RESEARCH ARTICLE   **OPEN ACCESS**

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTUREDTEACHING PROGRAMME ON KNOWLEDGE REGARDING IMPORTANCE OF IRON AND FOLIC ACID IN ANTENATAL MOTHERS IN SELECTED AREAS OF AHMEDABAD

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ABSTRACT

Background: Iron and folic acid supplementation (IFAS) programme is a key global intervention (WHO, 2013) for control and prevention of anaemia in pregnancy.women often experience iron deficiency due to increased iron demands for foetal growth and development, leading to anaemia if not addressed. Iron supplementation helps prevent or treat iron deficiency anaemia during pregnancy. Despite free provision of IFAS tablets, compliance has remained low over the years. Studies have associated high maternal knowledge with higher supplement use. *Materials and Methods*: Research design used for the study was quasi-experimentalwith one group pre-test post-test design.The investigator has adopted non probability convenient sampling technique to select 30 samples of Antenatal mothers in selected areas of Ahmedabad. The Questionnaire is selected to assess the level of knowledge among antenatal mothers before and after giving structured teaching programme. *Results:* The mean pre-test score was 7.2 and the mean post-test score was 11.Thus, the mean difference of 3.8. The standard deviation of pre-test score was 2.64 and of post-test score was 2.95. The calculated "t" value was 20.2 and the tabulated "t" value was 2.045 at 0.05 level of significance for 29 df. *Conclusion*: The findings of present study indicate that antenatal mothers have good effectiveness of structure teaching programme on improve knowledge regarding importance of iron and folic acid.

INTRODUCTION

Pregnancy is a physiological state in which a foetus develops inside a woman's womb or uterus.The nutrient demands of the embryo or the foetus developing in the uterus must be met in addition to those for maintenance of the adult women; this calls for quality nutrition both before and during pregnancy. Iron and folic acid are essential nutrients that play crucial roles in the body. Iron is vital for producing haemoglobin, which carries oxygen in the blood, while folic acid (or folate) is important for DNA synthesis and cell division. Both are important during pregnancy to support foetal development and prevent birth defects[1]. One in every three women had anaemia while one in every two had iron and folic acid deficiency, indicating that both folic acid and iron deficiencies constitute the major micronutrient deficiencies in women. Iron and folic acid deficiency is a serious public health issue due to its high potential negative consequences[2]. Anaemia is the second most common cause of maternal death in India and contributing to about 80% of maternal deaths caused by anaemia in South East Asia[3]. Studies have associated high maternal knowledge with higher supplement use during antenatal period which reduces prevalence of anaemia in pregnant mothers. Thus, the structured teaching programme was developed to enhance the knowledge of antenatal mother.

Objectives

1) To assess effectiveness of structured teaching programme before and after providing knowledge regarding the importance of Iron and folic acid in antenatal mothers.
2) To find the association of post-test Knowledge score of samples with their selected demographic variables.

MATERIALS AND METHODS

Research approach: Quantitative Research Approach.

Research design: Quasi experimentalone group pre testpost test design.

The variables used

Demographic variables: Demographic variables of study are age, qualification, income per month, occupation, type of family, previous knowledge regarding Iron and Folic acid supplements during antenatal period.

Dependent variable: Dependent variables of the study is knowledge regarding Iron and Folic acid supplements among the antenatal mothers.

Independent variable: Independent variable of this study is Structured Teaching Programme among the Antenatal mothers.

- **Settings of the study-** selected areas of Ahmedabad
- **Duration of the study-** 2 Months May - June 2024.
- **Data collection method –** The Selected Questionnaire
- **Target population:** antenatal mothers
- **Sample Size -** 30
- **Sampling Method-** non probability convenient sampling technique

Inclusion criteria

- Antenatal mothers available in selected areas in Ahmedabad.
- Antenatal mothers who can understand Hindi, English & Gujarati languages.
- Antenatal mothers who are willing to participate in study.
- Antenatal mothers who are in the age group of 18 and above.

Exclusion criteria

- Antenatal mothers not willing to participate in the study.
- Antenatal mothers not available at the time of Data collection.
- Antenatal mothers who are having high risk pregnancy.

➢ **Section 2:** It consists Questionnaire to measure the level of knowledge among antenatal mothers.

Statistical Methodology: Data analysis was done with the help of descriptive and inferential statistics.

RESULTS

The below table depicts the distribution in number and percentage of study subjects according to their demographic variables. It shows that 63.33% of sampleswere in the age group of 24-29 years, 23.33% of samples were in the age group of 30-35 years, 13.33% of samples were in the age group of 18-23 years, 0% of samples of the age group of more than 35 years. In relation to income, 33.33% of sampleswere earning 20,001-30,000 Rs., 30% of samples earning10,001-20,000 Rs., 20% of samplesearning 30,001-40,000 Rs., 10% of samplesearning ≤10,000 Rs., 6.66% of sample searning ≥40,0000 Rs in the group. In relation to occupation 60% of samples were Housewives, 20% of samples were doingJob and 20% of samples were doing Daily wages worker in the group. In relation to education, 40% of samples had studied Up to secondary standard, 36.66% of samples had studied up to primary education, 10% of samples were graduated, 6.66% of samples were postgraduate and more and 6.66% of samples were uneducated in the group.

