanage, et al., 2022)[2, 6]. The information and investigations undertaken and advised during preconception checkup include a thorough history taking of the women including her family history, medical history, menstrual history, and obstetric history, method of contraception, medication, occupation, diet, smoking, and alcohol consumption. The investigations should incorporate height and weight measurements, blood pressure, urinalysis, stool sample, blood test-hemoglobin, folic acid and vitamin levels, rubella immunity, VDRL, haemoglobinopathies, lead and trace elements, cervical smear, high vaginal swab. Similarly, the male is advised to undergo a semen analysis (Marshall, et al., 2016)[7]. In comprehensive preconception care, certain risk factors like chronic disease, infectious disease, gynecological disease, bad obstetrical history, genetic or inherited disease, certain medical treatment (antiepileptic drugs, oral anticoagulants), personal risk behaviors, exposure to chemicals and environmental toxins, consumption of over-the-counter medications must be taken into consideration (Marshall, et al., 2016)[8].

2. Methods and Materials

The present article adopts a survey approach and descriptive research design to achieve the key objectives that has been identified for the study.

2.1. Study Variable:

Demographic variables: This study considers- age, educational qualification, occupation of the woman and her husband, monthly per capita income, duration of marriage, number of living child, type of family, nearest health facilities available, as the key demographic variables that are likely to have significant consequences on the outcome of the study.

Research Variables: In the present study research following variables was included:

a. Knowledge on preconception care among postnatal women of Kamrup (Rural) district.
b. Attitudes on preconception care among postnatal women of Kamrup (Rural) district.
c. Practices on preconception among postnatal women of Kamrup (Rural) district.

2.2. Setting of the study

The Kamrup (Rural) District of Assam was selected as the study area for this present research. The study population considered for it comprised of the entire postnatal women (up to 6 weeks of postnatal period) of the Kamrup (rural) district who have registered in MCH register. The accessible population was from four selected Block Primary Health Centres (BPHCs) of Kamrup Rural district of Assam.

2.3. Sample and sample size

Calculated sample size is 400. Sample is selected by two stage simple random sampling method to from each of the selected BPHC proportionately.

Sample selection criteria

The following inclusion criteria were adopted to collect data from the interviewee:

a. Women registered in integrated RCH (Reproductive Child Health) Register of the respective BPHCs.
b. Women who were available during study period up to 6 weeks after birth.
c. Women willing to participate in the study.

Furthermore, following parameters were considered as exclusion criteria:

a. Women staying in maternal home during data collection period
b. Women or the baby who were seriously ill.

2.4. Data collection tools and technique

Semi structured interview schedule was used to collect basic socio-demographic data of the respondents. A structured knowledge questionnaire was designed to assess the knowledge on preconception care which contents 12 numbers of parameters. Based on Mean knowledge score and standard deviation (SD), knowledge level is classified as: Poor = < Mean – SD; Good = Mean – SD to Mean + SD, and Excellent = Mean + SD. Four point Likert scales were used to assess the attitude of the women towards preconception care. A semi structured tool was used to collect information regarding practices of preconception care among the postnatal mothers.

Data collection procedure

After acquiring formal administrative permission, the list of BPHCs was selected, out of which 4 BPHCs were randomly chosen by adopting lottery methods. T he Sub-divisional Magistrate and Health Officer (SDM & HO) and female health worker of each selected BPHC were approached and they were explained the purposes of the study and data collection procedure. From the integrated RCH (Reproductive Child Health) register, list of the women up to 6 weeks after delivery were prepared. Lottery method was used to select the sample from each BPHC. With the help of ASHA (Accredited Social Health Activist) and Anganwadi workers the study subjects were meeting either at convenient places forthem or at their residence place. The meeting was scheduled beforehand to meet the subjects as per their suitability. The purpose of the study was elaborated to the selected women and informed consent was obtained from those who were willing to participate. Assurance was given to maintain confidentiality about the study. Data was collected from the subject applying validated and reliable tool. Total time taken for each woman was 25-30 minutes.

