JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

A Study to assess the Knowledge and Determine thePrevalence of Anaemia in Pregnant Women of age18-45years in Selected Government Hospitals of Faridabad, Haryana.

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ABSTRACT

Anemia is the commonest hematological disorder that may occur in pregnancy. Iron deficiency is the most prevalent single deficiency state on a worldwide basis. It is important economically because it diminishes the capability of individuals who are affected to perform physical labor, and it diminishes both growth and learning in children. Anemia is one of the most widespread nutritional deficiency diseases. It affects all age groups and both sexes in most states of India. Profoundly affected group is pregnant women (82% to 98%) and pregnant in the child bearing age (74% to 99%). Pregnant women are more vulnerable to anemia because their need of iron is greater than those of adult men. Women having closely spaced pregnancies are particularly at risk.

Material and Methods: A descriptive study was adopted to determine the prevalence and knowledge of anemia in pregnant women of age 18-45 year. The study was conducted in selected hospital, Faridabad, Haryana. A total of 500 samples were enrolled using by non-probability purposive sampling technique. Research instrument was consisted in four parts; socio-demographic profile, clinical profile of pregnant women, self structured questionnaire to assess the knowledge regarding anemia, and information regarding prevalence of anemia. Data were collected through above mentioned tool. Tool was validated by expert ofnursing and medicine. The reliability of structured knowledge questionnaire is estimated by KR-21 formula and the r value found to be 0.76 and for anemia prevalence tool reliability was estimated by using Cronbach's alpha (r=.79) and both the tools were found to be reliable.Data were obtained from pregnant women. At the end of the study book on anemia was distributed to all pregnant women.

Results: According to the knowledge; half of them 50.4% had average knowledge followed by 23.8% had very good knowledge, 22%had below average knowledge and only 3.8% had excellent knowledge about anemia.

The mean score of knowledge was 21.41±9.64.The prevalence of anemia was 83.4% and 16.6% were non-anemic. As per prevalence of level of anemia in pregnant women; 68.6% had moderate anemia, 16.6% were normal, 10.8% had mild anemia and only 4% had severe anemia. The mean score of hemoglobin was 9.31±1.47. The median score of Hemoglobin was 9.10 (1.9).This study found the association between knowledge with age, type of family,, occupation , family income , socio-economic status ,iron/folic acid ,gravida ,parity and living children which indicate highly significant at 0.05 level. This study found the association between level of anemia with gestational age highly significant at 0.01 level.

Keywords: Anemia, Pregnant women, Knowledge, Prevalence, Booklet of anemia.

Background

Anemia is the commonest hematological disorder that may occur in pregnancy. Iron deficiency is the most prevalent single deficiency state on a worldwide basis. It is important economically because it diminishes the capability of individuals who are affected to perform physical labor, and it diminishes both growth and learning in children.

The highest prevalence rate of anemia is in the reproductive age group. It is estimated that two third of pregnant women and half of the non-pregnant women in South and Sub-Saharan Africa were anemic. Worldwide, the leading cause of anemia is iron deficiency anemia. Prevalence rates are higher in developing countries than in developed countries (**Abraham et al., 2018**).

Pregnancy is a period of a significant increase in iron requirement, and hence the risk of suffering from anemia is higher than in non-pregnant state. Although iron requirements are reduced in the first trimester because of the absence of menstruation, they rise steadily thereafter from approximately 0.8 mg per day in the first month to approximately 10 mg per day during the last 6 weeks of pregnancy. During periods of growth in infancy, childhood, adolescence, pregnancy iron requirements may outstrip the supply of iron from diet and stores. Iron loss from tissue growth during pregnancy and from bleeding during delivery and post partum averages 740 mg. Breastfeeding increases iron requirements by about 0.5 to 1 mg a day **(Bano, 2015)**.

WHO identifies anemia as the most common nutritional deficiency disorder in the world and a serious health concern among pregnant women. The 2011 estimates suggest that anemia affects around 800 million children and women all over the world, including 273 million children, 496 million nonpregnant women, and 32 million pregnant women.

Nine out of ten anemia sufferers live in developing countries, about 2 billion people suffer from anemia and an even larger number of people present iron deficiency. An alarming 600million people in South-East Asia are suffering from iron deficiency anemia, predominantly affecting adolescent girls, women of reproductive age and young children. The condition has a prevalence rate of 74 percent among pregnant women in the region ranging from 13.4percent in Thailand to 87 percent in India. About 74 percent of pregnant women in Bangladesh, 63 percent in Nepal, 58 percent in Sri Lanka and Myanmar, and 51 percent in Indonesia suffer from anemia (**Bentleyet al., 2003**).

