To Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention of Iron Deficiency Anemia among Antenatal Mothers of a Selected Primary Health Centre of Agartala, Tripura

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Abstract: *Iron Deficiency Anemia causes many maternal deaths every year. According to WHO─585,000 maternal deaths occur every year from pregnancy related causes. This means that every minute of a day there is one maternal death and 99%of these deaths occur in developing countries. Using Non – probability convenient sampling technique 60 samples were collected using structured knowledge questionnaire. The data was analysed using descriptive and inferential statistics. The results of this study showed that Antenatal mothers in general lacked knowledge about Prevention of Iron Deficiency Anemia before the Structured Teaching Programme. Mean knowledge score was 8.73. There is marked gain in knowledge after the Structured Teaching Programme i.e. 17.60. The difference in knowledge score was statistically significant at 0.05 level (t= 30.8232, p= <0.0001). A relationship between knowledge score and selected variables were noticed. The statistical significance was at 0.05 level.*

Keywords: Assess, Effectiveness, Structured Teaching Programme, Knowledge, Iron Deficiency Anemia, Antenatal mother

1. Introduction

Iron Deficiency Anemia is the most prevalent form in India. According to WHO─585,000 maternal deaths occur every year from pregnancy related causes. This means that every minute of a day there is one maternal death and 99%of these deaths occur in developing countries. The maternal mortality rate in the world is 390 per 100,000 live birth, in India 100,000 women die every year as a result of pregnancy and childbirth which means one maternal death in every five minutes. According to YIPR, Iron nutritional status, maternal mortality rate due to Iron Deficiency Anemia in the world increases about 51%, Food Nutrition Bull, 2006, have stated that in India 84.9% pregnant women are suffering from Iron Deficiency Anemia. According to NFHS report, 2005-06, prevalence of anemia in North-East states is 51.5%.

2. Need of the Study

According to WHO─585,000 maternal deaths occur every year from pregnancy related causes. This means that every minute of a day there is one maternal death and 99% of these deaths occur in developing countries. The maternal mortality rate in the world is 390 per 100,000 live birth, in India 100,000 women die every year as a result of pregnancy and childbirth which means one maternal death in every five minutes.

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Deficiency Anemia. According to NFHS report, 2005-06, prevalence of anemia in North-East states is 51.5%. [21]

The investigator is native of Agartala, she used to go to villages and attend antenatal clinics with her students during her 2 years of teaching experience, her observation of the local population and results of the above mentioned study arise on interest to the investigator to take up the area of Anandanagar Primary health centre, Agartala for conducting the study. She observed mothers in antenatal clinics who had complaints of tiredness, giddiness, fatigue, general malaise, inability to work efficiently. Most of them were diagnosed to be anemia. The investigator found that the main reason behind these problems was that every antenatal mothers does not take the whole Course of Iron and folic acid supplements properly and also not taking the diet which is rich in iron and folic acid.

The above said reasons shows that there is a lack of current information and no proper health education regarding iron and folic acid supplementation and diet. Knowledge about iron and folic acid necessity is a urgent and continuously needed by the mothers of respective area. The investigator was interested in educating the mothers regarding Iron Deficiency Anemia.

Statement of the Problem
A Study To Assess The Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention of Iron Deficiency Anemia Among Antenatal Mothers of a Selected Primary Health Centre of Agartala, Tripura.
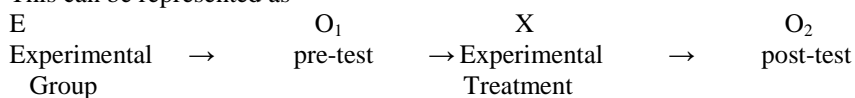
Objectives
1) To assess the pre-test knowledge score of Antenatal Mothers regarding prevention of Iron Deficiency Anemia.
2) To administer the Structured Teaching Programme regarding prevention of Iron Deficiency Anemia among Antenatal Mothers.
3) To assess the post- test knowledge score of Antenatal Mothers regarding prevention of Iron Deficiency Anemia.
4) To compare the pre-test & post-test knowledge score regarding prevention of Iron Deficiency Anemia among Antenatal mothers.
5) To find out the association between pre-test knowledge score of Antenatal mother regarding prevention Iron Deficiency Anemia with selected socio demographic variables.

Hypothesis
HO: There is no significant association between pre-test knowledge score of Antenatal mothers regarding prevention of Iron Deficiency Anemia & selected socio demographic variables.
H1: There is a significant association between pre-test knowledge score regarding prevention of Iron Deficiency Anemia among Antenatal Mothers & selected socio demographic variables.

This can be represented as

$$E \qquad O_1 \qquad X \qquad O_2$$

Experimental $\rightarrow$ pre-test $\rightarrow$ Experimental $\rightarrow$ post-test
Group Treatment

In this one group pre-test – post-test design ($O_1 \; XO_2$), the investigator introduced a basic measure before and after a planned exposure. In the present study the measure was the knowledge of antenatal mothers on Prevention of Iron Deficiency Anemia. The intervention given was Structured Teaching Programme, which is depicted as X

Variables

Independent variable
Independent variable is the variable that stands alone and does not depend on any other. It is the presumed cause of action. In this study the Structured Teaching Programme (STP) on Prevention of Iron Deficiency Anemia was the independent variable.

Dependent variable
Dependent variable is the effect of the action of the independent variable and cannot exist only by itself. In this study, it is the knowledge scores of antenatal mothers regarding Prevention of Iron Deficiency Anemia.

Extraneous variables
An uncontrolled variable that greatly influences the result of the study is called extraneous variable.

Setting
The study was conducted in Anandanagar primary health centre, Agartala.

