



# A STUDY TO ASSESS THE KNOWLEDGE REGARDING PREVENTION OF ANAEMIA AMONG PREGNANT WOMEN AT GOVERNMENT DISTRICT HOSPITAL, NARSINGHPUR, MADHYA PRADESH.

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**Abstract: Introduction:** According to the WHO, anaemia is a disorder when the blood's haemoglobin concentration is lower than usual due to a lack of one or more crucial nutrients. The WHO recommends a cut-off threshold of 13g/dl for adult men, 12g/dl for adult non-pregnant women, 11g/dl for pregnant women and children between the ages of 6 months and 6 years, and 12 for children between the ages of 6 years and 14 years. **Aim:** "A study to assess the knowledge regarding prevention of anaemia among pregnant women at Government District Hospital, Narsinghpur, Madhya Pradesh." **Objectives:** 1) To assess the pre-test level of knowledge regarding prevention of anaemia among pregnant women. 2) To find out the association between the pre-test level of knowledge regarding prevention of anaemia among pregnant women with their selected demographic variables. **Method:** Quantitative research approach was adopted. In this study, non – Experimental Descriptive Research Design was adopted to determine the knowledge regarding prevention of anaemia among pregnant women at Government District Hospital, Narsinghpur, Madhya Pradesh." **Result:** The majority of respondents (21, or 70%) had insufficient understanding, while nine respondents, or 30%, had moderate knowledge. The current study shows that Chi-square was calculated to determine the relationship between pregnant women's level of knowledge on the prevention of anaemia and their chosen demographic characteristics. There was a significant correlation between knowledge level and family type, but not between knowledge level and age, religion, education, career, place of residence, family income, prior knowledge of anaemia, or information source. **Conclusion:** The majority of respondents (21, or 70%) had insufficient understanding, while nine respondents, or 30%, had moderate knowledge. Therefore, the investigator concluded that structured teaching programme need to be given in future to increase the level of knowledge regarding prevention of anaemia among pregnant women.

**Key Words:** Knowledge, prevention of anaemia.

## Introduction

According to the WHO, anaemia is a disorder when the blood's haemoglobin concentration is lower than usual due to a lack of one or more crucial nutrients. The WHO recommends a cut-off threshold of 13g/dl for adult men, 12g/dl for adult non-pregnant women, 11g/dl for pregnant women and children between the ages of 6 months and 6 years, and 12 for children between the ages of 6 years and 14 years.

Because iron deficiency anaemia is one of the most prevalent types of anaemia, it is a serious health issue that affects people all over the world. Iron deficiency anaemia is more common in underdeveloped nations like India, particularly among toddlers, pre-schoolers, students, teenagers, and women who are sexually active.

## Statement of the problem

“A study to assess the knowledge regarding prevention of anaemia among pregnant women at Government District Hospital, Narsinghpur, Madhya Pradesh.”

## RESEARCH QUESTIONS

What is the level of knowledge of pregnant women at Government District Hospital, Narsinghpur regarding prevention of anaemia?

## OBJECTIVES OF THE STUDY

- ❖ To assess the pre-test level of knowledge regarding prevention of anaemia among pregnant women.
- ❖ To find out the association between the pre-test level of knowledge regarding prevention of anaemia among pregnant women with their selected demographic variables.

## RESEARCH HYPOTHESIS

- ✓ RH0 There will be no significant association between the pre-test level of knowledge regarding prevention of anaemia among pregnant women with their selected demographic variables.
- ✓ RH1 There will be a significant association between the pre-test level of knowledge regarding prevention of anaemia among pregnant women with their selected demographic variables.

## ASSUMPTION

The pregnant women may not have adequate knowledge regarding anaemia.

## DELIMITATION

- ❖ The sample size of 30 subjects.
- ❖ The study period of 1 week.
- ❖ The study is limited to pregnant women.

## RESEARCH APPROACH

In this study, quantitative research approach was adopted.

## RESEARCH DESIGN

In this study, non – Experimental Descriptive Research Design was adopted to determine the knowledge regarding prevention of anaemia among pregnant women at Government District Hospital, Narsinghpur, Madhya Pradesh.”

