Assess The Knowledge Regarding Anaemia and Its Prevention Among Students (18-21) Years

Bibha Kumari[1*], Chetna Vashishth[2], Sangeeta Pal[3], Satish Prajapati[4], Vijay Puri Goswami[5]

[1*]Assistant Professor, Department of OBG Nursing, Teerthanker Mahaveer College of Nursing, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh.

[2]P.G Tutor, Department of OBG Nursing, Teerthanker Mahaveer College of Nursing, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh.

[3]Associate Professor, Department of OBG Nursing, Dr. Sarvesh Kumar Shukla institute of Nursing & Paramedical Sciences, Bahraich, Uttar Pradesh.

[4]Assistant Professor, Department of Community Health Nursing, Teerthanker Mahaveer College of Nursing, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh.

[5]Assistant Professor, Department of Medical Surgical Nursing, Teerthanker Parshvnath College of Nursing, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh.

The term adolescence is Derived from the Latin word 'Adolescence' meaning "to grow, to mature". Traditionally, adolescence is defined as the period from the onset of puberty to the termination of physical growth and attainment of final adulthood and characteristic. Adolescence constituted 28.8% of population in India as on 1st March 2024.

Anaemia is a term that indicates a low red blood cells count and a haemoglobin level less than 10g/dl. It is not a disease but rather reflects a disease state or altered body functions. Physiologically anaemia exists when there is an insufficient amount of haemoglobin to deliver oxygen to the tissue. Iron is of great importance in human nutrition. The adult human body contains between 3-49g of iron of which about 60-70% is present in the blood as circulating iron and the rest as storage iron. Each gram of haemoglobin contains about 3.34mg of iron. The iron requirement for adolescents' girls is 2.4gms and boys 1.8gms of iron. (K. Park 2005).

The report by WHO (2023) states that adolescents aged between 10-19yrs account for more than one fifth of the world populations in which over 1200 million accounting to 19% of the global population are affected by nutritional anaemia. Similarly, one half of the non-pregnant women and two thirds of pregnant women in developing countries have haemoglobin levels below 12gms per decilitres.

Iron deficiency anaemia is one of the primary cause for the wastage of human resource and subsequent degradation of the society. Girls often enter their active reproductive years in late adolescence with poor iron status. Iron deficiency can result in negative reproductive consequences associated with premature birth, low birth weight and maternal mortality. Anaemia increases the risk of foetal mortality and morbidity. In India, 20 to 40 percent of maternal deaths are due to anaemia. The burden of anaemia is high though the remedy is so transparent for the health care personnel to take up the challenge. World health organization (WHO 2019) reports that iron deficiency is the most common nutritional disorder in the world. As many as 4-5million people, [66-80%] of the world's population suffer from anaemia. Two million people over 30% of the world population suffer from anaemia mainly due to iron deficiency.

In developing countries anaemia is mainly exacerbated by malaria, worm infestations and less dietary intake. Iron deficiency anaemia in India is caused mainly due to inadequate reserves at birth and aggravation of precarious conditions through out by poor dietary intake, hookworm infestations, the dietary habits of rice consumption, intake of coffee and tea with food which has tannin, a potent inhibitor of iron absorption, menstruation, malaria, and other infections (WHO 2020).

Bibha Kumari, Chetna Vashishth, Sangeeta Pal, Satish Prajapati, Vijay Puri Goswami

The iron deficiency anemia reduces the work capacity of individuals and the entire population bringing serious economic consequences and obstacles to national development. By treating the anemia which prevails among the poorest and the least educated, who are the most vulnerable group to iron deficiency, the national productivity could be raised by 20% on the whole. Daily iron requirements for female adolescents are 2.8mg. According to ICMR recommended dietary intake of iron for 13-15years is 28mg and 16-18years is 30mg. And the daily allowances of vitamin C for adolescents are 30-50mg. Keeping the above scenario on anaemia and its Prevention, the investigator felt that providing knowledge and prevention on this aspect the adolescent girls the further generation creators, the public health problem of anaemia can the reduced and thereby reducing the IMR and MMR in developing countries. So the investigator developed this study to determine the knowledge and prevention of anaemia among students (18-21years).

