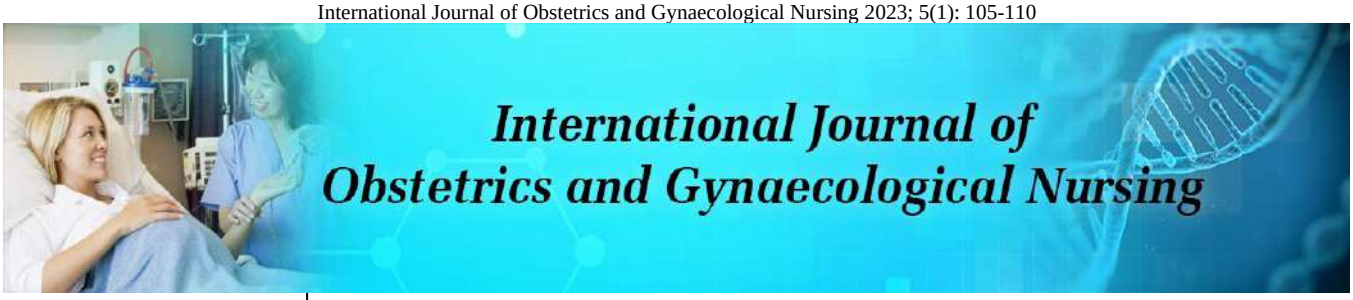

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A study to assess the knowledge regarding anaemia and its preventions among adolescents girls (12-18 years) in Junior High School, Kochhabhawar, Jhansi Uttar Pradesh

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Abstract
The purpose of the study was to Assess Knowledge regarding Anaemia and its Preventions among adolescents girls and to find out the need of training on management on prevention of anemia. The objectives of the study were to assess the knowledge and its Preventions among adolescents girls (12-18years) and to find out the correlation between Knowledge and its Preventions among adolescents girls. A survey research approach was used and the research design adopted for the present study was descriptive. The target population of the study was Students who are the students in the junior high school, Kochhabhawar, Jhansi. Sample size was 100. Data analysis was done by the basis of Objective and Hypothesis of study. The obtained data was analyzed based on objectives and hypothesis by using descriptive and inferential statistics and hypothesis were tested at 0.05 level of significance. The result of the study revealed that level of knowledge regarding anaemia among students, out of 100 students, 12% of the sample have inadequate knowledge, 85% have moderate knowledge and 3% have adequate knowledge.

Keywords: Assess, knowledge, anaemia, prevention, adolescents girls

Introduction
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 22.8% of population in India as on 1st March 2000. (Ghai O.P, 2004) [34]. 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) [35]. World health organization (WHO 2002) 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. 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 which has high phytate contents, intake of coffee and tea with food which has tannin, a potent inhibitor of iron absorption, menstruation, malaria, and other infections (WHO 1997). Two million people over 30% of the world population suffer from anaemia mainly due to iron deficiency. Daily iron requirements for female adolescents are 2.8 mg. According to ICMR recommended dietary intake of iron for 13-15years is 28 mg and 16-18 years is 30mg. And the daily allowances of vitamin C for adolescents are 30-50 mg.

Hypothesis

H_1: There is a significant Correlation between knowledge and its prevention of Anaemia among adolescents girls**.**

H_2: There is a significant Association between the knowledge of anaemia among the adolescents girls with their selected demographic variables.

H_3: There is a significant Association between the knowledge of prevention regarding anaemia among the adolescents girls with their selected demographic variables.

2. Materials and Methods

2.1 Research approach: Survey approach

2.2 Research design: Descriptive design

2.3 Setting of the study: Junior High School, Kochhabhawar, Jhansi

2.4 Population: Female Students (12-18 yrs)

2.5 Sample: Adolescents girls

2.6 sample size: 100

2.7 sampling techniques: Purposive sampling

2.8 Variables of the study- demographic variables: 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.

Research variables: In this study, knowledge regarding Anaemia and its Prevention among Students (12- 18 years) in Junior High School, Kochhabhawar, Jhansi.

2.9 Data collection tool: Self structured questionnaire on Anaemia was constructed by the investigator which contains items in the following aspects.

Section A: This section contains to collect the background information of the participants.

