

# Knowledge Attitude and Practice Regarding Preconception Care Among the Primigravida Woman

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**Abstract:** Preconception care is a set of interventions for women in reproductive age, in order to promote health before conception and to improve pregnancy-related outcomes. Though the benefit of preconception care is well known not many seek preconception care. This study is intended to assess the knowledge, attitude and practice regarding preconception care among primigravida women. A descriptive study was undertaken in the Outpatient Department of Obstetrics and Gynecology. A total of 150 subjects were selected using a simple random sampling technique. The data collection tool consists of structured self-administered questionnaire to assess the knowledge, attitude and practice of preconception care. Descriptive and inferential statistics were used to analyze the findings of the study. The results of the study revealed that 23% of the samples had adequate knowledge with a mean knowledge score of 49%+4.51.86% had moderately favourable attitude and 47% of the primigravida women had inadequate practices regarding preconception care. There was positive correlation between the knowledge and practice of primigravida women regarding preconception care there is a significant association between knowledge and practice regarding preconception care.

**Keywords:** Knowledge, Attitude, Practice, Preconception care

## 1. Introduction

Preconception care is which includes any interventions to optimize the women's health before pregnancy with an aim to improve maternal, newborn and child health outcomes. Preconception care bridges the gap in the continuum of care and addresses the pre pregnancy health risks and problems that would have negative maternal and fetal consequences in therefore has potential to further reduce global maternal and child mortality and morbidity especially in Low-income countries. Globally less 66% of pregnant women reported the utilization of the preconception care services (UNICEF). The reasons for not attending were unplanned pregnancy, unawareness of the preconception care services (Li Du 2021).

An interventional study it was found that of the 239 participants 143 received preconception care and 96 participants did not receive preconception care there was significant decrease in the number of congenital defects in the group who received preconception care compared to the group that did not receive (Steel et al.1991). Brief counselling on preconception health can improve the knowledge of general and personal health (Dunlop, 2013). Mazza and Chapman (2010) determined that women of reproductive age exhibited a lack of preconception care behaviour.

In the New York urban PCC study, Heavey (2010) examined outpatient medical charts of pregnant adolescent females to determine if they had a previous clinic appointment prior to pregnancy where PCC could have been provided. Heavey also reviewed the medical charts to identify PCC Health risk behaviors and interventions prior to pregnancy and at the clinic visit where they had a

positive pregnancy test. It was found that adolescents wanting to seek preconception care services contribute to reduction in the maternal and child mortality and morbidity.

The goal of preconception care is to improve pregnancy outcomes and women's health in general through prevention of disease and management of risk factors that affect pregnancy outcome and the health of future generations (WHO2013). Globally, at least four out of ten women report that their pregnancies are unplanned, the incidence and prevalence obesity, hypertension, diabetes and chronic conditions are increasing, moreover the lifestyle changes affects the pregnancy outcomes.

Preconception care is the primary care in all settings that contributes to these efforts aims primarily at improving maternal and child health, it brings health benefits to the adolescents, women and men, irrespective of their plans to become parents. The delivery of preconception care services is less due to the existing barriers like limited access to care. Hence the investigator was interested to evaluate the knowledge, attitude and practice regarding the preconception care among the primigravida women.

## 2. Objectives

- 1)To find the knowledge, attitude and practice regarding preconception care among primigravida women.
- 2)To find the relationship between knowledge, attitude and practice regarding preconception care among primigravida women.
- 3)To find the association between knowledge, attitude and practice regarding preconception care among primigravida women and the selected demographic and clinical variables.

### 3. Methods

#### Research design sample and setting

A descriptive research design was used to analyze the knowledge attitude and practice regarding preconception care. A simple random sampling technique was used to obtain a total of 150 samples of primigravida women in the outpatient department of the Obstetrics and Gynaecology of a tertiary hospital in South India.

#### Conceptual framework

The conceptual framework adopted for the study was based on the Health Promotion Model which comprises of three domains individual characteristics and experiences, behaviour specific cognitions and affect and behavioural outcomes.