Objectives:

1. To assess the knowledge regarding anaemia among students (18-21years) in selected college of Moradabad.

2. To assess the knowledge regarding prevention of anaemia among students (18-21years) in selected college of Moradabad.

3. To find out the correlation between the knowledge and prevention regarding anaemia among students(18-21years) in selected college of Moradabad.

4. To find out the association between knowledge of anaemia among the students(18-21years) with their selected demographic variables.

5. To find out the association between knowledge regarding prevention of anaemia among the students(18-21years) with their selected demographic variables.

Method: A quantitative research approach was used and the research design adopted for the present study was descriptive research design. The target population of the study was late girls students (18-21years) in selected college of Moradabad. Sample size was 100. Data analysis was done on the basis of Objective and Hypothesis of study. The collected data was organized in master data sheet and analysed using descriptive and inferential statistics as per objectives of the study, using SPSS16.0.

Organization of analysis

Data was analyzed and presented under these following sub headings:

Section 1: Description of demographic variables of Late adolescent girl.

Section 2: Description of late adolescent girls knowledge regarding Anaemia

Section 3: Description of late adolescent girls knowledge regarding prevention of Anaemia

Section 4: Correlation between knowledge and prevention of Anaemia.

Section 5: Association between the knowledge of anaemia among the students(18-21years) with their selected demographic variables.

Section 6: Association between the knowledge of prevention regarding anaemia among the students(18-21years) with their selected demographic variables.

Section 1: Description of demographic variables of Late adolescent girl.

Using demographic proforma, data was collected with regard to age in years, Religion, Monthly family income, Educational status of Mother, Occupation of Father, Occupation of mother, Media through which health information is obtained and personnel through whom health information is obtained. The data is presented in table 1.

Table 1 Frequency and percentage distribution of sample characteristics (*n* =100)

Sample Characteristics	Frequency *f*	Percentage %
Age in years		

a)	17 - 18 years	47	47.0
b)	19 - 20 years	45	45.0
c)	21- 22 years	4	4.0
d)	More than 23 years	4	4.0

Religion

a)	Hindu	80	80.0
b)	Muslim	15	15.0
c)	Christian	5	5.0

Standard

a)	B.Sc (N)1st year	48	48.0
b)	B.Sc (N)2nd year	44	44.0
c)	B.Sc (N)3rd year	7	7.0
d)	B.Sc (N)4th year	1	1.0

Education of the father

a)	illitrate	23	23.0
b)	Primary School	5	5.0
c)	Higher Secondary School	29	29.0
d)	Graduate	43	43.0

Occupation of the family

a)	Bussiness	33	33.0
b)	Self employment	41	41.0
c)	Govt. employee	26	26.0

Types of family

a)	Nuclear family	19	19.0
b)	Joint family	64	64.0
c)	Extended Family	17	17.0

Family Income

a)	10,000-20,000	33	33.0
b)	21,000-30,000	53	53.0
c)	31,000-40,000	11	11.0

d) More than 41,000	3	3.0

Food pattern

a) Vegetarian	9	9.0
b) Non- Vegetarian	91	91.0

Birth Order

a) First Child	4	4.0
b) Second Child	47	47.0
c) Third Child	48	48.0
d) Fourth Child	1	1.0

Source of information

a) Television	21	21.0
b) Newspaper	47	47.0
c) Family member	32	32.0

History of Anaemia in the Family

a) Yes	12	12.0
b) No	88	88.0

Description :

In table 1 the data is presented which revealed that, the majority of the sample 47(47%) have 17-18 years of age, majority of the sample 80% were believed in hinduism, most of the samples 48% were Studied in B.Sc (N) 1st Year, Majority of the sample 23% of the father is graduate,Most of the sample 41% were self employee, Majority of the sample 64% were in joint family, Majority of the sample 53% were 21,000-30,000 per month family income, majority of the sample 91% were having non-vegetarian food pattern, Most of the sample 48% were third child in birth order, Majority of the sample 47% were get information from newspaper regarding Anaemia and most of the sample 88% were having no history of anaemia in their Family.