Percentage Distribution of study subjects According to Demographic variables

N= 30

SR. No.	DEMOGRAPHIC VARIABLE	CATEGORIS	FREQUENCY	PERCENTAGE (%)
1	Age of samples	18 to 23 years	4	13.33 %
		24 to 29 years	19	63.33 %
		30 to 35 years	7	23.33 %
		More than 35 years	0	0 %
2	INCOME (PER MONTH)	≤10,000Rs.	3	10 %
		10,001-20,000 Rs.	9	30%
		20,001-30,000 Rs.	10	33.33 %
		30,001-40,000 Rs.	6	20 %
		>40,001Rs.	2	6.66%
3	Occupation of samples	Housewife	18	60%
		Daily wages worker	6	20%
		Job	6	20%
4	Educational Qualification of samples.	Uneducated	2	6.66%
		Up to primary standard	11	36.66%
		Up to secondary standard	12	40%
		Graduation	3	10%
		Postgraduation and more	2	6.66%
5	Family Type	Nuclear Family	17	56.66%
		Joint Family	13	43.33%
6	Previous knowledge regarding iron and folic acid during antenatal period	Yes	15	50%
		No	15	50%
7	Sources of information	Family and friends	2	6.66%
		Social and printed media	4	13.33%
		Health workers	9	30%

Description of frequency and percentage distribution of knowledge level of samples before and after providing structured teaching programme

(n=30)

Level of Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Poor (<50% score)	24	80%	11	36.66%
Average (51-75% score)	6	20%	16	53.33%
Good (>75% score)	0	0%	3	10%
Total	30	100%	30	100%

Tool used for data collection: (Description of the tool and sample of the tool with evaluation criteria)

The tool was divided into two sections as following:

➢ **Section 1:** Demographic variables which includes age, qualification, income per month, occupation, type of family, previous knowledge regarding Iron and Folic acid supplements during antenatal period.

In relation to family type, 56.66% ofsamples in the group were in nuclear family while 43.33% of samples were in joint family. In relation to Previous knowledge regarding iron and folic acid during antenatal period, 50% of samples in the group have previous knowledge and 50% of samples inthegroup haveno previous knowledge. In relation to source of information, 30% of samples in the group got the knowledge from health workers, 13.33% of samples inthegroup got the knowledge from Social and printed media and 6.66% of samples in the group got the knowledge from Family and friends.
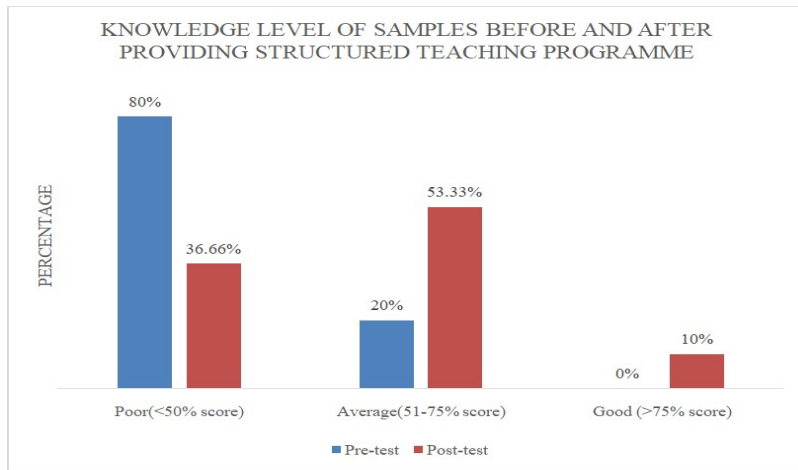
Findings related to mean, mean difference, standard deviation and t-test value of the pre-test and post-test effectiveness scores of samples.

Groups		Mean	Mean difference	SD	"t" value	Table "t" value	df	Level of significance
Sample Data	Pre-test	7.2	3.8	2.64				
	Post-test	11		2.95	20.2	2.045	29	0.05

In the above mentioned bar chart, in pre-test 80% ofsamples (24) in the group were having poor knowledge, 20% of samples (6) in the group were having average knowledge and 0% of samples (0) in the group were having good knowledge; In the post- test 36.66% ofsamples (11) in the group were having poor knowledge, 53.33% of samples (16) in the group were having average knowledge and 10% of samples (3) in the group were having good knowledge regarding importance of iron and folic acid in antenatal mothers. The above table depicts that the mean pre-test score was 7.2 and the mean post-test score was 11. Thus, the mean difference of 3.8. The table also shows that the standard deviation of pre-test score was 2.64 and standard deviation of post-test score was 2.95. The calculated "t" value was 20.2 and the tabulated "t" value was 2.045 at 0.05 level of significance for 29 df.

CONCLUSION

Comparison between pre-test and post-test effectiveness score obtained by the respondents for improving knowledge regarding importance of iron and folic acid in antenatal mothers shows thatthe mean post-test effectiveness score was significantly higher than the mean pre-test effectiveness score.

The calculated "t" value (t=20.2) was greater than the tabulated "t" value (t=2.045), there for it reveals that the structured teaching programme was effective amongst the samples.

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