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## A study to assess the effectiveness of planned teaching programme on knowledge regarding healthy lifestyle practices in pregnancy among primigravidae attending selected maternity hospitals at Dharwad

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### Abstract

**Background:** Maternal health is a nation's wealth. Women are the primary care takers, first educators, bearers and nurtures of the next generation this pre-experimental study aimed to assess the effectiveness of planned teaching programme on knowledge regarding healthy lifestyle practices in pregnancy among primigravidae attending selected maternity hospitals at Dharwad.

**Method:** An evaluative approach to with pre experimental one group pretest-posttest design was adopted for the study. The samples from the selected Maternity hospitals at Dharwad were selected using non probability sampling technique. The sample consisted of 50 Primigravidae mother's. The tool used for data collection was self-administered knowledge questionnaire and planned teaching programme was adopted. The data analysis was done by using both descriptive and inferential statistics.

**Result:** The findings reveal that the posttest mean knowledge score reveal was found higher (mean=27.66 SD-of 1.37) when compared with the pretest knowledge score value which was mean=15.12 SD-2.82. The statistical paired 't' implies that the difference in the pretest and post -test value was found statistically significant at 29.16. There exists statistical significance in the difference of knowledge score indicating the positive impact of planned teaching program. The computed chi-square value for association between level of knowledge of Primigravidae regarding healthy lifestyle practices in pregnancy and there selected demographic variables is found to be statistically significant at 0.05 levels.

**Conclusion:** The findings reveal that the knowledge of Primigravidae regarding healthy lifestyle practices in pregnancy is inadequate before the administration of planned teaching programme. The PTP was effective in increasing the knowledge of participants regarding healthy lifestyle practices in pregnancy. Since a very few studies have been conducted regarding this topic in India, so the nurse researcher can take further studies on the same topic.

**Keywords:** Primigravidae mother's, probability sampling, participants

### Introduction

**Background:** "A baby is god's opinion that life should go on." Carl Sandburg

Maternal health is a nation's wealth. Women are the primary care takers, first educators, bearers and nurtures of the next generation. They are the nucleus of our society. Our destiny lies with the wellbeing of women's health. Pregnancy is the period when women need more attention and care. Worldwide, an estimated 5, 15,000 women die of causes related to pregnancy and childbirth each year, and their deaths leave one million children motherless. 2 over 99% of these deaths occur in developing countries. In India, in every five minutes one woman dies from complications related to pregnancy and childbirth. This means more than 1, 00,000 women die each year due to pregnancy related causes <sup>[1]</sup>.

Lifestyle changes with pregnancy. One of the important factor for obesity after pregnancy is lack of physical activity and excessive gestational weight gain, for that, all women of Reproductive ages should start regular exercise to help them through the course of pregnancy and delivery <sup>[2]</sup>. In India majority of mothers are poor and malnourished and live under unsanitary condition. Maternal 301/100000 live birth and infant mortality rates 57/1000 live birth are high compare to other developing countries. In the light of this fact, we need to improve the health of the antenatal mothers. (UNICEF 2010) <sup>[3]</sup>.

Lack of healthy lifestyle knowledge, awareness and attitude makes incorrect perception of health practices which deals with the individual to move towards the unsafe motherhood, but these can be prevented if the mother had a teaching an antenatal care during her pregnancy. So the researcher was interested to assess the antenatal mother's knowledge, attitude and prepared Planned Teaching Programme to educate them which help the mother to move towards safe motherhood<sup>[4]</sup>.

Maternal Mortality Ratio (MMR) of India For the period 2016-18, as per the latest report of the national Sample Registration System (SRS) data is 130/100000 live births in 2014-16. This translates to 2500 additional mothers saved annually in 2018 as compared to 2016. Total estimated annual maternal deaths declined from 33,800 maternal deaths in 2016 to 26437 deaths in 2018<sup>[5]</sup>.