#### Tool for data collection

Socio demographic and clinical variables data sheet and pro forma to assess knowledge, attitude and practice regarding preconception care among the primigravida mothers. The Content Validity Index for self-administered structured questionnaire for the assessment of knowledge, attitude and practice was 0.98, 0.97 and 0.96 respectively. Later the tool was translated into the Tamil, Telugu and Hindi language without changing the meaning of the tool by a language expert. The reliability co-efficient on knowledge was found to be 0.88, the reliability coefficient on the attitude was found to be 0.71 and the reliability co-efficient on practice was found to be 0.79 revealing the tool is feasible for administration for the main study. Since the knowledge and practice reliability co-efficient is  $r > 0.70$ . The tool was found to be reliable and feasible for the main study.

This study was approved by the Institutional Research and ethical committee, obtained ethical clearance from the respective authorities. Informed written consent was obtained, confidentiality and privacy of the study participants was maintained. The subjects were given the right to refuse or withdraw consent to participate at any time of the study without reprisal.

### 4. Results and Discussion

Among the 150 samples 51% (76) of the samples were in the age group 24-29 years and 73% (110) were graduates and above. Most of the samples 60% (90) were from joint family and the area of residence were 50% urban and 50% rural. Majority of about 72% (108) of pregnancy were planned and 28% (42) unplanned pregnancy. 94% (141) did not know about preconception care. Most of the samples 93% (140) did not receive any preconception care. 94% have not known about preconception care, 9% samples had known about preconception care. 93% have not received any preconception care, 10% of the samples have received preconception care.

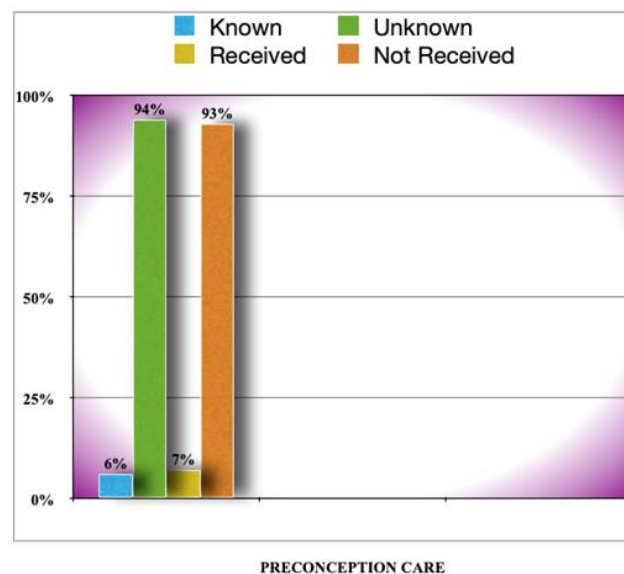


Figure 1: Preconception care

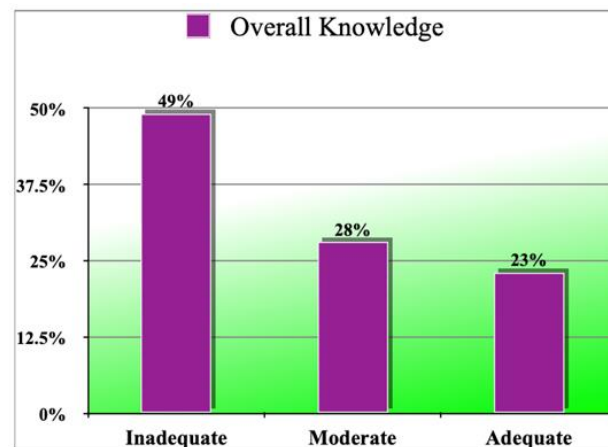
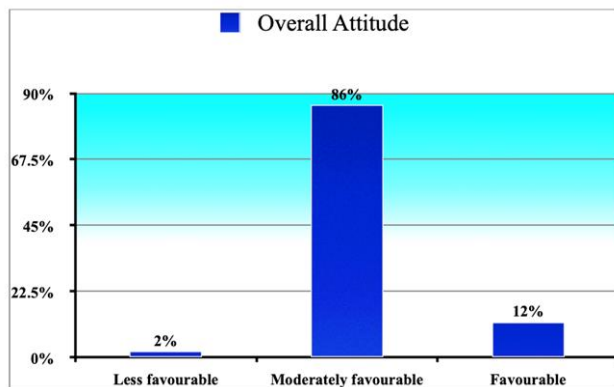