PROBLEM STATEMENT

A Study to Determine the Prevalence and Knowledge of Anaemia in Pregnant Women of age 18-45years in Selected Government Hospitals of Faridabad, Haryana.

OBJECTIVES

1. To assess the knowledge of pregnant women of age 18-45years regarding anaemia.
2. To determine the prevalence rate of anaemia in pregnant women of age 18-45years
3. To find out association of knowledge regarding anaemia with selected demographic variables.
4. To find out association of knowledge regarding anaemia with selected clinical variables.
5. To find out association of level of anaemia with selected demographic variables.
6. To find out association of level of anaemia with selected clinical variables.

OPERATIONAL DEFINITIONS

- **Prevalence:** In this study it refers to occurrence of anemia during pregnancy particular during of data collection.
- **Anemia:** In this study it refers to anemia is hemoglobin less than 11 gm/dl according to World Health Organization. Further its categories three levels of severity: mild anemia (Hb levels 9 to 10.9g/dL), moderate anemia (Hb levels 7 to 8.9g/dL), and severe anemia (Hb levels less than 7g/dL)
- **Knowledge:** In this study it refers to the response of pregnant women regarding basic information of anemia, management and prevention of anemia as measured by self-structured knowledge questionnaire
- **Pregnant women:** In this study it refers to those pregnant women who lies between age 18-45 year of age and visited selected government hospitals of Faridabad, Haryana.

ASSUMPTIONS

1. There is various level of anemia among pregnant women at selected hospitals in Faridabad, Haryana.
2. There is an association between level of anaemia with their selected demographic variables.

HYPOTHESES

H_1-There will be association between knowledge regarding anaemia and selected demographic variables.

H_2-There will be association between knowledge regarding anaemia and selected clinical variables.

H_3-There will be association between level of anaemia and selected demographic variables.

H_4-There will be association between level of anaemia and selected clinical variables.

DELIMITATION

- The study was conducted only selected Government hospitals at Faridabad, Haryana.
- The knowledge of anaemia was assessed only by thirty self-structured questionnaires.

- Only those pregnant women (between 18 – 45 years) who would be attending the ANC clinic during the project work.

Conceptual Framework

The conceptual frame work of the study is based on Peplau's interpersonal relations model. She described the psychodynamic nursing, which she defines as using an understanding of one's own behavior and needs to help others identify their needs.

Review of Literature.

The Review of Literature for the present study are presented under the following headings

1. Studies related to the prevalence of anemia among pregnant women

2. Studies related to knowledge of pregnant women regarding anemia.

Research Methodology

Research Approach

A quantitative approach was adopted to assess the knowledge and determine the prevalence of anaemia in pregnant women of age 18-45years in selected government hospitals of Faridabad, Haryana.

Research Design

For the present study, descriptive study design is utilized to achieve the objectives of the study.

Variables under Study

Dependent variable

Dependent variable in this study was knowledge of anaemia in pregnant women.

Demographic variables

The demographic variables under the study are age, number of children, type of family, religion, dietary habit, anemic status, iron/ folic acid supplementation during last pregnancy, socio economic status.

Clinical variables

Maternal age, Gestational Age, Parity, Number of Antenatal Visit.

Research Setting

The present study was conducted at selected government hospitals of Faridabad, Haryana.

Population

The population is of the entire aggregation of individuals in which the researcher interested. For the present study, population was pregnant women at selected government hospitals of Faridabad, Haryana.

Accessible Population

For the present study, accessible population was pregnant women of age 18-45years at selected government hospitals of Faridabad, Haryana.

Sampling Technique

In the present study purposive sampling technique was used to select the pregnant women who were at selected government hospitals of Faridabad, Haryana.

Sample and Sample Size

The sample and sample size of present study was 500pregnant women who were at selected government hospitals of Faridabad, Haryana.

Sampling Criteria

Inclusion criteria:

- Pregnant women who were willing to participate in the study.
- Pregnant women who were present during data collection time.
- Pregnant women who can read/understand English or Hindi language.

Exclusion criteria:

- Pregnant women those who have high risk pregnancy.