## VARIABLES

### Research Variable

Knowledge among pregnant women regarding prevention of anaemia.

## SETTING OF THE STUDY

The present study will be conducted at Government District Hospital, Narsinghpur, Madhya Pradesh.

## POPULATION

In the present study, population comprised of pregnant women at Government District Hospital, Narsinghpur, Madhya Pradesh.

## TARGET POPULATION

In the present study, target population comprised of pregnant women at Government District Hospital, Narsinghpur, Madhya Pradesh.

## ACCESSIBLE POPULATION

Pregnant women were the study's accessible population, and they were asked about their knowledge regarding prevention of anaemia at Government District Hospital, Narsinghpur, Madhya Pradesh.

## SAMPLE

In this study, the sample consists of pregnant women at Government District Hospital, Narsinghpur, Madhya Pradesh who fulfilled the inclusion criteria.

## SAMPLE SIZE

In this study, the sample comprised of 30 pregnant women who are between the age group of 20-40 years & admitted at Government District Hospital, Narsinghpur, Madhya Pradesh who fulfilled the inclusion criteria.

## SAMPLING TECHNIQUE

In this study, purposive sampling technique was used to select the sample.

## CRITERIA FOR SAMPLE SELECTION

### Inclusion criteria

The study includes:

- ✓ Pregnant women who are between the age group of 20- 40 years.
- ✓ Pregnant women who are willing to participate in the study.
- ✓ Pregnant women who can understand Hindi or English.

### Exclusion criteria

The study excludes:

- ✓ Pregnant women who are not willing to participate in the study.
- ✓ Pregnant women those who were not available at the time of data collection.

## DESCRIPTION OF THE TOOL

### SECTION: A Demographic variables

It consists of demographic variables such as age, religion, education, occupation, residence, type of family, family income, previous knowledge on anaemia, source of information on anaemia.

### SECTION B:

It consists of 25 anaemia related questions including causes, symptoms, diagnosis, treatment, management of anaemia. Each question has 4 options in which one is correct answer which is scored 1. Maximum score is 20.

### SCORING INTERPRETATION

- 0 – 40% -Inadequate knowledge
- 41 – 70% - Moderate knowledge
- 71 – 100% - Adequate knowledge

### VALIDITY OF THE TOOL

Four nursing professionals and one medical expert were consulted in order to determine the validity of the tool. According to suggestions made by the tool's specialists, modifications were made.

### RELIABILITY OF THE TOOL

The reliability of the tool was established by using test-retest method (Karl Pearson formula). Reliability of the tool was  $r = 0.86$ , so the tool was found to be reliable.

### PILOT STUDY

Among mothers of pre-schoolers, a pilot study was undertaken to evaluate the study's viability, relevance, and practicability. The period of data collecting was one week. The researcher got both verbal

and written consent from the hospitals before beginning the investigation. The study was determined to be viable since the data collected were suitable for statistical analysis.

## **DATA COLLECTION PROCEDURE**

After formal written permission obtained from Principal of Paradkar Nursing Institute Narsinghpur and Dean of Government District Hospital, Narsinghpur, Madhya Pradesh. 30 samples were selected as per inclusion criteria. Rapport was established with the pregnant women and brief introduction about the study. Knowledge questionnaire used to assess the pre-test knowledge of pregnant women regarding prevention of anaemia. Followed by the pre-test structured teaching programme was given for 45 minutes to create awareness regarding prevention of anaemia and 20 minutes was given for clarification of doubts. Pregnant women are co-operative, attentive, interested and clarified doubts during data collection period.

### **Plan for data analysis**

#### **Descriptive statistics: -**

- ✓ Frequency and percentage distribution will be used to describe demographic variable.
- ✓ Mean and standard deviation will be used to analyse the pre-test and post-test level of knowledge regarding prevention of anaemia among pregnant women.

#### **Inferential statistics: -**

- ✓ Paired t-test will be used to compare the pre-test level knowledge regarding prevention of anaemia.
- ✓ Chi- square test will be used to associate pre-test level of knowledge regarding prevention of anaemia with their selected demographic variable.