As per the Sample Registration System (SRS) report by Registrar General of India (RGI) for the last three years, Maternal Mortality Ratio (MMR) of India has reduced from 130 births in SRS 2016-18.16per 100000 live births in SRS 2014-16 to 122 in SRS 2015-17 and 113 per 100000live births inSRS2016-18<sup>[6]</sup>.

Maternal Mortality Rate is 133 per one lakh women which is targeted to be reduced to100 by 2020 and below 50 by 2030. The state aims to increase the area under health services in the state by providing gall secondary care services in all Taluk a hospitals by 2030<sup>[7]</sup>.

AnexperimentalstudyontheeffectofStructuredTeachingProgrammeregardingantenatal exercise on knowledge and skill of pregnant women at Madurai in Tamil Nadu concluded that there is a great need of preparing a Structured Teaching Programme on antenatal exercise for educating antenatal women for modifying their action. Improving the practice of the antenatal exercise help to prevent complications and lead to safe delivery<sup>[8]</sup>.

## Method

The investigator adopted the conceptual frame work based on the concepts of modified Ludwig von bertalanffy's general system theory. This theory includes 3 important components i.e Input, Throughput, and Output. In this conceptual framework, an input refers to the assessment of socio-demographic variables of Primigravida. In this conceptual framework, a throughput includes answering for pre-test, administration of planned teaching program, answering for post-test and comparison of results of pretest and posttest. In this conceptual framework, output includes results either enhancement in knowledge regarding effectiveness of Planned Teaching Programme on knowledge regarding Primigravida on knowledge regarding healthy lifestyle practices in pregnancy is the output that may be regarded as the product of process.

The research design selected for the study was one group pretest-posttest design and evaluative approach was used. The dependent variable was Knowledge regarding healthy lifestyle practices among Primigravidae and Independent Variable was Planned Teaching Programme and Socio-demographic variable were, Age, Religion, Education, Occupation, Family income per month, Type of family, Sources of information.

The sample of the study comprised of 50 Primigravida from selected maternity hospitals at Dharwad. Probability Simple

Random Sampling Technique was used to draw the sample for the study.

The tool developed and used for the data collection was structured knowledge questionnaire. The reliability of tool was established by Split-half method by applying the Karl Pearson's Coefficient of correlation was  $r = 0.84$  knowledge questionnaire.

Pilot study is the small scale version or trail run, done in preparation of a major study. A pilot study was conducted from 04-04-2022 to 09-04-2022 in selected maternity hospital at Dharwad after taking administrative approval. The purpose of pilot study was to pretest the data collection instrument, to find out the feasibility of conducting the study and to decide upon the plan of statistical analysis. A total of 10 samples were selected by using Simple Random Sampling Technique. On day 1 the pretest was conducted, later planned teaching program was administered to the participant and post test was conducted on day 8. The tools and study design were found to be feasible.

## Data Collection Procedure

Study was approved by the institute of ethical committee. Formal administrative permission was obtained (Annexure-H).Data were collected from 18-04-2022 to 26-04-2022. Sample Was selected as per the sampling criteria. The purpose of the study was explained and co-operation required from the respondents was explained to them. Confidentiality was assured. Consent to participate in the study was obtained from each subject. On day 1 pretest was conducted and planned teaching program was given conducted. The post test was administered to participants on 8<sup>th</sup>day.

## Plan of data analysis

It was planned to use both descriptive and inferential statistics for analysis of the data.

- Organization of data on the master sheet.
- Tabulation of data in terms of frequency, percentage, mean, median, mode, standard deviation and range to describe the data.
- Paired't' test for testing the effectiveness of Planned Teaching Programme on knowledge regarding healthy lifestyle practices in pregnancy among Primigravida.
- Chi-square test to find out an association between pre-test knowledge scores and socio-demographic variables.

## Results

**Organization of findings:** The analysis of the data is organized and presented data was under the following sections;

**Section I:** Distribution of sample characteristics according to socio- demographic variables.

**Section II:** Analysis and interpretation of knowledge scores of Primigravida regarding healthy lifestyle practice in pregnancy.