2.5. Ethical consideration

Ethical permission was obtained from ethical committee, Guwahati Medical College, Guwahati. Administrative permission was obtained to conduct the study in the selected BPHCs from the Joint Director of Health Services, Government of Assam.

3. Results

3.1. Background of the respondents

Based on the findings of the survey conducted for this study, it was found that majority (83.5%) of the total respondents belong to 21 to 35 years of age group (Table 1). 93.5% of the total respondents was housewives, unlike the husbands who were engaged in several professions, and among them farmer and daily wager were commonest (22.8%) as shown in Table 1. It was also observed that about 48% of the total respondents had income of less than Rs. 974.00 per month per capita (Table 1). In connection with the family architecture, this study observed that 65.7% were from joint

family. In religious aspect it was observed that 97% of the total respondents were Hindu in religion, 1.5% was Muslim, and 5% were Christian.

Table 1: Date showing socio-demographic distribution of the respondents (N = 400)

Sl. No.	Demographic profile	Percentage
1	Age	
	≤ 20 years	14.5
	21-35 years	83.5
	>35years	2
2	Occupation of the respondent	
	Anganwadi worker	0.3
	Weaver	6
	Daily wage	0.3
	Housewife	93.5
4	Occupation of the respondent	
	Shopkeeper	2.8
	Daily wage	22.8
	Driver	12.3
	Farmer	22.8
5	Per capita per month income	
	<Rs 974	48
	Rs 975-2935	41.3
	>Rs 2935	10.8

Majority (57 %) of the total respondents had both secondary or more than secondary education and few (10.5%) of the total respondents had no formal education (Figure 1). Similarly, 73.5.5% of the total respondents' husbands had either secondary or more than secondary education and only 5.5% had no formal education (Figure 1).

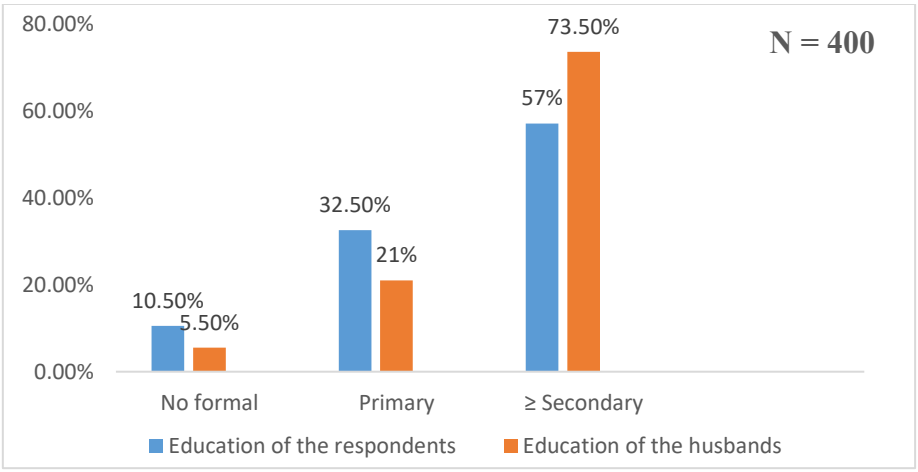


Figure 1. Percentage distribution of respondents as per education level.

The finding presented in this study suggests that highest fraction (41.5%) of the total respondents had 3-5 years and only 3.8 % had more than 10 years of married life. It was also found that majority of the total respondents (57.5%) had only one living child and only 1.5% had more than 3 numbers of living children (Table-2). This survey report also shows that sub-Centre was the nearest health care facilities available for the majority of the total respondents (84%) (Table 2). This study finds that proper transportation facilities were not available to communicate to the nearest health care setting and walking or auto rickshaw are the two principal mode of transportation for the women in general.