Selection and Development Of Tool

The tool was developed by keeping in mind the objectives of the study and prepared after extensive review of literature, internet sources and through discussion with guide, co-guide and opinions of various experts in the field of Obstetrics and Gynecological Nursing, medical surgical nursing, Social and Preventive Medicine and Medicine.

Description of Tool

The tool consists of 4parts: -

Part A: Socio-demographic Profile

It consists of items for obtaining information from pregnant women which include age, number of children, type of family, religion, dietary habit, anemic status, iron/ folic acid supplementation during last pregnancy, socio economic status.

Part B: Clinical profile

It consists of items for obtaining information from pregnant women which include Maternal age, Gestational Age, Parity, Number of Antenatal Visit.

Part C: Standardized information regarding prevalence of anemia

It consists of 19 items obtaining information from pregnant women. Response was obtained in yes or no. If the response yes one score will be awarded and for No Zero will be awarded.

Part D: Self-Structured Questionnaire

It consists of 30 items for obtaining information from pregnant women on anaemia about basic information, preventive measures management of anaemia. The item numbers 1,2,3,4,7, 14,15,17, 20,21,30 has only one right answer and item numbers 5,6,8,9,10,11,12,13,16,18,19,22,23,24,25,26,27,28,29 has more than one right answer. The minimum score is 0 and the maximum score is 52.

Scoring Criteria:

For each correct response 1 mark will be given and 0 mark for incorrect answer.

Level of Knowledge	Score in Numbers
Excellent	40-50
Very Good	27-39
Average	14-26
Below average	0-13

VALIDITY OF TOOL : To ensure content validity of tools it was submitted to 10 experts in the nursing, medicine, Experts were requested to judge the tool for clarity, relevance, appropriateness, relatedness, and meaningfulness for the purpose of study and to give their opinion and suggestions on the content, its coverage, organization, presentation, language, and feasibility. Necessary modifications were made as per expert's advice.

Pre testing of the tool

The structured knowledge questionnaire was pretested with 50 samples of pregnant women and construct validity is established.

Construct validity

Construct validity is the extent to which an instrument measures a theoretical attribute (Beanland, 1999, Polit & Hungler, 1999). In Multiple Choice Questions, construct validity is related to whether or not the questions measure the domain of knowledge being examined. The construct validity Multiple Choice Questions should be established using 'item response analyses such as item difficulty analysis, item discrimination analysis and distractor evaluation (Gronlund 1968, Violato 1991, Haladyna 1999, Masters et al, 2001).

Item analysis

Item analysis is a process which examines participant responses to individual test items (questions) in order to assess the quality of those items and of the test as a whole (Neeraja, 2011). In theItem analysis difficulty value and discrimination index were calculated.

Item difficulty index=H + L /N ×100

Where, H is the number of correct responses in the high group, L is the number of correct responses in the low group, and N is the total number of respondents. An item is considered difficult when the difficulty index value is between 20 -30 was considered as most difficult, 30-40 was considered as difficult, 40-60 was Moderate difficult, 60-70 easy, 70-80 most easy. In the present study, the difficulty value of all the 23 items out 30 items on knowledge questionnaire on anemia ranged between 32 to 68 and the 4,5.7.8 was difficulty level of more than 80. So, these items were simplified.

Item Discrimination index:

The item discrimination analysis examines how each MCQ is related to overall test performance (Nunnally & Bernstein 1994 and Haladyna, 1999). According to Guilbert (1989) describes it as the way an item differentiates respondents who know the content from those who do not. The item discrimination index (DI) is calculated using the formula:

Discrimination index = 2 x (H-L) / N

Where, H is the number of correct answers in high group, L is the , number of correct answers in low group, N is the total number of respondents in both groups.

According to Ebel (1954) the items with discrimination index of > 0.40 is very good item, between 0.30 -0.39 is good item, between 0.20-29 is marginal items needs improvement, <0.19 is poor item needs to be removed. In the present study, the discrimination index of all the 30 items of knowledge questionnaire on anemia ranged between 0.30 to 0.45. Therefore, all the 30 items were retained without any modification.

Calculating content validity index:

Content validity index is used to find out representativeness, comprehension, ambiguity and clarity. Two types of content validity index (CVI) are calculated i.e., I-CVI and S-CVI. I-CVI is item level content validity index. It is the proportion of content experts giving items a relevance rating 3 or 4. The formula used to compute I-CVI is agreed item/number of experts. S-CVI is scale for content validity index. It is the average of I-CVI scores for all items on the scale. There are two methods for estimating S-CVI, in which the average of the I-CVI scores for all items on the scale (S-CVI/Ave) and the proportion of items on the scale that achieve relevance scale of 3 or 4 by all experts (S-CVI/UA). The experts rate the items 1 to 4, as given in the following rating.