Section 2: Description of late adolescent girls   knowledge regarding Anaemia

Knowledge regarding Anaemia with late adolescent girls by using structured knowledge questionnaire. The questionnaires comprises of 20 Mcq's. The description of score is presented in figure 1.

Table -2 Frequency and Percentage Distribution of   sample based on level of Knowledge

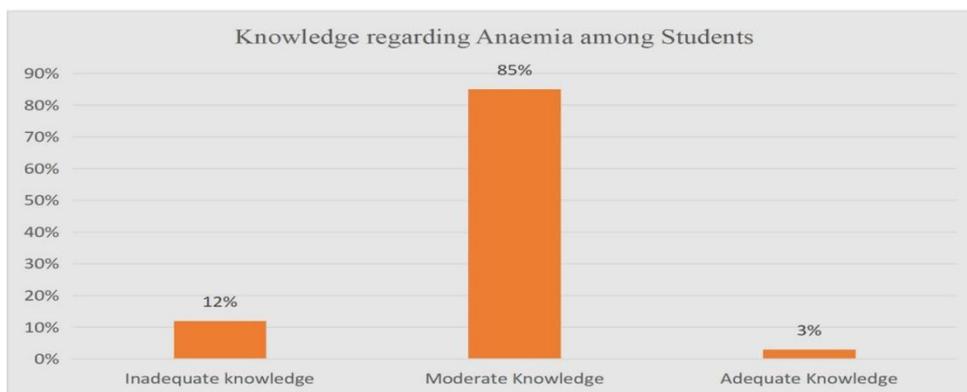| LEVEL OF KNOWLEDGE REGARDING ANAEMIA	FREQUENCY	PERCENTAGE
INADEQUATE KNOWLEDGE	12	12%
MODERATE KNOWLEDGE	85	85%
ADEQUATE KNOWLEDGE	3	3%

(n=100)

Fig -3 : Bar Diagram showing percentage of Students Based on thier Knowledge.

The Data obtained in figure 1 revealed that 12% of the sample have   inadequate   knolwedge, 85% have moderate knowledge and 3% have Adequate knowledge.

Section 3: Description of late adolescent girls   knowledge regarding prevention of Anaemia

Knowledge regarding prevention Anaemia with late adolescent girls by using structured knowledge questionnaire. The questionnaires comprises of 20 M.c.qs. The description of score is presented in figure 1.

Table -3 Frequency and Percentage Distribution of   sample based on level of Knowledge (n=100)

LEVEL OF KNOWLEDGE OF PREVENTION OF ANAEMIA	FREQUENCY	PERCENTAGE
INADEQUATE KNOWLEDGE	4	4%
MODERATE KNOWLEDGE	78	78%
ADEQUATE KNOWLEDGE	18	18%

Bibha Kumari, Chetna Vashishth, Sangeeta Pal, Satish Prajapati, Vijay Puri
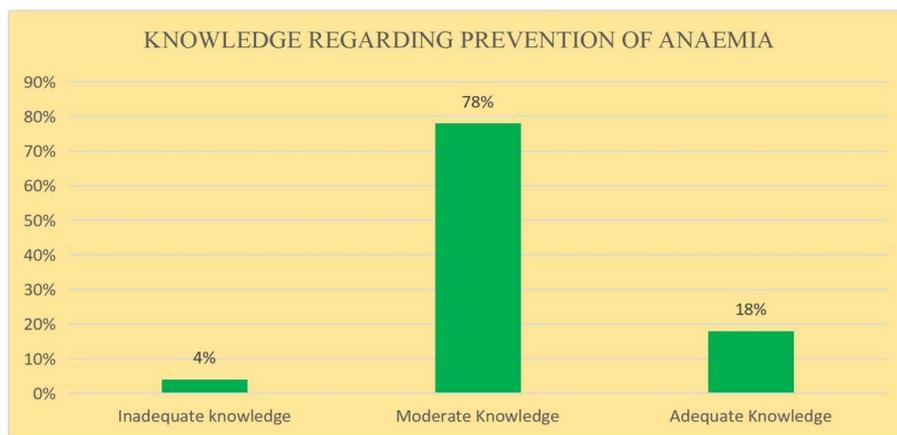Goswami

Fig-4:Bar Diagram showing percentage of Students Based on thier Prevention of knowledge

The Data obtained in figure 1 revealed that 4% of the sample have inadequate knolwedge, 78% have moderate knowledge and 18% have Adequate knowledge.

