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A Study to Assess the Effectiveness of IEC Strategy on Anaemia Among Pregnant Women on Iron Supplementation in A Selected Hospital, Gurugram, Haryana

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ABSTRACT

Background of the study: Pregnant women may benefit from information, education and communication strategies to improve and maintain their health and prevent sickness.

Goal: This study aimed to identify the effectiveness of the IEC strategy on iron supplementation for anaemia among pregnant women.

Methods: A Quantitative research design was carried out at the SGT Hospital. The subjects were antenatal mothers attending antenatal clinics in SGT Hospital, which was used with a purposive sampling technique, and the Sample size was 120 pregnant mothers. The intervention was provided to the antenatal mothers through a PowerPoint presentation, an information booklet and communication. For selecting the samples, the inclusion and exclusion criteria were followed. A structured questionnaire was used to assess the effectiveness of the IEC strategy on anaemia among pregnant women in selected hospitals. The data gathered was analysed and interpreted using both descriptive and inferential statistics.

Results: Among 120 pregnant women in the pre-test, 26.6% had poor knowledge, 14.6% had average knowledge and 26.6% showed good knowledge. After providing intervention, there was an increase in knowledge, with 53.3% showing average knowledge, 33.3% showing good performance, and 13.3% showing excellent performance.

Conclusion: After the intervention, there was an increase in the understanding of pregnant women. The IEC strategy was beneficial in improving the knowledge and prevention of anaemia among pregnant mothers. It is advised that health education be provided to antenatal mothers to enhance their knowledge.

Keywords: *IEC strategy, Anaemia, Pregnant women, Iron supplements, pregnant women on iron supplementation*.

1. INTRODUCTION

Background of the study:

It has been established that anaemia is the most prevalent type of nutritional insufficiency globally, especially in developing nations like India [1]. Even though anaemia is an illness that may be readily prevented and treated, pregnancy and anaemia are nonetheless closely related [2]. The underlying factors associated with the prevalence of anaemia during pregnancy may include decreased intake and increased demand, excess demand in the case of multigravida women, altered metabolism and background characteristics like low socioeconomic status, illiteracy, early marriage, associated with increased susceptibility to infectious diseases like hookworm infections [3]. The World Health Organization (WHO) reports that anaemia prevalence in expectant mothers ranges from 14% in affluent nations to 65%-75% in India [4]. Anaemia in women can emerge as the

primary factor contributing to neonatal and maternal deaths [5].

The WHO classifies anaemia in pregnancy as having a hemoglobin value of less than 11g/dl. For hemoglobin levels between 10.0 and 10.9g/dl, 7 and 9.9g/dl, and severe <7g/dl, anaemia in pregnancy can be further classified as mild, moderate and severe [6]. Numerous investigations revealed a link between anaemia and the death rate among mothers [7]. Pregnancy-related anaemia can cause low birth weight, stillbirth, neonatal death and intrauterine growth retardation, in addition to maternal mortality [8].

India launched the National Nutritional Anemia Prophylaxis Program (NNAPP) to prevent anaemia in pregnant women due to the country's low dietary iron folic acid deficiencies and high anaemia prevalence [9]. Under this program, pregnant women in urban areas receive 500 mcg of folic acid and 100 mg of ferrous iron through urban family welfare centres [10].

2. MATERIAL AND METHODS

Study design:

The impact of an Information, Education, and Communication (IEC) strategy on anaemia in 120 pregnant women receiving iron supplementation at SGT Hospital, Gurugram, was evaluated quantitatively in this pre-experimental study. A structured questionnaire was used to gather pre- and post-test data, and descriptive and inferential statistics were used for analysis.

Setting of the study:

The study was carried out in the antenatal clinic at SGT Hospital in Gurugram, Haryana. The setting was chosen based on administrative approval, study feasibility, and the availability of pregnant women using iron supplements. It offered a regulated setting for carrying out the IEC plan and gathering trustworthy data.

Participants and sampling:

120 pregnant women who visited the antenatal clinic at SGT Hospital in Gurugram, Haryana, were involved in the study. Purposive sampling was used to choose the participants. Pregnant women using iron supplements who were available and willing to participate were among the inclusion criteria. Accessibility, practicality, and administrative approval were taken into consideration when selecting the research location. Participants were given a structured questionnaire to gauge their understanding of anaemia both before and after the IEC intervention, and ethical consent was acquired.

Research tool:

Section A: Forms were developed to gather demographic information. Age, education, family income, eating habits, family size, occupation, husband's occupation, location, and prior knowledge are the nine questions on the demographic proforma. The best options must be marked with a checkmark by the responders.