### **Data analysis and interpretation of the data**

#### **SECTION A:**

#### **Frequency & percentage distribution of sample according to the demographic variables**

Age-wise, the majority of pregnant mothers are: 17 (56.67%) are between the ages of 31 and 35; 6 (20%) are between the ages of 21 and 25; 5 (16.67%) are between the ages of 26 and 30; and 2 (6.67%) are between the ages of 36 and 40.

Regarding religion, the bulk of the group—22 individuals—were Hindus, followed by Christians (6 individuals—20%) and Muslims (2 individuals—6.67%).

In terms of education, 16 (53.33%) of the pregnant mothers have a high school diploma or equivalent, 9 (30%) have an undergraduate degree, 4 (13.33%) have a postgraduate degree, and at least 1 (3.33%) are illiterate.

Regarding occupation, majority of the pregnant women 13(43.33%) were private employee, 9(30%) were house wife, 6(20%) government employee and 2 (6.67%) were coolie.

Regarding where they live, 29 (96.67%) are urban residents and 1 (3.33%) are country residents. 17 (56.67%) of the families are combined families, while 13 (43.33%) are nuclear families.

Regarding family income, 13 (43.33%) belonged to the Rs. 10001-Rs. 15000 range, while 7 (23.33%) belonged to the Rs. 5001- Rs. 10000 range. Regarding prior awareness of anaemia, 24 people (80%) already knew something about it, whereas 6 people (20%) did not.

Regarding the source of information, 24 (80%) of respondents said they had no knowledge of anaemia, 3 (10%) said they had learned about it from the media, 2 (6.67%) said they had learned it from friends, and 3 (3.33%) said they had learned it from family.

## SECTION B:

### Assess the pre-test level of knowledge regarding prevention of anaemia among pregnant women at Government District Hospital, Narsinghpur, Madhya Pradesh.

The majority of respondents (21, or 70%) had insufficient understanding, while nine respondents, or 30%, had moderate knowledge.

Se. No	Level of Knowledge	Pre test	
		f	%
1	Inadequate knowledge	21	70
2	Moderate knowledge	9	30
3	Adequate knowledge	0	0.00

## SECTION C:

### Association between pre-test level on knowledge prevention of anaemia among pregnant women with their selected demographic variables.

Chi-square was calculated to determine the relationship between pregnant women's level of knowledge on the prevention of anaemia and their chosen demographic characteristics. There was a significant correlation between knowledge level and family type, but not between knowledge level and age, religion, education, career, place of residence, family income, prior knowledge of anaemia, or information source.

## IMPLICATIONS FOR NURSING

The implication of the pregnant women study has been discussed under the heading as

- Nursing Practice
- Nursing Education
- Nursing Administration
- Nursing Research

### Nursing Practice

- The duty of nurses to safeguard people's health, prevent sickness, and promote and preserve health has increased. As a result, community health nurses can concentrate on these issues in the local area.
- To treat and prevent anaemia, screening camps can be organised, and early detection can be carried out through a public education system.
- Community members could receive self-educational modules on how to prevent anaemia.
- Every month, women should receive a health education programme during their check-ups at the hospitals and clinics.

### Nursing Education

- Nurses should get ongoing training in risk group identification and prevention, with a focus on food and women with anaemia, in order to improve the quality of health information they deliver to patients.
- Educationists, administrators, and supervisors should stress health in nursing classes because today's nursing students will become staff nurses tomorrow.
- Nursing education should place more emphasis on preparing aspiring nurses to disseminate information and support government programmes on prevention of anaemia, as well as its causes, symptoms, and treatments.
- Nursing education should also focus on the various methods of educating students during their training period.

### Nursing Research

- The study also demonstrates a knowledge gap in the area of diet and anaemia.
- The study will be a helpful reference resource for further research, and it underscores the urgent need for more study on women's knowledge of anaemia and food.
- This study is a preliminary effort to explore the idea of knowledge, attitude, and practise in anaemia prevention, and its findings may inspire women to lead healthier lifestyles.
- Additional research on widespread anaemia is possible.