**Section III:** Testing hypotheses.

**Section I:** Distribution of sample characteristics according to socio-demographic variables.

Study comprised of 50 participants. The socio demographic scores of participants were tabulated and frequency percentage was calculated. The findings are presented in following table and graphs.

**Table 1:** Frequency and percentage distribution of subjects according to socio-demographic variables. n=50

Sl. No.	Demographic Variables	Frequency (f)	Percentage (%)
<b>1. Age (in years)</b>			
	Less than 20	03	06
	20-24	25	50
	25-29	10	20
	Above 30	12	24
<b>2. Religion</b>			
	Hindu	25	50
	Christian	03	06
	Muslim	10	20
	a) Others	12	24
<b>3. Education</b>			
	a) Illiterate	01	02
	b) Primary	03	06
	c) Higher Secondary	08	16
	d) Collegiate	38	76
<b>4. Occupation</b>			
	a) Housewife	03	06
	b) Private employee	06	12
	c) Government employee	09	18
	d) Own business	32	64
<b>5. Family Income per month (in rupees)</b>			
	a) Less than 2000/-	00	00
	b) 2000/- to 3000/-	06	12
	c) 3000/- to 4000/-	31	62
	d) Above 4000/-	13	26
<b>6. Type of family</b>			
	a) Nuclear family	50	100
	Joint family	00	00
<b>7. Sources of information</b>			
	a) Television	03	06
	b) News paper	25	50
	c) Health professionals	10	20
	d) Radio	12	24

## Section II

### A: Distribution of knowledge score during pre- test and post- test

**Table 2:** Analysis and Interpretation of knowledge scores of primigravida regarding healthy lifestyle practices in pregnancy. n=50

Area of analysis	Mean	Median	Mode	Standard deviation	Range
Pre-test	15.12	15	16	2.82	11
Post-test	27.66	29	30	1.37	05
Difference	12.54	14	14	1.45	06

**Table No. 2:** Reveals that, the pre-test mean knowledge score was 15.12, median 15, mode 16, standard deviation 2.82, and range 11. Whereas the post-test, mean knowledge score was 27.66, median 29, mode 30, standard deviation 1.37 and range 05. The overall difference in mean knowledge score was 12.54, median 14, mode 14, standard deviation 1.45 and range 06.

### B: Distribution Respondents Pretest and Post Test Scores According To Their Level of Knowledge

**Table 3:** Frequency and percentage distribution of knowledge scores of subjects regarding healthy lifestyle practices in pregnancy among Primigravida. n=50

Level of knowledge	Pre-test		Post-test	
	Frequency(f)	Percentage (%)	Frequency(f)	Percentage (%)
Good	09	18	40	80
Average	31	62	10	20
Poor	10	20	00	00

**The data presented in the Table No. 3:** Reveals that, distribution of level of knowledge of primigravida regarding healthy lifestyle practices in pregnancy among Primigravida during pre-test and post-test. Most of the subjects in the pre-test 31 (62%) had average knowledge, 09 (18%) had good knowledge and 10 (20%) had poor knowledge. Whereas, in post-test after CBT, 40 (80%) had good knowledge and 10 (20%) had average knowledge.

### C: percentage distribution of subjects according to their level of knowledge scores in pre-test and post-test.

**Table 4:** Pre-test, post-test percentage of knowledge scores of subject's regarding healthy lifestyle practices in pregnancy among Primigravida. n=50

Items	Total Score	Mean% of knowledge scores of subjects		
		Pre-test	Post-test	Gain in knowledge
Structured knowledge questionnaire	1750	43.20	90.57	47.37

**Table No. 4:** Reveals that, there was 47.37% of gain in knowledge after administration of Planned Teaching Programme.

## Section III

### Testing of Hypotheses

**H1:** The mean post-test knowledge scores of the Primigravida receiving Planned Teaching Programme on knowledge regarding healthy lifestyle practices in pregnancy will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

**Table 5:** Mean difference ( $\bar{d}$ ), Standard Error of difference (SED) and paired 't' values of knowledge scores of subjects regarding healthy lifestyle practices in pregnancy among Primigravida. n=50

Mean difference (d)	Standard error of difference (SED)	Paired 't' values	
		Calculated	Tabulated
12.54	0.43	29.16*	2.009

\* At 0.05 level of significance

**Table No. 5:** reveals that, the calculated paired 't' value ( $t_{cal}=29.16^*$ ) was greater than the tabulated value ( $t_{tab}=2.009$ ). Hence,  $H_1$  was accepted. This indicates that the gain in knowledge scores was statistically significant at 0.05 level of significance. Therefore, the Planned Teaching Programme was effective to improve the knowledge of subjects.