Section 4:   Correlation between knowledge and   prevention of Anaemia

Table -4

Correlation between knowledge and its prevention of Anaemia among Late Adolescent Students

(n=100)

H$_{01}$

Correlation of knowledge and Mean Classroom management	correlation r	p value
Mean knowledge score p= 0.08	10.3	r= 0.04
Mean Prevention of anaemia Score	10.5	

*significance at 0.05 level of significance

Table 4 shows that there is no statistical significant correlation between the knowledge and its prevention of Anaemia among Late Adolescent Students. Hence Null Hypothesis (H01) is accepted, H1 is rejected.

Section 5: Association between the knowledge of anaemia among the students(18-21 years) and selected demographic variables.

DEMOGRAPHIC VARIABLES	CHI SQUARE VALUE	D/F	VALUE
Age in years	2.32	3	Non Significant

Bibha Kumari, Chetna Vashishth, Sangeeta Pal, Satish Prajapati, Vijay Puri Goswami

Religion	2.86	3	Non Significant
Standard	0.45	1	Significant
Education of the father	3.55	2	Non Significant
Occupation of the family	3.41	3	Non Significant
Types of Family	3.09	3	Non Significant
Family Income	1.97	1	Non Significant
Food Pattern	5.02	6	Non Significant
Birth Order	1.30	3	Non Significant
Source of Information	0.03	3	Significant
History of Anaemia in the Family	3.31	2	Non significant

1. There is a significant association between age of students and level of Knowledge χ^2 2.32 (P>0.05). Therefore, H_2 Hypothesis was accepted.

2. There is a significant association between religion and level of knowledge χ^2 2.86(P>0.05). Therefore, H_2 Hypothesis was accepted.

3. There is a non -significant association between standard and level of knowledge $\chi^2$0.45 (P>0.05). Therefore, H_2 Hypothesis was rejected .

4. There is a significant association between Education of the father and knowledge on anaemia χ^2 3.55 (P>0.05). Therefore, H_2 Hypothesis was accepted.

5. There is a significant association between occupation of the family and level of knowledge regarding Anaemia $\chi^2$3.41(P>0.05). Therefore, H_2 Hypothesis was accepted.

6. There is a significant association between Types of the Family and level of Knowledge regarding Anaemia χ^2 3.09(P>0.05). Therefore, H_2 Hypothesis was accepted.

7. There is a significant association between Family Income and level of Knowledge regarding Anaemia χ^2 1.97 (P>0.05). Therefore, H_2 Hypothesis was accepted.

8. There is a significant association between Food pattern and level of Knowledge regarding Anaemia χ^2 5.02(P>0.05). Therefore, H_2 Hypothesis was accepted.

9. There is a significant association between Birth order and level of Knowledge regarding Anaemia χ^2 1.30(P>0.05). Therefore, H_2 Hypothesis was accepted.

10. There is a non-significant association between source of information and level of Knowledge regarding Anaemia χ^2 0.03 (P>0.05). Therefore, H_2 Hypothesis was Rejected.

11. There is a significant association between history of anaemia in the family and level of Knowledge regarding Anaemia χ^2 1.30(P>0.05). Therefore, H_2 Hypothesis was accepted.

Section 6: Association between the knowledge of prevention regarding anaemia among the students(18-21years) and selected demographic variables.

DEMOGRAPHIC VARIABLES	CHI SQUARE VALUE	D/F	VALUE
Age in years	3.679	2	Non Significant
Religion	2.443	2	Non Significant
Standard	5.985	1	Non Significant
Education of the father	0.270	2	Significant

Occupation of the family	3.709	2	Non Significant
Types of Family	0.781	1	Non Significant
Family Income	2.146	1	Non Significant
Food Pattern	1.897	2	Non Significant
Birth Order	0.371	1	Significant
Source of Information	3.679	2	Non Significant
History of Anaemia in the Family	2.443	2	Non Significant

1) There is a significant association between age of students and level of prevention of Knowledge χ^2 2.32 (P>0.05). Therefore, H3 Hypothesis was accepted.