## Nursing administration

- The idea of an enlarged and expanded role for nurses presents a nurse administrator with numerous options to raise the standard of living for women.
- In addition to her work, the nurse administrator should coordinate the preventive, innovative, and rehabilitative aspects of care.
- The public should be made aware of the prevention of anaemia, and here is where the nursing administrators at different levels of the health care delivery system should concentrate their efforts.
- Nursing staff should be ready to assume a leading role in training other medical professionals in anaemia prevention.

## RECOMMENDATIONS

- A study can be carried out among the urban community and the other age groups. The study can be repeated with sizable samples in many contexts.
- A high sample size allows the study to be conducted in various hospital settings.
- A comparison between urban and rural women can be done.
- Regular screening for iron deficiency should be carried out among high-risk groups including adolescents and pregnant women.
- An experimental study on iron supplementation for women in various contexts can be done.

## LIMITATIONS

- ❖ The sample size of 30 subjects.
- ❖ The study period of 1 week.
- ❖ The study is limited to pregnant women.

## CONCLUSION

The present study assessed the knowledge regarding prevention of anaemia among pregnant women at Government District Hospital, Narsinghpur, Madhya Pradesh. The data were collected from 30 pregnant women on knowledge regarding prevention of anaemia. The data obtained was analysed according to the objectives and hypothesis of the study. Data analysis was computed after transferring the collected data into a coding sheet. The data was analysed, tabulated and interpreted using descriptive and inferential statistics. The majority of respondents (21, or 70%) had insufficient understanding, while nine respondents, or 30%, had moderate knowledge. Therefore, the investigator concluded that structured teaching programme need to be given in future to increase the level of knowledge regarding prevention of anaemia among pregnant women.

## BIBLIOGRAPHY

- 1) Park. K, Textbook of preventive and social medicine, 20th edition, M/S banarsidas banana publishers, Pp 559.



- 2) K V Krishna das, Text book of medicine, 5th edition, Jaypee publications, Pp 164- 165.
- 3) Kothari C R, Research Methodology Method and techniques. Second Edition, New age international P Ltd publishers, Delhi, Pp200.
- 4) G. S. Toteja, Padam Singh, B. S. Dhillon, B. N. Saxena, F. U. Ahmed, Lt. R. P. Singh, Balendu Prakash, et, al. Prevalence of anaemia among pregnant women and adolescent girls in 16 districts of India. Food and Nutrition
- 5) Melaku Umeta, Jemila Haidar, Tsegaye demisse, Girma Akalu, Gonfa Ayana, iron deficiency anaemia among women of reproductive age in nine administrative regions of Ethiopia.
- 6) Raghuram V, Manjula anil, Jayaram. Prevalence of anaemia amongst women in the productive age group in a rural area in south India. International journal of biological & medical research. [Online] [Cited 2012]; 3 (2); 1482-1484: Available from: URL: [www.biomedscidirect.com](http://www.biomedscidirect.com).
- 7) Ansuman Panigrahi, Parsun Bikash Sahoo. Nutritional anaemia and its epidemiological correlates among women of reproductive age in an urbanslum of Bhubaneswar, Orissa. [Online] [cited 2012 Jan]; Available from: URL: <http://ijph.in/currentissue.asp>
- 8) ME Bentley and PL Griffiths. The burden of anaemia among women in India.
- 9) European Journal of Clinical Nutrition. [Online] [cited 2003]; 5 (7); 52–60: Available from: URL: [www.nature.com/ejcn](http://www.nature.com/ejcn)
- 10) Tahir Ansari, Laquat ali, Hariq Aziz, Jamal Ara, Nagina, Humera tahir.
- 11) Nutritional iron deficiency in women of childbearing age- what to do. Journal of Ayub Medical College Abbottbad. [Online] [cited 2009]; 21 Available from: URL: <http://www.ayubued.edu.pak/JAMC/PAST/21-3>
- 12) Yishu Sun. Challenges with Iron Deficiency Anaemia among Women of Reproductive Age in Saharawi Refugee Camps, Tindouf, Algeria. [Online] Available from: URL: [http://idtjeneste.nb.no/URN:NBN:nobibsys\\_brage\\_12618](http://idtjeneste.nb.no/URN:NBN:nobibsys_brage_12618)
- 13) P Malhotra, Savita Kumari, R Kumar and Varma S. Prevalence anaemia in adult rural population of northern India. Journal of association of physicians of India. [Online] [cited 2004 Jan]; 5 (2); Available from: URL: <http://www.japi.org>
- 14) Pala and Dundar. Prevalence and risk factors of anaemia among women of reproductive age in Bursa, Turkey. Indian journal of medicine, September, 2008. Vol, 128. Pp282-286
- 15) Prashanth Thankachan, Sumithra Muthayya, Thomas Walczyk, Anura V. Kurpad, and Richard F. Hurrell. An analysis of the etiology of anemia and iron deficiency in young women of low socioeconomic status in Bangalore, India. Food and Nutrition Bulletin. [Online] [cited 2007 march]; 28 (3): Available from: URL: <http://www.ncbi.nlm.nih.gov/pubmed/17974366>