**Table 6:** Association between pre-test knowledge scores of subjects with their selected socio-demographic variables n=50

Sl. No.	Demographic Variables	Good	Average	Poor	Chi-Square DF		DF
					Cal	Tab	
<b>1. Age in Years</b>							
	Less than 20	0	0	0	4.841	12.59	6
	20-24	0	0	0			
	25-29	5	25	10			
	Above 30	0	10	0			
<b>2. Religion</b>							
	Hindu	03	09	03	3.1	12.59	6
	Christian	00	07	03			
	Muslim	02	07	01			
	Others	00	00	00			
<b>3. Education</b>							
	Illiterate	01	02	00	8.87	12.59	06
	Primary	00	05	01			
	Higher Secondary	03	06	00			
	Collegiate	05	18	09			
<b>4. Occupation</b>							
	Housewife	00	03	00			
	Private employee	02	04	03			
	Government Employee	02	13	03	3.28	12.59	6
	Own business	01	03	01			
<b>5. Family Income per month</b>							
	Less than 2000/-	00	00	00	2.04	12.59	06
	2000/- to 3000/-	01	04	01			
	3000/- to 4000/-	04	20	07			
	Above 4000/-	04	07	02			
<b>6.s Type of family</b>							
	Nuclear family	05	25	08	29.4	9.49	04
	Joint family	04	06	02			
<b>7. Sources of information</b>							
	Television	08	17	00	9.39	12.59	06
	Newspaper	00	03	00			
	Health professionals	01	08	01			
	Radio	00	03	09			

## Discussion

The findings of the study were discussed under the following headings

1. The socio-demographic variables of primigravidae women
2. Knowledge scores of Primigravidae women regarding healthy lifestyle practices in pregnancy
3. The effectiveness of Planned Teaching Programme on knowledge regarding healthy lifestyle practices in pregnancy
4. The association between pre-test knowledge scores of and their selected socio- demographic variables.

### Findings related to the socio-demographic variables of Primigravida women

- Majority 28 (56%) of the respondents belong to the age group of 23yrs
- Majority 25 (50%) of the respondents were belonged to Hindu religion
- Majority 38 (76%) of the respondents were completed Graduation
- Majority 30 (70%) respondents were belonged to government job
- Majority 38 (76%) respondents subjects were belonged to nuclear family

- Each 50 (100%) respondents were exposing to mass media

Similar findings were observed in the study conducted by Ali Murat Kirik, Ahmet Arslan, Ahmet Cetinkaya and Mehmet Gul who observed that majority of the subjects 61 (22.70%) were at the age group of 23 years and 57 (21.3%) were at the age group of 26 years. Whereas, 38 (14.2%) subjects were at the age group of 24 years, 69 (25.3%) were in the age group of 25 years and 46 (16.50%) subjects were at the age group of 27 years.

Also similar findings were supported through a study conducted by Geeta Baishya and Nabanika Kalita, who observed that 50 (50%) belonged to Hindu religion whereas 50 (50%) were belonged to Muslim religion.

Also findings were supported through a study conducted by Madhusudan Madaiah, Chaluvraj Talkad Seshaiyengar, Preethi Suresh, Santhosh Munipapanna, and Suresha Doddasabbenahalli Sonnappa who observed that majority, 328 (80.39%) were completed their Graduation and above, 67 (16.42%) were completed their PUC and below and 13 (3.18%) were illiterate.