2) There is a significant association between religion and level of prevention of knowledge χ^2 2.86(P>0.05). Therefore, H3 Hypothesis was accepted.

3) There is a non -significant association between standard and level of prevention of knowledge χ^2 0.45 (P>0.05). Therefore, H3 Hypothesis was rejected .

4) There is a non significant association between Education of the father and prevention of knowledge on anaemia χ^2 0.270 (P>0.05). Therefore, H3 Hypothesis was rejected.

5) There is a significant association between occupation of the family and level of prevention of knowledge regarding Anaemia χ^2 3.41(P>0.05). Therefore, H3 Hypothesis was accepted.

6) There is a significant association between Types of the Family and level of prevention of Knowledge regarding Anaemia χ^2 3.09(P>0.05). Therefore, H3 Hypothesis was accepted.

7) There is a significant association between Family Income and level of prevention of Knowledge regarding Anaemia χ^2 1.97 (P>0.05). Therefore, H3 Hypothesis was accepted.

8) There is a significant association between Food pattern and level of prevention of Knowledge regarding Anaemia χ^2 5.02(P>0.05). Therefore, H3 Hypothesis was accepted.

9) There is a non significant association between Birth order and level of prevention of Knowledge regarding Anaemia χ^2 0.371 (P>0.05). Therefore, H3 Hypothesis was rejected.

10) There is a non-significant association between source of information and level of prevention of Knowledge regarding Anaemia χ^2 0.03 (P>0.05). Therefore,H3 Hypothesis was Rejected.

11) There is a significant association between history of anaemia in the family and level of prevention of Knowledge regarding Anaemia χ^2 1.30(P>0.05). Therefore, H3 Hypothesis was accepted.

CONCLUSION

This study shows that the majority of the sample 12% of the sample have inadequate knolwedge, 85% have moderate knowledge and 3% have Adequate knowledge and 4% of the sample have inadequate knolwedge, 78% have moderate knowledge and 18% have Adequate knowledge and there is no statistical significant correlation between the knowledge and its prevention of Anaemia among Late Adolescent Students. Hence Null Hypothesis (H01) is accepted, H1 is rejected.There is a non -significant association between standard and level of knowledge χ^2 0.45 (P>0.05). Therefore, H2 Hypothesis was rejected,There is a non-significant association between source of information and level of prevention of Knowledge regarding Anaemia $\chi 2$ 0.03(P>0.05). Therefore, H3 Hypothesis was Rejected.

REFERENCES

1. Abha Choudhary et. al. (2020) prevalence of anemia in both India. Tropical Doctor the Royal society of Medicine Press Limited. December (Vol-36), PP No 167-169.

2. Abalkhail B et. al. (2021). Prevalence of anemia in school students. The Royal Society of Medicine Press Limited. November (Vol-53), PP 519-28.

3. Ahemed et. al. (2021), Anemia and non deficiency among adolescent girls. European Journal of Clinical nutrition. November 10 (Vol-2), PP 153-156.

4. Akramipour et. al. (20019). Prevalence of iron deficiency anemia among adolescent girls. Journal of hematology. December 13 (Vol 6), PP 352-356.

5. Basavanthappa BT. (2009). Medical and Surgical Nursing. (2nd edition), Newdelhi : Jaypee brothers Publication. PP 176-179.

6. Google Scholar [Internet]. Google.com. 2024 [cited 2024 Dec 29]. Available from:

   https://scholar.google.com/scholar?start=40&q=post+partum+psychosis+disorder+articles+&hl=en&as_sdt=0

7. Google Scholar [Internet]. Google.com. 2024. Available from:

   https://scholar.google.com/scholar?start=40&q=a+study+to+assess+the+knowledge+and+attitude+regarding+postpartum+psychosis+disorders+among+postnatal+mother&hl=en&as_sdt=0