Table 2. Percentage distribution of the respondents as per their duration of marriage, number of living child, nearest health care facility available (N = 400)

Sl.No.	Demographic profile	Percentage
1	Duration of marriage	
	≤2 years	35
	3-5years	41.5
	6-10years	19.75
	>10years	3.8
2	Number of living child	
	One	57.5
	Two to three	41
	Four to five	1.5
3	Types of nearest health care facilities	
	SC	84
	PHC	13.3
	CHC	2.8

3.2.Knowledge on preconception care

It was found that 71.11% of the total respondents had poor knowledge, only 28.9% had good knowledge and no one has excellent level of knowledge on preconception care. Data suggest that only 3.2% of the total respondents had clear understanding about the meaning of preconception care (Figure 2). Same analysis also reflects that 12.8% of total respondents had clear understanding on components of preconception care (Figure 2). Regarding the importance of preconception care only 18.88% of the total respondents gave correct responses. Bar diagram also shows that only 8.5% of the total respondents aware about the sources of preconception care.

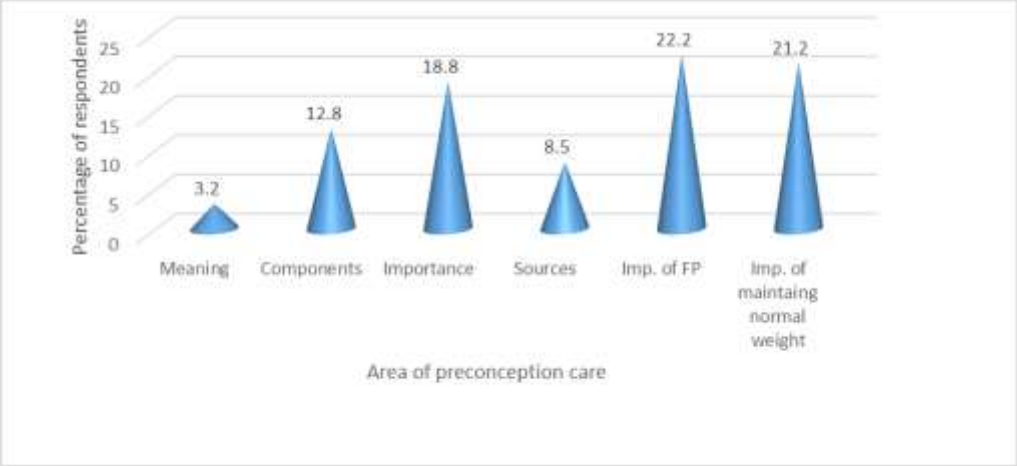


Figure 2. Distribution of respondents as per their knowledge on different areas of preconception care (N = 400).

The survey result presented in Figure 2 also shows that 22.2% of the total respondents had clear understanding about the importance of family planning during preconception period. On the other hand, the findings of the present study suggest that 21.2% of the total respondents had clear understanding about importance of maintaining normal weight during preconception period.

Data presented in Table 3 shows that 37.2% of the total respondents had given correct responses related to side effects of smoking or chewing tobacco during preconception period. The findings show that 31.2% of the total respondents gave the correct responses regarding the side effects of alcohol intake during preconception period. The findings suggest that 32 % of the total respondents gave the correct responses regarding avoidance of toxic environment during preconception period. Similarly, regarding the awareness about the importance of proper treatment of any medical disorder before conceiving was found correct in only 39% of the total respondents. The present survey finds that 41 % of the total respondents were aware about importance of having a healthy eating pattern during pre-conception period. It was also observed that 33% of the total respondents gave correct responses regarding avoiding of any type of stress before conceiving (Table 3).

Table 3. Area wise distribution of knowledge score of the respondents (N = 400)

Sl. No.	Knowledge area	Percentage
1	Side effect of chewing tobacco during preconception period	37.2
2	Side effect of alcohol intake during preconception period	31.2
3	Avoidance of toxic environment during preconception period	32
4	Proper treatment of any medical disorder before conceiving	39
5	Have a healthy eating pattern during preconception period	41

6	Avoiding of any type of stress before conceiving	33

3.3.Attitudes on preconception care

Observation of the data collected during this study suggested that 71.5% of the total respondents had negative attitude on preconception care. This study finds that only 9.5% of the total respondents strongly agreed and 35.5% agreed with the statement of if preconception health of a woman determines the pregnancy outcome (Figure 3).