Section B: This section describes knowledge-based questionnaire that comprised of 20 items. It delt with the Definition, Cause, Signs and symptoms, management, Dietary management, and Prevention of Anaemia.

Section C: This section contains questionnaire that comprised of 20 items. It delt with the dietary management regarding prevention of anaemia.

2.10 Inclusion Criteria

- Aged between 12-18 years who attained menarche.
- Who are willing to participate in the study.
- Who knows Hindi and English language.
- Available during the data collection procedure

2.11 Exclusion Criteria

- Absent during the data collection procedure
- Under the treatment of anaemia.
- Not willing to participate.

2.12 Data Collection method: A formal written permission was obtained from the principal of Junior High School, Kochhabhawar, Jhansi. The data was collected from 03-02-2023 to 31-03-2023 from students in Junior High School, Kochhabhawar, Jhansi, who fulfilled the inclusion criteria. The self-structured questionnaire were administered to collect background information of the students regarding Knowledge and prevention of Anaemia. The data collection took 30 – 40 minutes. Before conducting the study, consent was taken from samples by explaining the purpose of the study.

3. Result and discussion-

This study shows that the majority (12%) of the samples have inadequate knowledge, 85% have moderate knowledge and 3% have Adequate knowledge regarding knowledge of anemia. 4% of the sample have inadequate knowledge, 78% have moderate knowledge and 18% have Adequate knowledge regarding prevention of anemia and there is no statistically significant correlation between the knowledge and its prevention of Anaemia among Adolescent girls. correlation between the knowledge and its prevention of Anaemia among Adolescent girls is r=0.04 at 0.05 level of significance, so Null Hypothesis (H_{01}) is accepted, H_1 is rejected.

There is a non-significant association between source of information and level of Knowledge regarding Anaemia λ^2 0.03(P>0.05) and standard and level of knowledge λ^2 0.45 (P>0.05). Therefore, H_2 Hypothesis was Rejected. There was significant association found between knowledge of anemia with other demographic variables. Therefore, H_2 Hypothesis was accepted. There is a non significant association between Education of the father and prevention of knowledge on anaemia λ^2 0.270 (P>0.05) and Birth order and level of prevention of Knowledge regarding Anaemia λ^2 0.371(P>0.05). Therefore, H_3 Hypothesis was rejected. There was significant association found between prevention of anemia with other demographic variables. Therefore, H_3 Hypothesis was accepted.

There is a Result of the study has supported by a similar Descriptive study on "Prevalence of anemia among adolescents in Nepal. A total sample of three hundred and eight adolescents participated 157 females and 151 males. It reveals that the overall prevalence of iron deficiency anemia among adolescent population in female was 78.3% and male was 52.3% sufficiency or deficiency of iron makes the living of adolescents different as it affects their growth requirement and cognitive performance. Iron reserve in female results better reproductive outcome.

Result of the study has supported by a similar descriptive study to assess the knowledge, attitude, and practice studies on adolescents and youth in relation to their reproductive health in India. The objective of the study is to develop a replicable model for provision of sexual and reproductive health services to college-based youth in Thane district. In order to assess the awareness and views about reproductive health, baseline data of the proposed study has been collected. A self-administered semi-structured questionnaire was used for the survey, which included 800 Male and 700 Female in age group 15-24 years. The result of the survey was students lacked scientific information and misconceptions are widespread on various reproductive health issues.

Result of the study shows that to assess the prevalence of anemia among Government school girls. The findings reveal

that anemia was more marked among governmental school attendees and those born to low educated mothers. Menstruating girls were at around double the risk of being anemic than non-menstruating girls.

Anemia was associated with negative impact on school performance and was more marked among those failed their exams as compared to students with excellent results. Skipping breakfast was reported by 14.9% of students and this habit did not differ by age, sex, body mass index or social class. At age 12 and over low social class and menstruating girls constitute the high-risk groups and the result shows that there is no statistically significant correlation between the knowledge and its prevention of Anaemia.