Section B: survey to gauge respondents' awareness of anaemia in expectant mothers. Ten items on a questionnaire were used to gauge respondents' knowledge of anaemia. Vitamins, foods, the causes of anaemia, its effects on the body, and the most typical symptoms are all covered. Under the direction of a guide and nursing faculty experts, the tool was prepared. 120 pregnant women were given this tool at the SGT Hospital's antenatal clinic in Gurugram, Haryana. The tool was proven to be trustworthy. Scoring: 0-4: Inadequate. 5-7: Moderately adequate, 8-10: Adequate

Ethical Consideration:

The conduct of the study was approved by the Institutional Ethical Committee. The Dean of the Faculty of Nursing and the SGT University authorities provided their administrative consent. Professionalism was maintained. The study participants' consent to participate in the research endeavour was acquired prior to any data collection. Confidentiality of the information was maintained.

Data Analysis:

The following sections was containing the data studied:

Section A: To determine the frequency percentage distribution of demographic variables.

Section B: To determine the trends in morbidities among expectant mothers

Section C: Categorisation of the respondents' knowledge scores on the pre- and post-tests about anaemia in expectant mothers.

Section D: Describes the frequency, percentage, t-value, and p-value of the effectiveness of the IEC strategy on expectant mothers.

Section E: To determine the relationship between anaemia-related parameters and the prevalence of anaemia in pregnant women receiving iron supplementation using the computed chi-square value, df, and P value.

3. RESULTS

Table 1: This section describes the participants' demographic data based on age, education, family income, food habits, occupation, occupation of husband, family size, locality and previous knowledge about anaemia. n=120

Variables	Categories	Frequency	Percentage (%)
Age	Less than 20	20	16.6
	20- 25	44	36.6
	26- 30	40	33.3
	31 and Above	16	13.3
Education	Primary	20	16.6
	Secondary	48	40
	Graduation	36	30
	Post- Graduation	16	13.3
Family income	Less than 10000	24	20
	11,000- 20,000	40	33.3
	21,000- Above	56	46.7
Food habits	Vegetarian	88	73.3
	Non- vegetarian	12	10
	Eggetarian	20	16.7
Family size	Nuclear	36	30
	Joint	84	70
Occupation	Home-maker	84	70
	Private job	28	23.3
	Government job	0	0
	Business	8	6.6
Occupation of husband	Private job	88	73.3
	Government job	20	16.7
	Business	12	10
Locality	Urban	20	16.6
	Rural	100	83.3
Previous knowledge	Yes	60	50
	No	60	50

Table 1 represents the total sample age group of pregnant women less than 20 years, which is 16.6%, 20-25 years 36.6%, 26-30 years 33.3%, and 31-35 years 13.3%. Among all pregnant women, the primary education level is 16.6%, the secondary education level is 40%, the graduation level is 30%, and the post-graduation level is 13.3%. Food habits are primarily vegetarian, 73.3% non-vegetarian, 10% and eggetarian, 16.7%. Most pregnant women live in a joint family (70%) and a nuclear family (30%). Occupation of pregnant women may affect their health; it is categorised as housemakers at 70%, private jobs at 23.3%, and businesswomen at 6.6%. The locality of pregnant women is essential because, in rural areas, there are females who are not aware of anaemia and suffer from health conditions due to anaemia. Pregnant women living in rural areas comprise 83.3% of the population, and urban women comprise 16.6%.

Section B: Description of the Pattern of Morbidities observed among pregnant women

Table 2: Pattern of Morbidities observed among pregnant women n=120

Disease	Frequency	Percentage (%)
Anemia	32	26.6

Table 2 shows that 26.6% (32/120) of pregnant women have anaemia after Iron supplementation.

Section C: Classification of respondents' Pretest and Posttest knowledge scores

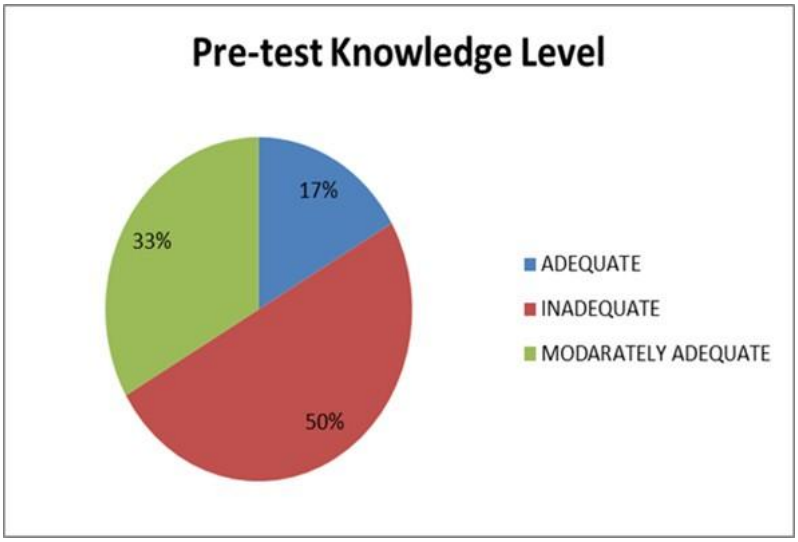

Figure 1: Pie chart represents the pretest knowledge score of pregnant women on Iron supplementation.