Figure 2: Knowledge of preconception care

The findings of the present study showed that 49% (74) of the samples have inadequate knowledge, 28% (42) of the samples have moderate knowledge and 23% (34) of the samples have adequate knowledge regarding preconception care. 71% (107) had adequate knowledge on diet to be taken during pregnancy and 50% of the samples knew about recommended frequency of antenatal checkup and interval for birth spacing and screening tests done in pregnancy. Among the samples only 30-35% had adequate knowledge on risk factors of pregnancy and genetic counseling. This study finding is supported by a descriptive cross-sectional study in which 51% of the respondents had inadequate knowledge, 42% had moderate knowledge and the mean knowledge score was  $36.79 \pm 9.04$ . The knowledge gap was found on genetic counseling, meaning of preconception care, folic acids supplementation and time for preconception care. (Nepali, 2017).



**Figure 3:** Attitude of preconception care

The present study also reveals that 86% (129) of antenatal women had moderately favourable attitude towards preconception care and 12% (18) had favourable attitude and 2% (3) of the primigravida women had less favourable attitude. In a study conducted by Khan et al. (2019) majority of women felt that preconception care was an important time to ensure good health, with regular engagement in physical activity being regarded as one of the most important priorities. The findings of the present study when compared with the other studies clearly indicated that the attitude of the primigravida mothers towards preconception care has improved over the years

Table.1 depicts that majority of the samples 47% (70) of the primigravida women had inadequate practice, 32% (21) had moderate practice and 21% (32) of the primigravida women had adequate practice of preconception care. The lower practice of seeking preconception care in the current study also relates to the lack of availability of preconception care facility. Preconception care is introduced during consultations for contraception following childbirth and follow up for chronic illness such as diabetes and hypertension. Thus, women who do not encounter contraception clinics and who do not have a chronic illness may not be informed about preconception care.

It was found that there was positive correlation between the Knowledge and practice of primigravida women regarding preconception care which is statistically significant with the Pearsons correlation coefficient ( $r = 0.510$ ), ( $p=0.01$ ). There was no correlation between the knowledge and attitude of primigravida women regarding preconception care which is statistically not significant with the Pearsons correlation coefficient ( $r = -0.035$ ) at the significant level of ( $p = 0.674$ ). Likewise, it was also found that there was no correlation between attitude and practice regarding the preconception care which is statistically not significant with the Pearsons correlation coefficient ( $r = -0.028$ ), ( $p=0.738$ ), at the significant level of  $p= 0.01$ .

**Table 1:** Distribution of samples based on the practice regarding preconception care among primigravida women (N=150).

Aspects	Practiced		Not Practiced	
	n	%	n	%
Attended early medical checkups for pregnancy planning	99	66	51	34
Used contraception methods for birth spacing	33	22	117	78
Consumed folic acid	79	53	71	47
Exercised during pregnancy	63	42	87	58
Consumed well balanced diet	133	89	17	11
Screened for STI/risk factors	63	42	87	58
Avoided environmental hazards	113	75	37	25
Avoided unnecessary medication use	113	75	37	25
Missed regular clinical appointments	103	69	47	31
Attended Preconception counseling with partner	90	60	60	40
Immunized during pregnancy	39	26	110	73
Checked routine Lab investigations	83	55	67	45
Received information regarding preconception risk conditions	61	41	89	59
Received information on stress and anxiety	80	53	70	47
Received information regarding pregnancy	60	40	90	60

**Table 2:** Association between knowledge regarding preconception care among primigravida women with demographic variables. (N=150)

Category	Inadequate (<49.9%)		Moderate (50-74.9%)		Adequate (≥75%)		Chi-square P value	
	n	%	n	%	n	%		
<b>Age(years)</b>								
18-23	28	52.8	21	39.6	4	7.5	18.63	0.003**
24-29	37	48.7	20	26.3	19	25		
30-40	7	36.8	3	15.8	11	52.4		
<b>Education</b>								
≤Higher secondary	22	76	3	10.3	4	13.8	11.48	0.003**
Graduation & above	50	41.3	41	33.9	30	24.8		
<b>Occupation</b>								
House wife	59	52.1	35	31	19	16.8	14.06	0.007**
Private employee	12	42.9	7	25	9	32.1		
Govt. employee	1	11	2	22.2	6	66.7		
<b>Income</b>								
≤15000	31	55.4	16	28.6	9	16.1	24.94	0.001**
>15000	41	43.6	28	29.8	25	26.6		
<b>Type of family</b>								
Nuclear	23	38.3	19	31.7	18	30	4.50	0.105
Joint	49	54.4	25	27.8	16	17.8		
<b>Area of residence</b>								
Urban	31	41.3	24	32	20	26.7	2.81	0.245
Rural	41	54.7	20	26.7	14	18.7		