4. Tables and Figures

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

Characteristics of Sample	Frequency f	Percentage %
Age in years		
a) 12 - 13 years	47	47.0
a) 14 - 15 years	45	45.0
b) 16- 17 years	4	4.0
c) More than 17 years	4	4.0
Religion		
a) Hindu	80	80.0
b) Muslim	15	15.0
c) Christian	5	5.0
Standard		
a) 9th standard	48	48.0
b) 10th standard	44	44.0
c) 11th standard	7	7.0
d) 12th standard	1	1.0
Education of the father		
a) illiterate	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) Business	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

5. Description

In table 1 the data is presented which revealed that, the majority of the sample 47(47%) have 12-13 years of age, majority of the sample 80% were believed in Hinduism, most of the samples 48% were Studied in 6th standard, Majority of the sample 23% of the father is graduate, Most of the sample's family (41%) were self-employed, Majority of the sample (64%) were in joint family, Majority (53%) of

the sample's family were 21,000-30,000 per month 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 no history of Anaemia in the Family.

Table 2: Frequency and Percentage Distribution of sample based on level of Knowledge regarding anaemia. (n=100)

Level of knowledge regarding anaemia	Frequency	Percentage
Inadequate knowledge	12	12%
Moderate knowledge	85	85%
Adequate knowledge	3	3%

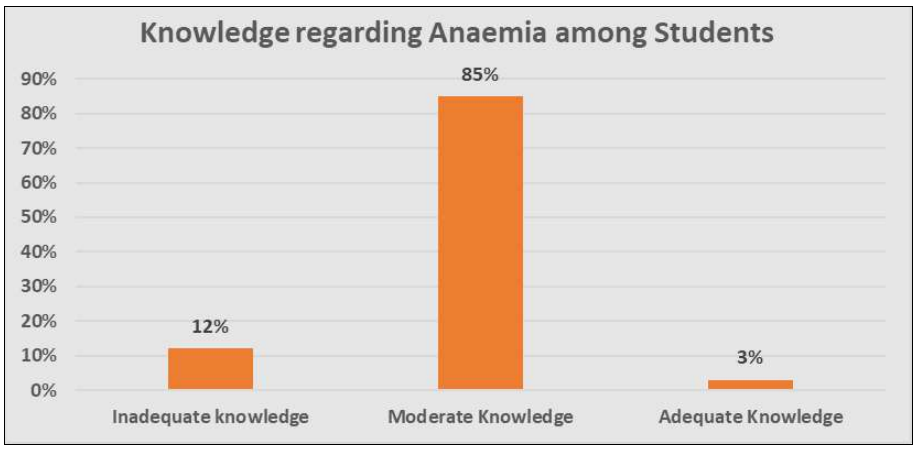

Fig 1: Bar Diagram showing percentage of Students Based on their Knowledge.

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

Table 3: Frequency and Percentage Distribution of sample based on level of Knowledge regarding prevention of anaemia (n=100)

Level of knowledge of prevention of anaemia	Frequency	Percentage
Inadequate knowledge	4	4%
Moderate knowledge	78	78%
Adequate knowledge	18	18%

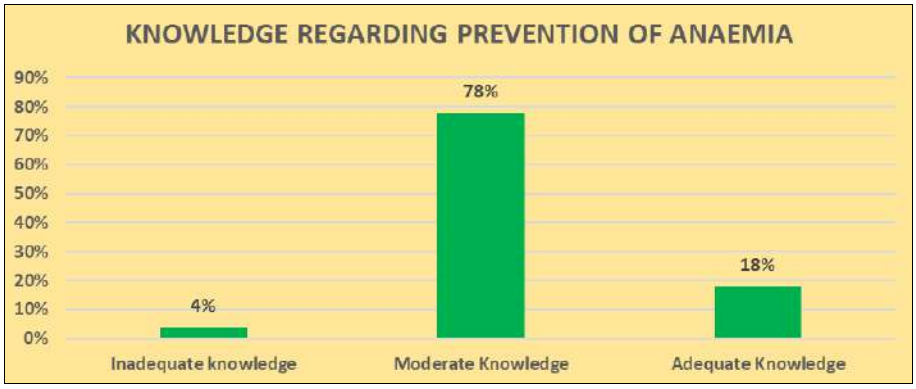

Fig 2: Bar Diagram showing percentage of Students Based on their knowledge regarding Prevention of anemia.

The Data obtained in figure 2 revealed that 4% of the sample have inadequate knowledge, 78% have moderate knowledge and 18% have Adequate knowledge.