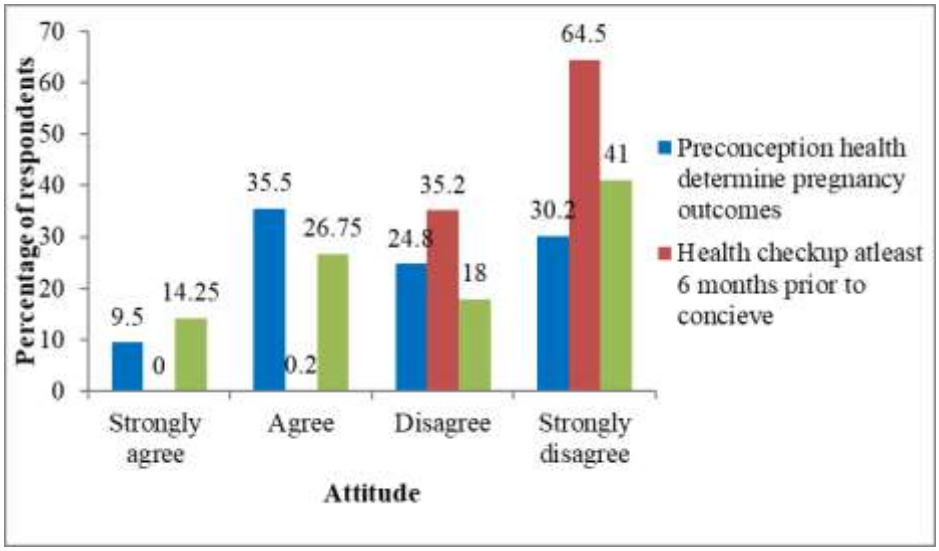


Figure 3. Percentage distribution of the respondents as per their attitude on preconception care.

The present study (Figure 3) reflects that only a few (0.2%) of the total respondents agreed with the importance of health check-up at least six months prior to conception. It is clear from Figure 3 that only 14.25% of the total respondents were strongly agreed and 26.75% were agreed with importance of taking care of health at least six months prior to conception.

3.4. Practices on preconception care

3.4.1. Planned pregnancy

It was observed during this study that 84% of the total respondents did not plan their last pregnancy. Among them 6.5% had planned their last pregnancy 6 months prior and 9.5% had planned 1 year prior to conception.

3.4.2. Use of family planning devices

This study shows that, 73% of the total respondents did not use any of the family planning devices. Only 18% of the total respondents used OCP and 9% had used CuT as the family planning devices (Figure 4)

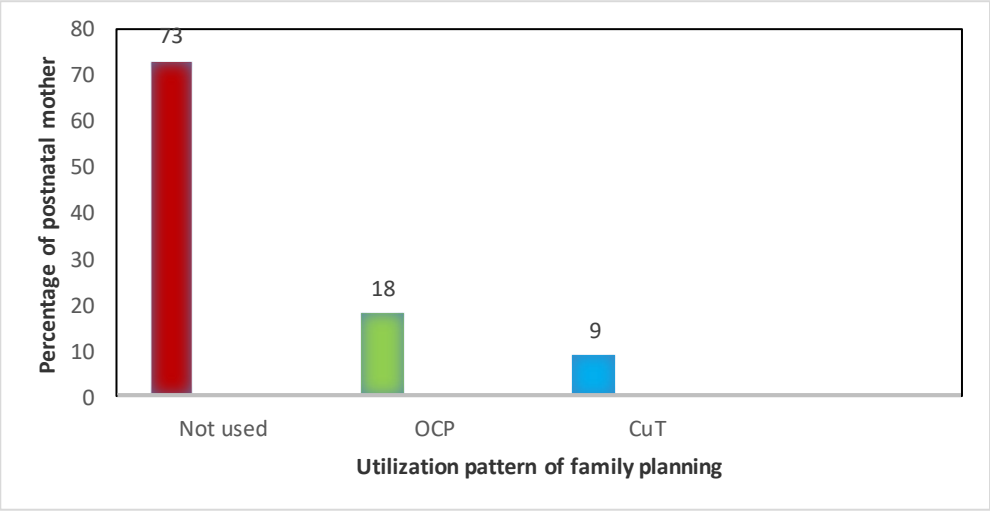


Figure 4. Distribution of respondents a per their utilization pattern of family planning methods (N = 400).