Item Number	E1	E2	E3	E4	E5	E6	E7	E8	EA	I-CVI	UA
1-26	1	1	1	1	1	1	1	1	1	1	1
27	1	1	0	1	0	1	1	0	5	0.62	0
28-30	1	1	1	1	1	1	1	1	1	1	1

Experts in agreement:

Sum up the experts rating of each item. If an expert marked the item score either '3' (need minor changes) or '4' (relevant), then it is considered as agreed, if not disagreed. For an each agreed items the assigned score was '1'and for disagreed item '0'. For a example in item number 27 (1 + 1 + 0+1 + 0 + 1 + 1+ 0) = 5

Universal agreement (UA):

If all experts agreed to the item then the score 'one', even one expert is not agreed then the score is zero.

I-CVI:

The total number of expert's agreement divided by the total number of experts. For a example in item number 1, 8/8=1. In item number 27 five experts agreed and three experts rejected. So 5/8=0.62.

S-CVI/Ave (based on I-CVI):

The sum up of I-CVI score of all items divided by the total number of items, for example the S-CVI/Ave (30/30) is equal to 1.

Reliability of Tool

The reliability of structured knowledge questionnaire is estimated by KR-21 formula and the r value found to be 0.76. The tool was found reliable.

Pilot Study

The pilot study was carried out on 63pregnant women to assess the feasibility for conducting main research study and to assess the relevancy of the tool. The study was performed in month of July 2021. The findings of the pilot study revealed that the study was feasibility to perform a lager study in terms of time, money, and study sample availability.

Ethical Consideration

Ethics is the ability to distinguish between right and wrong and to act accordingly (Emelda, 2011). The investigator adhered to the following ethical principles in this study:

1. **Beneficence** – This refers to minimizing harm and maximizing benefits (Belmont, 1979)
   a. **Freedom from harm and discomfort**
      - The pregnant women were not subjected to unnecessary risks for harm or discomfort during the study period.
      - The investigator was qualified and authorized to carry out the study.
      - The study proposal and plan had formal ethical approval by the research committee of ESIC Medical College and Hospital, Faridabad, Haryana.
      - Formal permission was obtained from the ESIC Medical College and Hospital, Faridabad, Haryana.
      - The data collection was done during the permitted time.
      - No intrusive questions were asked to the pregnant women during data collection.

   b. **Protection from exploitation**

   The investigator explained the procedure and nature of the study to the pregnant women and ensured that none of the participants would be exploited or denied fair treatment.

2. **Respect for Human Dignity**

This means that the research subjects should have autonomy and self-determination (Belmont, 1979).

a. The right to self-determination: The researcher gave full freedom to the pregnant women to decide voluntarily whether to participate in the study or to withdraw from the study and the right to ask questions.

b. The right to full disclosure: The investigator has fully described the nature of the study, the participant's right to refuse participation, and the investigator's responsibilities and potential benefits of the study. Written informed consent signed by the participant and the investigator was ensured before the data collection.

3. **Justice:**

This refers to the need for fair treatment and the right to privacy (Belmont, 1979).

a. The right to fair treatment: The pregnant women were selected based on their conformity to the inclusion criteria and not based on any vulnerability. The personal and cultural beliefs and lifestyles

of all the pregnant women were respected and they were treated equally. The contact information of the researcher was given to the samples for any desired clarifications.

b. The right to privacy: The researcher limited queries to the items specified in the data collection tool and no intrusive or embarrassing questions were put to the participants.

4. Confidentiality

The participants were assured strict confidentiality of their identity, or the information shared by them during reporting, presentation, or publication of this research work.

Data Collection Procedure

The data collection was done in the month of July 2021- November 2021at ESIC Medical College & Hospital after getting administrative permission from the hospital.For selection hospital for final data collection, the researcher prepared the list of maternity hospitals in Faridabad, Gurgaon (excluded District Civil Hospital, Faridabad, Haryana from the list) and ESIC Medical College & Hospital, Faridabad, Gurgaon Haryana was randomly selected using lottery method. A total of500 pregnantwomen wereenrolled for the study by using purposive sampling technique. The researcher introduced herself and the purpose of the study was explained to the participants and written informed consent was obtained. The data was collected using demographic variables, clinical profile and structured knowledge questionnaire on anemia and anemia prevalence tool. After the data collection informational booklet on anemia was given to the pregnant women.