Table 4: Correlation between knowledge and its prevention of Anaemia among Adolescent girls (n=100)

H_{01}			
Correlation of knowledge and Classroom management	**Mean**	**Correlation *r***	**p value**
Mean knowledge score	10.3	r= 0.04	p= 0.08
Mean Prevention of anaemia Score	10.5		

*significance at 0.05 level

Table 4 shows that there is no statistical significant correlation between the knowledge and its prevention of Anaemia among Adolescent Girls. Hence Null Hypothesis (H_{01}) is accepted, H_1 is rejected.

Table 5: Association between the knowledge of anaemia among the students (12-18 years) and selected demographic variables.

Demographic variables	Chi square value	D/F	Value
Age in years	2.32	3	Non-Significant
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

- There is a significant association between age of students and level of Knowledge λ^2 2.32 (P>0.05). Therefore, H_2 Hypothesis was accepted.
- There is a significant association between religion and level of knowledge λ^2 2.86(P>0.05). Therefore, H_2 Hypothesis was accepted.
- There is a non -significant association between standard and level of knowledge λ^2 0.45 (P>0.05). Therefore, H_2 Hypothesis was rejected.
- There is a significant association between Education of the father and knowledge on anaemia λ^2 3.55 (P>0.05). Therefore, H_2 Hypothesis was accepted.
- There is a significant association between occupation of the family and level of knowledge regarding Anaemia λ^2 3.41 (P>0.05). Therefore, H_2 Hypothesis was accepted.
- There is a significant association between Types of the Family and level of Knowledge regarding Anaemia λ^2 3.09 (P>0.05). Therefore, H_2 Hypothesis was accepted.
- There is a significant association between Family Income and level of Knowledge regarding Anaemia λ^2 1.97 (P>0.05). Therefore, H_2 Hypothesis was accepted.
- There is a significant association between Food pattern and level of Knowledge regarding Anaemia λ^2 5.02(P>0.05). Therefore, H_2 Hypothesis was accepted.
- There is a significant association between Birth order and level of Knowledge regarding Anaemia λ^2 1.30(P>0.05). Therefore, H_2 Hypothesis was accepted.
- There is a non-significant association between source of information and level of Knowledge regarding Anaemia λ^2 0.03(P>0.05). Therefore, H_2 Hypothesis was Rejected.
- There is a significant association between history of anaemia in the family and level of Knowledge regarding Anaemia λ^2 1.30 (P>0.05). Therefore, H_2 Hypothesis was accepted.

Table 6: Association between the knowledge of prevention regarding anaemia among the students (12-18years) 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

- There is a significant association between age of students and level of prevention of Knowledge λ^2 2.32 (P>0.05). Therefore, H_3 Hypothesis was accepted.
- There is a significant association between religion and level of prevention of knowledge λ^2 2.86(P>0.05). Therefore, H_3 Hypothesis was accepted.
- There is a non -significant association between standard and level of prevention of knowledge $\lambda^2$0.45 (P>0.05). Therefore, H_3 Hypothesis was rejected.
- There is a non-significant association between Education of the father and prevention of knowledge on anaemia λ^2 0.270 (P>0.05). Therefore, H_3 Hypothesis was rejected.
- There is a significant association between occupation of the family and level of prevention of knowledge regarding Anaemia λ^2 3.41(P>0.05). Therefore, H_3 Hypothesis was accepted.
- There is a significant association between Types of the Family and level of prevention of Knowledge regarding Anaemia λ^2 3.09(P>0.05). Therefore, H_3 Hypothesis was accepted.
- There is a significant association between Family Income and level of prevention of Knowledge regarding Anaemia λ^2 1.97 (P>0.05). Therefore, H_3 Hypothesis was accepted.
- There is a significant association between Food pattern and level of prevention of Knowledge regarding Anaemia λ^2 5.02(P>0.05). Therefore, H_3 Hypothesis was accepted.
- There is a non significant association between Birth order and level of prevention of Knowledge regarding Anaemia λ^2 0.371(P>0.05). Therefore, H_3 Hypothesis was rejected.
- There is a non-significant association between source of information and level of prevention of Knowledge regarding Anaemia λ^2 0.03(P>0.05). Therefore, H_3 Hypothesis was Rejected.

- 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, H_3 Hypothesis was accepted.

6. Conflict of Interest
Not available

7. Financial Support
Not available

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