3.4.3. Status of health problems before pregnancy

Figure 5 show that 84% of the total respondents did not have any health problems prior to conception. The most common problems identified were anemia (4.5%), fever (2.3%), dysmenorrhea (5.3%) and burning micturition (4.25%).

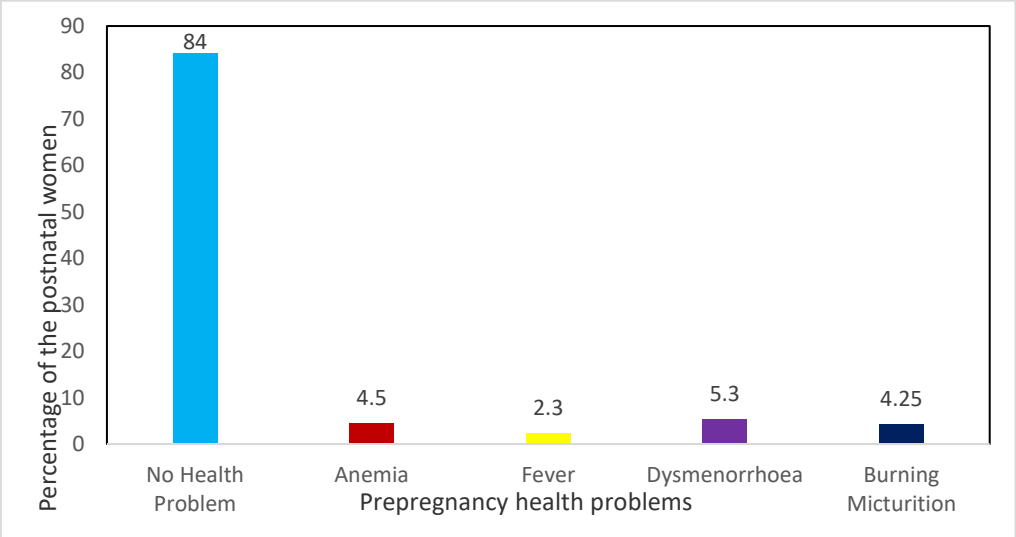


Figure 5. Distribution of the respondents as per existing health problems prior to last pregnancy (N = 400).

3.4.4. Prevalence of any risk behavior

It was found that 69% of the total respondents had no risk behavior, but 18.75% had habit of chewing betel nut and 12.25% had habit of consuming homemade beer (Figure 6).

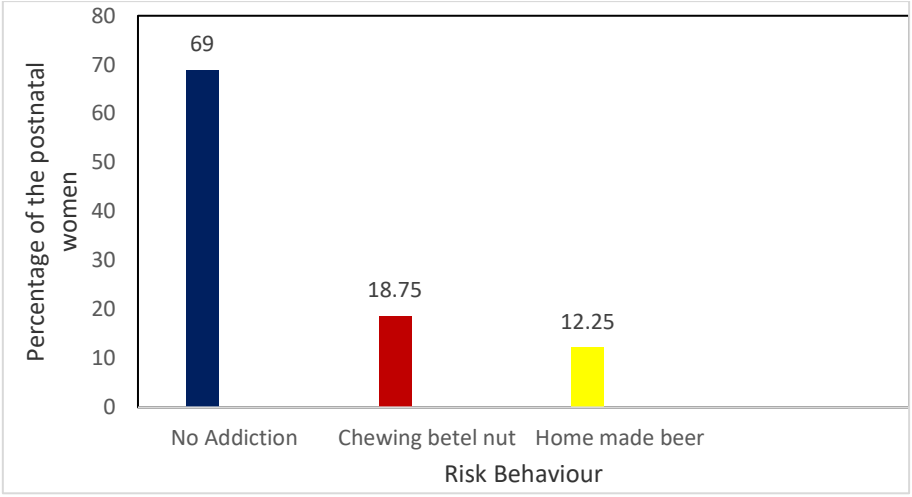


Figure 6. Distribution of the respondents as per their risk behavior prior to last pregnancy (N = 400).