Figure1. This represents the pretest knowledge score of pregnant women; 60 pregnant women (50%) have inadequate knowledge, 40 pregnant women (33%) have moderately adequate knowledge, and 20 pregnant women (17%) have adequate knowledge.

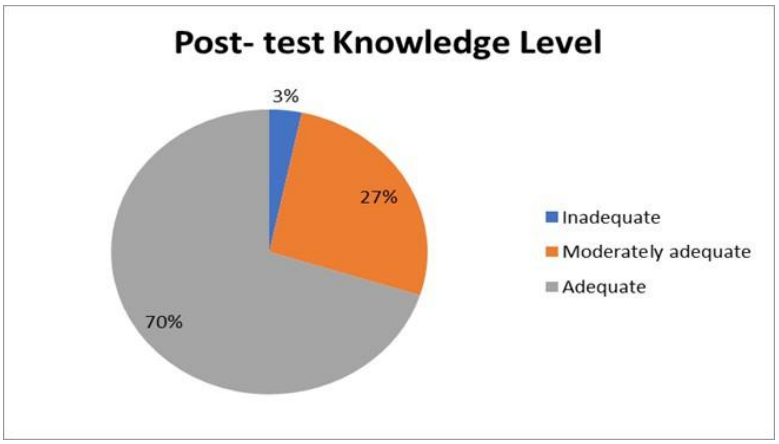

Figure 2: Pie chart represents the post-test knowledge score of pregnant women on Iron supplementation.

Figure2. This represents the pretest knowledge score of pregnant women: 4 pregnant women (3%) have inadequate knowledge, 32 pregnant women (27%) have moderately adequate knowledge, and 84 pregnant women (70%) have adequate knowledge.

Section D: Description of the Effectiveness of the IEC strategy on pregnant women

Table 3: Finding statistical significance of the Effectiveness of the IEC strategy on pregnant women was analysed through a paired t-test n=120

Sl No.	Experimental Group	Mean	SD	"t" Value	df	P value
1.	**Pre-test**	4.6	2.24	5.21	58	0.001*
2.	**Post-test**	7.3	1.74			

***Significant at <0.05 level of significance.**

Table 3 revealed a significant difference between pre-test and post-test knowledge scores regarding anaemia among pregnant women on Iron supplementation in Gurugram, with significance at t=5.21, p=0.001. Hence, the null (H0) hypothesis is rejected, and the research hypothesis is accepted. Therefore, it can be interpreted that the intervention with the IEC strategy effectively improved pregnant women's knowledge of Iron supplementation.

Section E: Find out the association between factors of anaemia and prevalence of anaemia among pregnant women on iron supplementation in terms of calculated chi-square value, df, P value

Table 4: Description of calculated chi-square value, df, p-value n=120

Variables	Pretest Knowledge Score Frequency			Chi X^2	df	P value	Table value
	Inadequate	Moderately Adequate	Adequate				
Age							
Less than 20	8	8	4				
20- 25	20	20	4	2.15	6	0.90	12.59
26- 30	24	8	8				
31 and Above	8	4	4				
Education							
Primary	12	4	4				
Secondary	28	12	8	2.37	6	0.88	12.59
Graduation	16	16	4				
Post- Graduation	4	8	4				
Family income							
Less than 10000	8	12	4				
11,000- 20,000	28	8	4	2.79	4	0.59	9.49
21,000 and Above	24	20	12				

Food habit							
Vegetarian	52	28	8				
Non- vegetarian	4	4	4	4.40	4	0.35	9.49
Eggetarian	4	8	28				
Family size							
Nuclear	16	12	8	0.31	2	0.85	5.99
Joint	44	28	12				
Occupation of husband							
Private job	48	32	8	3.57	4	0.46	9.49
Government job	8	4	8				
Business	14	4	14				

***Not Significant at the 0.05 level of significance.**

The data presented in Table 4 shows no significant association between pretest knowledge and selected demographic variables, as the calculated chi X2 value is smaller than the tabulated value at 0.05 significance levels; hence, the null ($H0_2$) hypothesis is accepted.

4. CONCLUSION

The study found that most pregnant women were unaware of anaemia during pregnancy and had inadequate knowledge. They were taking medications without knowing the actions, or some knew after some visits during the antenatal period. The present study indicated that the IEC strategy improved pregnant women's knowledge. The mean post-test knowledge score was significantly higher than the mean pre-test knowledge score.

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Conflict of interest:

There is no conflict of interest

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