

Original Research Article

Effectiveness of self-instructional module on knowledge regarding dietary management of iron deficiency anemia among pregnant women attending outpatient department

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ABSTRACT

Background: Anaemia is a big health issue in the world, and iron deficiency anaemia is one of the commonest types of anaemia amongst them. The incidence rate of anaemia during pregnancy has been reported high around 40-80%. This study aimed to observe the effectiveness of self-instructional module on knowledge regarding dietary management of iron deficiency anaemia among pregnant women attending outpatient department (OPD).

Methods: The research approach was quantitative and one group pre-test – post-test control design sample size was 80 women selected by non-probability purposive sampling technique fulfilling the inclusion criteria.

Results: The researcher compared the calculated t value i.e. 6.04 with the critical value (2.00) on 0.05 level of significance (df=79). Since the calculated value lied beyond the critical value the alternative hypothesis was accepted. So there was a significant change in the pre-test and post-test knowledge score of pregnant women regarding dietary management on iron deficiency anemia.

Conclusions: The researcher concluded that the self-instructional module was helpful in improving the level of knowledge among pregnant women. Self-instructional module can be a part of antenatal clinics/OPD and we can apply this for the future studies for prevention of anemia and management of anemia among pregnant women.

Keywords: Iron deficiency anaemia, Self-instructional module, Pregnant women, Antenatal OPD

INTRODUCTION

Anemia is a big health issue in the world, and the iron deficiency anemia is one of the commonest type of anemia and the incidence rate of anemia during pregnancy has been reported so high 40-80%. The prevalence of iron deficiency anemia is higher in developing countries like India, particularly affecting toddler, teens and women of childbearing age.¹

In obstetrics and perinatal treatment, anemia is a common concern. Regardless of gestational age, hemoglobin below 10.5 g/dl can be considered as true anemia. Nutritional deficiencies, parasitic and bacterial

infections, and inborn red blood cell disorders such as thalassemia are the key causes for anemia in pregnancy. Iron deficiency, which has an estimated global prevalence of 20 percent-80 percent and consists of a predominantly female population, is the primary cause of obstetric anemia. Phases of deficits in iron.²

According to World Health Organization (WHO), anemia is characterized as low hemoglobin concentration resulting in a decrease in oxygen carrying capacity or blood; hemoglobin (Hb) level of 11 gm is considered to be anemia during pregnancy. Anemia is caused by many factors, such as nutritional deficiency (acid deficiency, protein efficiency, and vitamin A deficiency),

blood loss, genetic causes, pregnancy, and worm contact.³

Pregnancy induces primarily nutritional anemia. The cardio vascular system is responsible for many physiological changes during pregnancy. The plasma volume is increased and the blood cells are also elevated, but the blood cells are not raised relative to the plasma volume, causing hemodilution. Due to the physiological anemia of hem dilution, as well as during pregnancy, the mother requires 60 mg of iron/day to satisfy the requirement that she develops iron deficiency anemia during pregnancy.⁴ Maternal iron deficiency anemia is associated with increased placenta weight or height, a disorder that could pose a risk of subsequent high blood pressure in offspring pregnant women with the iron-bearing component in the blood (losing Hb levels) has an increased risk for pre-term or low birth weight infants (nevertheless, iron, supplement does not appear to have any effect on the iron-bearing component in the blood).⁵

METHODS

Research design

The design of the research was quasi-experimental (one group pre-test post-test control group design).

Variables

Independent variable

Self-instructional module on dietary management of iron deficiency anemia was the independent variable.

Dependent variable

Level of knowledge of mothers regarding dietary management of iron deficiency anemia was the dependent variable.

Demographic profile

It included age, education, religion, and monthly income of family/month, parity, dietary pattern, residence, and type of family.

Setting of the study

The researcher setting refers to the specific place where the information is gathered." In this study setting was antenatal outpatient department (OPD) in the department of obstetrics and gynecology, Queen Mary Hospital Lucknow, Uttar Pradesh.

Population

In this study population under the study was pregnant women who are attending OPD for antenatal check-up during pregnancy.

Sample and sampling technique

The sample of the study was the pregnant women who are anemic, primigravida and multigravida, who met the inclusion criteria and agreed to participate were included in this study.

Sample size

80 pregnant women consisted of the sample size.

Sampling technique

Non-probability purposive sampling technique was used.

RESULTS

The result was organised according to the given objectives.