4. Discussion

The results obtained during the present study reports that only 28.88% of the total respondents had given the correct responses in different parameters considered under the preconception care. Involvement of health care personnel as well as creating awareness program through different social media is likely to improve the scenario to a significant extent. This finding is comparable to those reported by Sudanese women in Khartoum State which reports only 11% possess knowledge about preconception care (Ahmed, 2015)[10], and 27.5% among the women from North West Ethiopia (Ayalew, 2017) [11]. However, high awareness rate of preconception care was reported among Malyasian women (51.9%) (Kasim, 2016) [12] and Nigeria (43%) (Sartain, 2012) [13]. In another study, it was found that in Nepal, 64.5% women had average knowledge about preconception care and 15.5% had good level of Knowledge (Giri, 2018) [14]. The discrepancy between the result of present study and these studies can be attributed to various factors, such as health care system not properly activating the preconception services, lack of concerning government policy and programme, and lack of media participation in developing country. Thus, the findings highlight the pressing need to create awareness regarding the preconception care among the eligible couple, which should be prioritized by the health care sector.

The present study also reflects that majority (71.50 %) of the total respondents had negative attitude on different aspect of preconception care. There is a general consensus that knowledge creates awareness which translates to positive attitudes (Ranjini, 2013) [15]. Awareness of the grass root level workers was observed as one of most influencing factors for creating positive attitudes among the community people. In this aspect, the government should take steps to create awareness regarding preconception care among the grass root level health care personnel like ASHA, Anganwadi workers. It is worth mentioning that, the last few decades has witnessed involvement of a large number of health care personnel. The government policy should consider providing adequate training and orientation to such health care providers, so that they can impart the need and significance of preconception care to the concerned section of the society at the grass root level.

The results presented in this article shows that 84% of the total respondents did not plan their last pregnancy, that reflects that surveyed population are scientifically unaware about the need of preconception care. The findings of this study reports that only those couple who had primary or

secondary infertility problem and few women who had medical disorder during preconception period visited health care facilities. Such married couples seek medical advice from health care personnel for health checkup and treatment of existing health problems before conception. This observation explains the findings which suggest that majority of the couple had unplanned pregnancy. Non utilization of family planning devices may be one of the considerable factors behind this. One of the major observations of the present study was that 73% of the total population did not used family planning devices. Government of India has emphasized on increasing the utilization pattern of family planning devices, which, however, still remains unsatisfactory. Reasons of lack of acceptance of the community people may be due to less active participation of the grass root health workers on this regards as well as noninvolvement of the husband. Each antenatal clinic must provide proper guidance and counseling programme of different types of family planning devices to the couple as well as to the supporting family members. Emphasis should be given so that the couple should be prepared from antenatal period to take right decision for use of appropriate family planning devices to prevent unwanted pregnancy at least during lactation period of minimum two years. Previous studies suggest acceptances of contraceptive devices are influenced by literacy level of husband and respondents, nuclear family and increasing age (Kumar, et al., 2018; Bortahkur, et al., 2015) [16, 17].

5. Conclusion

A healthy preconception period is equally important like antenatal, intra-natal and postnatal period for the healthy pregnancy outcomes. Adequate preconception screening and care may reduce certain risk factors during pregnancy and post pregnancy. Creating awareness among the eligible couple regarding importance of preconception care is most essential to reduce maternal and newborn morbidity and mortality. The findings of this suggest that there is need to orient the grass root level health workers to impart the importance of preconception care among the surveyed women residing in Kamrup Rural District. The scientific training given to such health workers should emphasize on including the basic need of preconception care, so that they can act as effective means of knowledge transfer to both the women and men.

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