Findings of the study

Table 1: Level of Knowledge about Anaemia in Pregnant Women.

N=500

S. No.	Level of knowledge	f	%	Mean SD	Median (IQR)
1.	Excellent	19	3.8	21.41±9.64	20 (14)
2.	Very Good	119	23.8		
3.	Average	252	50.4		
4.	Below Average	110	22.0		

Table 1 demonstrates the level of knowledge regarding anaemia among pregnant women.

Table 2: Item analysis of knowledge questionnaire regarding anemia among pregnant women.

N=500

Items	Mean	SD
1.	.59	.493
2.	.71	.654
3.	.46	.499
4.	.56	.655
5.	.96	.613
6.	1.13	.379
7.	.48	.504
8.	.81	.604
9.	.55	.498
10.	.66	.618
11.	1.00	.458
12.	.61	.582
13.	.49	.543
14.	.96	.187
15.	.59	.497
16.	1.16	.458
17.	.62	.495
18.	.74	.563
19.	.43	.535
20.	.54	.499
21.	.59	.492
22.	1.08	.366
23.	.55	.604
24.	1.24	.631
25.	.61	.589
26.	.92	.436
27.	.78	.461
28.	.59	.576
29.	.46	.526
30.	.54	.499

Table 2 depicts that item analysis of knowledge questionnaire regarding anemia among pregnant women. Item No. 24 and 16 had higher mean score i.e.1.24±0.63 and 1.16±0.45. While in comparison item No. 19 and 29 had lower mean score i.e.0.43±0.53 and 0.46±0.52 respectively.

Table 3: **Information regarding anaemia among pregnant women.**

N=500

S. No	Content	No		Yes	
		f	%	f	%
1.	Previous diagnosis of anaemia	252	50.4	248	49.6
2.	Previous iron therapy	304	60.8	196	39.2
3.	Maternal and family history domain	413	82.6	87	17.4
4.	Maternal anemia other times	463	92.6	37	7.4
5.	Mother's third or more child	460	92.0	40	8.0
6.	Other relatives with anaemia	429	85.8	71	14.2
7.	Are you eating fruits 5 times in a week?	9	1.8	491	98.2
8.	Do you eat meat or beans 5 times in a week?	-	-	500	100.0
9.	Eat chips, snacks, sweets daily	427	85.4	73	14.6
10.	Are you drinking 2 glasses of cow's milk daily?	302	60.4	198	39.6
11.	Any child with low birth weight	460	92.0	40	8.0

12.	Any history of bleeding	363	72.6	137	27.4
13.	Are you suffering from frequent nausea or vomiting?	210	42.0	290	58.0
14.	Do you know that pregnant women need double diet?	-	-	500	100.0
15.	Do you know about cheap alternatives of healthy diet?	-	-	500	100.0
16.	Do you have previous history of miscarriage?	325	65.0	175	35.0
17.	Are you suffering from any sort of stress or worry?	414	82.8	86	17.2
18.	Do you think that after regular visits to doctor you feel quite better than previous?	-	-	500	100.0
19.	Average rest per day? (7-8hours)	9	1.8	491	98.2

Major Findings of the study

- In this present study major finding; Out of 500 pregnant women; 76.2% women lie between 21-30 year. Their mean age was 26.35±4.48. All 100% were married. As per their number of children, 43.6% had single child. According to their family pattern, 67% belong to joint family and 33% belong to nuclear family. The most of them 94.8% were Hindu. As per their dietary pattern, 42.2% were vegetarian followed by 37.6% were non-vegetarian and 20.2% were eggetarian.