Also findings were supported through a study conducted by Babita Kayastha, Ashmita Gurung and 57 Rashmi Chawal, who observed that majority of the subjects, 142 (71%) were

belonged to nuclear family, 50 (25%) subjects were belonged to joint family, 08 (04%) subjects were belonged to extended family.

Also These findings were supported through a study conducted by Mrs. Priya S, Ms. Akhila K V, Ms. Aneesha, Ms. Anitta Kuriakose, Ms. Anju Praveen, and Ms. Anna Raju who observed that majority of subjects 142 (56.8%) had family income of Rs. >10,000, 93 (37.2%) had family income of Rs. 5,000-10,000 and 15 (06%) had family income of Rs. <5,000.

Similar findings were supported through a study conducted by Mohammed Ibrahim N, John George T, Jenyz M. Mundodan and Jini M. P who observed that majority of the subjects, 297 (74.3%) were having mobile phones, 57 (14.3%) subjects were having Laptops whereas, 24 (06%) subjects were having monthly journals and 22 (5.4%) subjects were having daily newspapers and magazines at home.

#### **Finding related to level of knowledge scores of Primigravidae women regarding healthy lifestyle practices in pregnancy**

The overall pre-test knowledge scores revealed that majority of the subjects 31 (62%) had average knowledge, 09 (18%) had good knowledge and 10 (20%) had poor knowledge. Whereas, in post-test majority of the subjects 40 (80%) had good knowledge and 10 (20%) had average knowledge scores regarding healthy lifestyle practices in pregnancy. These findings were supported through a study conducted by Karthi R, Porselvi M, Menaga Gandhi B, Tamilvanan K and Thiruvengadam P, who observed that majority of the subjects in pre-test, 33 (66%) of Primigravidae women had inadequate knowledge, 17 (34%) of Primigravidae women had moderately adequate knowledge and none of them had adequate knowledge. Whereas, in post-test 43 (86%) of Primigravidae women had adequate knowledge, 07 (14%) of Primigravidae women had moderately adequate knowledge and none of them had inadequate knowledge regarding healthy lifestyle practices in pregnancy.

#### **Findings related to effectiveness of Planned Teaching Programme on knowledge regarding healthy lifestyle practices in pregnancy**

The calculated paired 't' value ( $t_{cal}=29.16^*$ ) was greater than the tabulated value ( $t_{tab}=2.009$ ). Hence, H<sub>1</sub> was accepted. This indicates that the gain in knowledge scores was statistically significant at 0.05 level of significance. Therefore, the Planned Teaching Programme was effective to improve the knowledge of subjects regarding healthy lifestyle practices in pregnancy.

These findings were supported by a study conducted by Karthi R, Porselvi M, Menaga Gandhi B, Tamilvanan K and Thiruvengadam P in which the calculated 't' value ( $t_{cal}=25.03^*$ ) was greater than the table value ( $t_{tab}=23.69$ ) at 0.05 level of significance. Hence, it is statistically interpreted that Planned Teaching Programme was effective in improving the knowledge of subjects regarding healthy lifestyle practices in pregnancy.

#### **Findings related to association between pre-test knowledge scores of a Primigravida women and socio-demographic variables**

The calculated chi-square test revealed that there was no statistical association between pre-test knowledge scores of

Primigravidae women and socio-demographic variables such as age, religion, education, and occupation, type of family, family income and sources of information. Hence, Hypotheses was rejected for above variables. These findings were supported through a study reviewed by Neha Bharti who observed that there was no statistical association between pre-test knowledge scores of Primigravida women regarding healthy lifestyle practices in pregnancy with selected socio-demographic variables.

#### **Conclusion**

The overall pre-test knowledge scores of primigravida women were average. The post-test knowledge scores of the subjects after administration of the Planned Teaching Programme was significantly higher than the pre-test knowledge scores. Hence, Planned Teaching Programme was effective in improving knowledge regarding healthy lifestyle practices in pregnancy among Primigravidae women. There was no statistical association between the knowledge scores and socio-demographic variables such as age, religion, education, occupation, type of family, family income and sources of information.

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