H2: The post-test knowledge scores of Antenatal Mothers will be significantly higher than the pre-test knowledge score.

Research Methodology
This chapter deals with the methodology that was selected by the investigator in order to find out the effectiveness of Structured Teaching Programme on antenatal mothers regarding prevention of Iron Deficiency Anemia. The methodology of the study includes research approach, research design, variables, setting of the study, population, sampling process, development and selection of tools, description of tool- validity & reliability, ethical consideration, pilot study, data collection procedure & plan for data analysis.

Research Approach
Pre Experimental research approach was used for this study. Pre Experimental research that involves finding out how well a programme, practice or policy is working. Its goal is to assess or evaluate the success of the programme.

Research Design
Pre-experimental i.e. one group pre-test – post-test design was adopted for the study.

Population
In this study, the population consists of antenatal mothers of Anandanagar primary health centre, Agartala.

Sampling Process

Sample:
In the present study antenatal mothers of Anandanagar PHC who fulfilled the inclusion criteria was selected as sample.

Sample size
In the present study the size of sample is 60.

Sampling techniques
Non – probability convenient sampling technique was used for the study. Non- probability convenient sampling approach uses participants who are readily available.

Sampling Criteria

Inclusion criteria
1) All the Antenatal Mothers attending the Anandanagar Primary health center of Agartala, Tripura.
2) Antenatal Mothers who are willing to participate in the study.

Exclusion criteria
1) Antenatal Mothers who are selected for pilot study.
2) Antenatal Mothers who are unable to understand Bengali.

Development/ Selection of Tools

Description of Tool
The structured interview questionnaire consists of section I and section II.

Section I: Deals with the socio-demographic data of the subjects. The demographic data includes age, religion, educational status, occupation, family's monthly income, family structure, number of children and sources of information

Section II: Consist of 24 multiple choice questions to identify the knowledge of antenatal mothers regarding Prevention of Iron Deficiency Anemia.

The content areas included were Iron Deficiency Anemia& its causes, sign & symptoms, complication, investigation, prevention, & iron rich diet. The items were of multiple-choice with one correct answer. Each correct answer was given score one. The total score was 24. The final tool consisted of 24 items.

Consultation with the statistician was done for preparation of the plan for data analysis.

Scoring
- The interview questionnaire consisted of 24 multiple choice questions. Each correct response carried one mark and the incorrect response was marked zero.
- Maximum score - 24

Poor	0 – 8
Average	9 – 16
Good	17- 24

3. Result and Findings

Data Analysis and Interpretation
This chapter deals with the analysis and interpretation of the data obtained from the responses of 60 antenatal mothers of Anandanagar primary health centre, Agartala through a structured interview questionnaire regarding prevention of Iron Deficiency Anemia.

The purpose of data analysis is to translate information collected during the course of the study into interpretable form so that research questions could be answered. Collected data were analysed using descriptive and inferential statistics. The analysis of data was done, interpreted in the light of the objectives and hypothesis formulated for the study.

Presentation of Data
Collected data were organised and presented under the following headings:
Section I   : Demographic variables
Section II   : Knowledge distribution of participants
Section III: Association between knowledge scores and selected demographic variables.
Section IV: Effectiveness of Structured Teaching Programme in terms of gain in

Knowledge scores
Section V: Area wise knowledge distribution of participants.

Figure 18: Difference between pre & Post - test Knowledge regarding Anemia, N=60

Knowledge	Mean	SD	T value	P value
Pre Test	8.73	3.0	30.8232	<0.0001
Post Test	17.60	1.44		

The data depicted in the table 18 and figure 18.18 explains the effectiveness of Structured Teaching Programme through Pre & Post Test difference. Level of knowledge before Structured Teaching Programme was 8.73% & after the administration of Structured Teaching Programme it was 17.60%.

4. Discussion

This chapter discusses the major findings of the study and reviews them in terms of results from other studies. The aim of the study was to develop and implement Structured Teaching Programme to improve knowledge of Antenatal mothers on Prevention of Iron Deficiency Anemia.

5. Major findings of the study

1) Pre-test knowledge score of the antenatal mothers regarding Prevention of Iron Deficiency Anemia.
The findings showed that mothers had some knowledge regarding Prevention of Iron Deficiency Anemia. The mean score of pre-test was 8.73. Thus shows that there is some knowledge deficit. Most of the subjects had scored i.e. 32(53.3%) poor, 25(41.7%) subjects scored average and only 3(5.0%) scored good.

2) Association between pre-test knowledge score and selected demographic variables.

In order to find the relationship between pre-test knowledge and selected demographic variables chi-square test was used. The findings revealed that the religion and family's monthly income of mothers show no significant relationship with increase in knowledge, whereas the mothers age, education, occupation, type of family, number of children and sources of information show a significant relationship with increase in knowledge.

6. Summary

The findings of the study proved that Antenatal mothers lacked knowledge on Prevention of Iron Deficiency Anemia. Structured Teaching Programme provided to them by the investigator was useful in terms of increasing the knowledge on Prevention of Iron Deficiency Anemia

On the whole, carrying out the present study was provided an enriching experience for the investigator to conduct further studies. A pre experimental approach using one group pre-test-post-test design was used for the study. The conceptual framework provided a framework on which to base the study. The tool for collecting data and structured teaching programme was developed by the investigator and validated with the help of experts.

The conceptual framework of the present study was based on Ludwigvon Bertalanffy's general system theory, 1930. The study was evaluative in nature, with one group pre-test, post-test design. It was to determine the effectiveness of structured teaching programme in terms of knowledge gain by 60 antenatal mothers of Anandanagar PHC, Agartala.

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