- According to their educational status, 22.8% had high school certificate followed by 22% had intermediate or post high school diploma, 20.2% had graduate degree, 12.2% had middle school certificate, 10.4% were illiterate, 6.2% had primary school certificate and similarly 6.2% had post-graduate degree. The most of them 93.2% were unemployed followed by 4.8% were semi-skilled workers and only 2% were unskilled workers. As per their family income,
- The average monthly income was 14170.00±2851.90. The 56.6% were lies in upper lower socio-economic status followed by 26.4% were lies in lower middle socio-economic status and 17% were lies in upper middle socio-economic status.
- As per their clinical profile, the average gestational age of women was 23.17±10. 07..65% pregnant women have taken iron/folic acid supplementation less than 180 days and 35% were never taken these supplementations during pregnancy.
- 31.8% were Gravida – 2 followed by 25.6% were Gravida – 1, 24.2% were Gravida – 3, 12% were Gravida – 4 and 6.4% were Gravida - ≥5.; 43% women had given birth of one child followed by 35.8% didn't give any birth of child, 16.6% had given birth of two child and only 4.6% had given birth equal or more than three children.
- As per living Children of pregnant women; 43.2% women had one live child followed by 38.2% had not any live child. As per their abortion,65.6% women were not having any history of abortion followed 22.4% were undergone one time for abortion, 7.2% were undergone two time for abortion, 4.8% were undergone for three or more than three time for abortion.
- Out of 500 pregnant women; half of them 50.4% had average knowledge followed by 23.8% had very good knowledge, 22%had below average knowledge and only 3.8% had excellent knowledge about anemia. The mean score of knowledge was 21.41±9.64.

- The overall prevalence of anemia in pregnant women. Out of 500 pregnant women; the prevalence of anemia was 83.4% and 16.6% were non-anemic.
- The prevalence of level of anemia in pregnant women show that 68.6% had moderate anemia, 16.6% were normal, 10.8% had mild anemia and only 4% had severe anemia. The mean score of hemoglobin was 9.31±1.47.
- The study found that there was a significant association between knowledge and age **(χ^2= 49.282, p=0.001),** type of family **(χ^2= 43.417, p=0.001) , (χ^2= 794.546, p=0.001)** , occupation **(χ^2= 80.704, p=0.001) ,** family income **(χ^2= 74.892, p=0.001)** , socio-economic status **(χ^2= 283.548, p=0.001),** iron/folic acid **(χ^2= 31.812, p=0.001),** gravida **(χ^2= 65.869, p=0.001)** , parity **(χ^2= 49.282, p=0.001)** and living children **(χ^2= 54.817, p=0.001)** which indicate highly significant at 0.05 level. This study found the association between level of anemia with gestational age **(χ^2= 35.501, p=0.002)** highly significant at 0.01 level.

Implication of the Study

Nursing Practice

- Nurses play a vital role in the preventive aspects of health problems. Much effort must be made by the nurse to increase the knowledge about Iron deficiency anemia among the antenatal mothers.
- As prevention is better than cure concentrated efforts should be taken in the prevention of iron deficiency anemia the tactful approach, which is possible only by a nurse with knowledge of reproductive health.
- The current study emphasis on health for all demands that every individual should be self-sufficient and self-reliant. Therefore, assessment of learning needs is an essential step towards developing knowledge of pregnant women. Health education session should be scheduled periodically by nurses at antenatal clinics.

Nursing Education

- In service education and continuing education to nurse midwives on antenatal care including the prevention and management of anemia is to be given in all institutions.
- Nurse educator plays a major role in educating the pregnant women to meet the felt needs of the patients.
- The nurse educator can provide evidence based education to the nursing personnel to update their knowledge on prevalence, and severity of anemia in all aspects among pregnant women.

Nursing Research

- The essence of the research is to build up new body of knowledge in nursing as an evolving profession.
- Continuing research and utilization of findings in the practice will make the health professionals to understand more about the needs of the Anemic mother during pregnancy.
- The nurse and pregnant women should be encourage to do research in the field of interest regarding the Prevalence and knowledge of anemia among pregnant women.

Nursing Administration

- Nursing administrator should conduct an in service education programme on measures to improve the patient needs at hospital to nursing professionals.
- Continuing education on needs of Antenatal mothers helps to update the information in nursing care areas.
- The nurse administrator can formulate feedback forms and evaluation of the staffs to improve the quality of care.

RECOMMENDATIONS

1. The study can be replicated with larger sample size to generalize the findings.
2. An experimental approach can be applied to assess the effectiveness of non-chemical iron supplements in preventing anaemia among pregnant women (age between 18-45 years).
3. A Comparative study can be done in different setting. (Rural and Urban Pregnant women)
4. A study can be undertaken with early detection and effective management of the prevalence of anaemia in pregnancy.
5. In a unique effort to prevent this problem, pregnant women should encourage to attending antenatal care more often to decrease the incidence of prevalence of anaemia.

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