Section I: description of selected socio demographic variables of pregnant women attending OPD

It included the following: 40% of participants were aged between 23-27 years, 20% of participants were aged between 28-32 years, 10% were aged between 18-22 years and 5% were aged between 33-37 years and above 37 years of age; 50% of participants were graduated, 20% were having secondary education, and 10% were having post-graduation; 50% of participants were Muslim, 25% Hindu, and 05% of pregnant women were Christian; 60% of participants were home maker, and 20% of participants were skilled worker; 60% of participants belong to joint family, and 20% of participants belong to nuclear family; 40% of participants were having monthly income between Rs.5000- Rs.10000, 30% of participants were having less than Rs. 5000 monthly income, 10% of participants were having above 20000 Rs. monthly income; and 40% of participants have 1-4 number of antenatal visit, 20% were having 9-12 antenatal visit, and 10% were having 5-8 and more than 12 visits.

Section II: effectiveness of self-instructional module on level of knowledge regarding dietary management on iron deficiency anemia

The researcher compared the calculated t value (6.04) with the critical value (2.00) on 79 degree of freedom ($p < 0.05$).

Since the calculated value is lies beyond the critical value the researcher rejected the null hypothesis and accepted the alternative hypothesis that is there is a significant change in the pre-test and post-test knowledge score of pregnant women regarding dietary management of iron deficiency anemia.

So, this is evident that the self-instructional module regarding dietary management of anemia was effective in improving knowledge of pregnant women.

Table 1: Effectiveness of self-instructional module on level of knowledge regarding dietary management on iron deficiency anemia.

Dietary management on iron deficiency anemia	N	Mean	Standard deviation	df	Paired t value
Pre-test	80	8.28	3.37	79	6.04
Post-test	80	12.3	3.21		P<0.05

DISCUSSION

The discussion was organised under following sections.

Section I: description of demographic variables of the pregnant women

In the present study 80 pregnant women participated. Amongst them majority of the samples were aged between 23-27 years, graduated, Muslim, home maker, belonged to joint family, having monthly income between Rs. 5001-Rs. 10000, and had 1-4 number of antenatal visits.

The above mentioned findings were supported by the following prevalence study on pregnant women regarding anemia that was conducted by Muhammed et al. The findings revealed that there were total 272 pregnant women. In this, most of the pregnant women 95 (34.9%) were highly present in the age group of 21-25 years, majority of the pregnant women 83 (30.5%) had secondary education, most of the pregnant women 171 (62.8%) were house wife, majority of women had nuclear family 153 (56.2%), Out of 272, 137 (50.3%) had family income in the range between 10,000-30,000 rupees per month, It was seen that majority of gravidae 154 (56.6%) fall in category of 2 pregnancy, majority of the pregnant women 129 (47.4%) had less than 2 years spacing interval, among that 219 (80.5%) belongs to non-vegetarian diet, and 158 (58%) had previous history of anemia.⁶

Effectiveness of self-instructional module on level of knowledge regarding dietary management of iron deficiency anemia

The researcher compared the t value (6.04) with the critical value is lies beyond the critical value the researcher rejected the null hypothesis and accepted the alternative hypothesis that there is a significant change in the pre-test and post-test knowledge score of pregnant women regarding dietary management of iron deficiency anemia. So this is evident that, the self-instructional module regarding dietary management of iron deficiency anemia was effective.

Section II

The researcher compared the calculated t value (6.04) with the critical value (2.00) on 79 degree of freedom ($p < 0.05$). Since the calculated value is lies beyond the critical value the researcher rejected the null hypothesis and accepted the alternative hypothesis that is there is a significant change

in the pre-test and post-test knowledge score of pregnant women regarding dietary management of iron deficiency anemia. So, this is evident that the self-instructional module regarding dietary management of anemia was effective in improving knowledge of pregnant women. The above mentioned findings are supported by the following findings.

Joseph conducted a study to assess the effectiveness of structured teaching programme on prevention and management of anemia in pregnancy among 30 antenatal mothers attending obstetric and gynaecological outpatient department on antenatal mothers. The study reveals that the mean pre-test score was 8.10 ± 1.647 and the mean post test score was 19.73 ± 1.015 . The difference between the pre and post test scores was highly significant at $p < 0.05$ level (2 tailed). Thus the study revealed that the structured teaching was effective in improving the level of knowledge on the prevention and management of anemia in pregnancy.⁷

Mothers belonged to joint family, and with regard to food pattern, majority of the antenatal mothers, nearly 80% were non-vegetarians.

The mean pre-test knowledge so the above study supported my study that the study shows improvement in knowledge after the intervention as per my study.

CONCLUSION

The researcher concluded that the self-instructional module was helpful in improving the level of knowledge among pregnant women. Self-instructional module can be a part of antenatal clinics/OPD and we can apply this for the future studies for prevention of anemia and management of anemia among pregnant women.

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