- 16) Simon, Peter, Donald. Hookworm-related anaemia among pregnant women: a systematic review. *Journal of PLoS Neglected Tropical Diseases*. [Online] [cited 2008 September]; 2 (9); 291: Available from: URL: [www.plosntd.org](http://www.plosntd.org)
- 17) Joharah M. Al-Quaiz. Iron deficiency anaemia Saudi. *Saudi Medical Journal* [Online] [cited 2001]; 22 (6); 491-496: Available from: URL: <http://www.smj.org.sa/PDFFiles/Jun01/Iron.pdf>
- 18) Prashanth Thankachan, Sumithra Muthayya, Thomas Walczyk, Anura V.Kurpad, and Richard F. Hurrell. An analysis of the etiology of anaemia and iron deficiency in young women of low socioeconomic status in Bangalore, India. *Food and Nutrition Bulletin* [Online] [cited 2007]; 28 (3): Available from: URL: <http://www.ingentaconnect.com>
- 19) Sant-Rayn Pasricha, Sonia R. Caruana, Tran Q. Phuc, Gerard J. Casey, Damien Jolley, Sally Kingsland. Anaemia, Iron Deficiency, Meat Consumption, and Hookworm Infection in Women of Reproductive Age in Northwest Vietnam. *American Journal of Tropical Medicine Hygiene*. [Online] [cited 2008]; 78 (3); 375– 381: Available from: URL: <http://www.ajtmh.org>.
- 20) Shobha Rao, Smita joshi, Pradnya bhide, Bhiravi puranic and Asawari kanade. Social dimensions related to anaemia among women of childbearing age from rural India. *Journal of public health nutrition*. [Online] [cited 2010 August]; 5 (8): Available from: URL: <http://journals.cambridge.org>
- 21) Ansari, liaquat ali, tariq Aziz, jamal ara, Nagina. Nutritional iron deficiency in women of childbearing age, in Karachi, Pakistan. *Journal of Ayub Medical College Abbottbad*. [Online] [cited 2009]; 21: Available from: URL: <http://www.ayubued.edu.Pak/JAMC/PAST/21-3>
- 22) Ahmad Hasan Sultan. Anaemia among female college student attending the University of Sharjah: prevalence and classification. [Online] [cited 2007]; 82 (4): Available from: URL: [www.ephag.net/pdf](http://www.ephag.net/pdf)
- 23) D Shojaeizadeh. Study on Knowledge, Attitude and Practice of Secondary School Girls in Qazvin on Iron Deficiency Anaemia. *Iranian Journal of Public Health*. [Online] [cited 2001]; 30 (1-2); 53-56: Available from: URL: <http://journals.tums.ac.ir/>
- 24) F. Moradi, Mohammadi1 A. Kadivar1 and s. J. Masoumi. Knowledge and practice of pregnant women in Fars province about intake of iron supplements. *Journal of Acta Medica Iranica*. [Online] [cited 2007]; 45 (4): Available from: URL: <http://journals.tums.ac.ir/> 30. Lusine Mirzoyan. Iron-Deficiency Anaemia.
- 25) Mamta & Tamphasana Devi, L (2014). Prevalence of Anaemia and Knowledge Regarding Anaemia among Reproductive Age Women. *IOSR Journal of Nursing and Health Science*. 3. 54-60. 10.9790/1959-03225460.
- 26) Rati, S., & Jawadagi, S (2014). Prevalence of anaemia among adolescent girls studying in selected schools. *IJSR*, 3(8), 1237-42.
- 27) Toteja, G. S., Singh, P., Dhillon, B. S., Saxena, B. N., Ahmed, F. U., Singh, R. P & Sarma,