\*p&lt;0.05

**Table 3:** Association between practice regarding preconception care among primigravida women with demographic variables. (N=150)

Category	Inadequate (<49.9%)		Moderate (50-74.9%)		Adequate (≥75%)		Chi-square P value	
	n	%	n	%	n	%		
<b>Age(years)</b>								
18-23	32	60.4	13	24.5	8	15.1	24.12	0.001**
24-29	33	44.0	31	41.3	11	14.7		
30-40	5	26.3	4	21.1	12	57.1		
<b>Education</b>								
Primary	8	80	1	10	1	10		
Higher secondary	22	73.3	4	13.3	4	13.3	17.68	0.001**
Graduation & above	40	36.7	43	39.4	26	23.9		
<b>Occupation</b>								
House wife	59	52.7	33	29.5	20	17.9	10.36	0.035**
Private employee	11	39.3	10	35.7	7	25		
Govt. employee	2	22.2	3	33.3	4	44.4		
<b>Income</b>								
≤15000	30	53.6	10	17.9	16	28.6	12.95	0.044**
>15000	41	43.6	38	40.4	15	16		
<b>Religion</b>								
Hindu	58	46.8	42	33.9	24	19.4	10.20	0.019**
Christian	5	29.4	5	29.4	7	41.2		
Muslim	6	75	1	12.5	1	12.5		
<b>Type of family</b>								
Nuclear	20	33.3	23	38.3	17	28.3	7.88	0.019**
Joint	50	56.2	25	28.1	14	15.7		
<b>Area of residence</b>								
Urban	26	34.7	29	38.7	20	26.7	9.31	0.009**
Rural	44	59.5	19	25.7	11	14.9		

\*p&lt;0.05

Table.2 depicts that There is a statistically significant association between demographic variables such as age, education and income with knowledge regarding preconception care. It also reveals that there is no statistically significant association between type of family and area of residence with knowledge regarding preconception. Table.3 There is a statistically significant association between age at marriage, pregnancy, type of conception and preconception care known with practice regarding preconception care. The level of pregnancy planning was associated with planning behavior, such as information-seeking and intake of folic acid, but without a reduction in alcohol consumption. One-third of all women took folic acid 1 month prior to conception, 17% used tobacco daily and 11% used alcohol weekly 3 months before conception. (Shawe J, et al, 2015) There is statistically no significant association between knowledge and attitude regarding the preconception care among the primigravida women and the level of education. There is a statistically significant association between occupation and education with attitude regarding preconception care. It also reveals that there is no statistically significant association between age, religion, history of chronic illness, pregnancy, type of conception and preconception care with attitude regarding preconception care.

### Nursing Implications

Preconception care is a known concept but it has not reached all the areas, nurses can play a role in recognizing, exercising, coordinating and incorporation of preconception care in their routine health encounters. Educational programmes can create awareness. Strategic planning can be done to provide direction to access the quality preconception care by working as an interdisciplinary team within the local, state and the government.

### 5. Recommendations

A further study can be done to assess the barriers, beliefs regarding preconception care among antenatal women, men, healthcare workers.

### 6. Conclusion

Preconception care has a positive effect on the range of health outcomes, prevents unintended pregnancies, complications during pregnancy and delivery and helps in reducing maternal and child mortality. The findings of the study highlight that majority of the respondents had inadequate knowledge, attitude and practices regarding the preconception care. More education and awareness are essential to increase the knowledge on the different aspects and concepts of preconceptions care among the primigravida women. To prevent the short term and long-term adverse effects for the mother and the child. If the knowledge regarding the preconception care is increased, the practices and the attitude towards the preconception care will simultaneously be improved. As preconception care are a set of interventions, it should be accessible, affordable and delivered during routine health encounters

which can improve health in both developed and developing countries.

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