- 28) U. C. (2006). Prevalence of anaemia among pregnant women and adolescent girls in 16 districts of India. *Food and Nutrition Bulletin*, 27(4), 311-315.
- 29) Sieving Renee, Stevens Amy Bush (2017). Adolescent Psychosocial Development Implications for Pregnancy and Prenatal Care. p.23-29.
- 30) Keikhaei B, Askari R, Aminzadeh M (2012) Adolescent with Unfeasible Body Mass Index: A Risk Factor for Iron Deficiency Anaemia. *J Health Med Informat* 3(109):1- 4
- 31) Chaudhary, S. M., & Dhage, V. R. (2008). A study of anaemia among adolescent females in the urban area of Nagpur. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 33(4), 243.
- 32) N Hima Varghese (2012). A Study to Evaluate the Effectiveness of Oral Administration Dates for Prevention of Iron Deficiency Anaemia Adolescent Girls Selected Pre-University colleges in Hassan, Karnataka. An online published Masters of Nursing thesis at University of Rajiv Gandhi Institute of Health Sciences.
- 33) Dr. Meenu. Concept of Health. Available from: <https://gmch.gov.in/estudy/e%20lectures/Community%20Medicine/Concept%20of%20Health.pdf>
- 34) Kaur, K. (2014). Anaemia a silent killer among women in India: Present scenario. *European Journal of Zoological Research*, 3(1), 32-36.
- 35) Press information bureau. Government of India. Ministry of health and family welfare. 2013 Mar 12. Available from: <http://pib.nic.in/newsite/PrintRelease.aspx?relid=93467>
- 36) Shegaze, M., Wondafrash, M., Alemayehu, A. A., Mohammed, S., Shewangezaw, Z., Abdo, M., & Gendisha, G. (2015). Magnitude and Determinants of Overweight and Obesity among High School Adolescents in Addis Ababa, Ethiopia. *Journal of Food and Nutrition Sciences*, 3(5), 166-173
- 37) National family health survey-4. State fact sheet Bihar and India. 2015-2016. P.1-4, 1-6. Available from: [http://rchiips.org/NFHS/pdf/NFHS4/BR\\_FactSheet.pdf](http://rchiips.org/NFHS/pdf/NFHS4/BR_FactSheet.pdf) and
- 38) Shamim, M., Miah Nannur, R., Prodhan, K., Linkon, M., & Sidur, M. (2014). Prevalence of Iron Deficiency Anemia Among Adolescent Girls and Its Risk Factors PARIPEX - INDIAN JOURNAL OF RESEARCH Volume-7 | Issue-11 | November-2018 | ISSN - 2250-1991 | IF: 6.761 | IC Value: 86.18
- 39) M Priyanka 2015. Evaluate the effectiveness of drumstick leaves juice to increase the haemoglobin level among adolescent girls with anaemia in a selected home at Madurai district. An unpublished master thesis at Dr. M.G.R. Medical University. Chennai. Tamil Nadu. Available from: <http://repository.tnmgrmu.ac.in/2203/1/3004069priyankam.pdf>
- 40) Sonia, C. (2018). Prevalence of anaemia and to evaluate the effectiveness of planned teaching programme (PTP) on prevention and control of anaemia among adolescent school children in terms of knowledge and practice. *PARIPEX-INDIAN JOURNAL OF RESEARCH*, 6(8): 48-50