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A study to assess the prevalence of anaemia and its effect on health status among young adolescents of college of nursing pims, Loni (BK)

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Abstract
Adolescence, a period of transition between childhood and adulthood, occupies a crucial position in the life of human beings. This period is characterised by an exceptionally rapid rate of growth. Adolescents (both boys and girls) are at risk of developing iron deficiency and iron deficiency anaemia because of the increased iron requirement for growth [1] Objective: -1) to assess the prevalence of anaemia among adolescents of college of Nursing.2) to identify the health status of young adolescents of College of Nursing. 3. To compare the prevalence of anaemia with their selected socio-demographic variable. Material and method: The study was conducted on young adolescents of college of nursing, Loni. A non-experimental research, descriptive survey design with cross sectional approach was used in this study 100 young adolescents were selected for the study. Non-Probability purposive sampling technique. Structured interview schedule to evaluate the prevalence of anaemia and its effect on health status among young adolescents. Result: The results revealed that the more than adolescents (53%) had anemia out of which (20%) had moderate and (27%) had mild anemia.

Keywords: Assess, anemia, young adolescents

Introduction
Adolescence is a coming of age as children grow into young adult. These teen years are a period of intense growth, not only physically, but also mentally and socially. During this time 20% of final adult height and 50% of adult weight are attained. Because of this rapid growth, adolescents are especially vulnerable to anaemia. Proper nutrition, including adequate iron intake, plays an important part of teenager's growth and development. During adolescence, teenagers will acquire the knowledge and skills that will help them to become independent, successful young adults. Iron deficiency and iron deficiency anaemia can affect this learning and development, but parents can help their teenagers stay healthy by teaching them some easy way to prevent iron deficiency [2].

Problem statement
"A study to assess the prevalence of anaemia and it's effect on health status among young adolescents of College of Nursing PIMS, Loni (Bk)"

Objective of study
1. To assess the prevalence of anaemia among adolescents of college of Nursing.
2. To identify the health status of young adolescents of College of Nursing.
3. To compare the prevalence of anaemia with their selected socio-demographic variable.

Research methodology
Research approach: Cross-Sectional Approach
Research design: Descriptive Survey Design.
Population: Young Adolescents
Sample: Adolescents
Sample Size: 100
Setting: The study was conducted on young adolescents of college of nursing, loni.
Sampling Technique: Non-Probability purposive sampling
Tool: Structured interview schedule to evaluate the prevalence of anaemia and its effect on health status among young adolescents.

Sampling criteria
Inclusion criteria
The young adolescents who are:
- Between age groups 10-24 years and studying at CON
- Available during data collection period
- willing to participate

Exclusion criteria
The young adolescence who are
1. Known case of anemia and under treatment.
2. Absent during the data collection period.

Section I: Description of Sociodemographic data
- Age depicts that higher percentage of 41% students belong to the age group of 21-22 years of age followed by 32% belongs to 19-20 years of age and remaining 27% 17-18 years of age and 23-24 years of age respectively. Hence it can be interprets that majority (53%) were above 21years of age.
- Gender depicts that majority (68%) of participants was females and 32% were males. It interprets that the feminine nature of nursing profession.

- Type of family depicts that majority (61%) of adolescent students belongs to joint family and remaining (39%) students belongs to nuclear family. It interpreted family system of India.
- Family size depicts that majority (60%) of students have>5 members in the family followed by (37%) of students have 3-5 members and only (3%) have 3 members.
- Educational status highlighting that equal proportion (25%) of adolescents was belong to III, IV Bsc and II, III GNM clear.
- Religion show, that majority (58%) of students belongs to Hindu religion where in nearly are fourth (23%) was Muslim, and the remaining (18%) was belong to Christian others. It shows the religion destitution of India.
- Diet pattern depicts that higher practice (40%) of students practice vegetariandiet consumed followed by (37%) of student consumed non-vegetarian type of diet and 23% students consumed mixed diet.
- Area of residence shows that majority (78%) of them was living in rural area and remaining (11%) of them living in semi-urban and urban area respectively.
- Marital status shows that most (79%) of then was single and significant respondents (21%) were married.
- Family monthly income depicts that higher percentage (42%) of students family income was between Rs. 11708-19515 followed by more or less similar participants (20%*21%) of students had family income between Rs. 3908-11707 and Rs 19516 -29199 respectively. It interprets that majority of participants understudy were belong of higher income group.
- Hb level of boys/girls depicts that percentage of 47% student had (N) Hb level; where more than test 53% had anemia, wherein 27% had mild; 20% had moderate and 6% had severe anemia. It highlighted those participants understudy suffer with anemia.
- Total TLC count of boys/girls depicts that more than higher (52%) of students had normal TLC count where (30%) had low TLC count and (18%) had high TLC count. It interpret that significant participants (48%) had TLC count respectively
- Neutrophil count of boys/girls depicts that majority percentage of 55% had normal neutrophils count wherein 28% had low neutrophils count and 17% had high neutrophils count.
- Lymphocytes count of boys/girls depicts that majority percentage of 67% had normal lymphocytes count followed by 21% had low lymphocytes and 12% had high lymphocytes count.
- Monocytes count of boys/girls depicts that majority percentage of 78% students had normal monocyte count followed by 12% had high count and 10% had low monocytes count.
- Nucleated RBC count of boys/girls depicts that higher percentage (45%) had normal nucleated RBC count Wherein significant participants (39%) had low count suggested that participants of anemia.
- Platelet count of boys/girls depicts that majority (72%) of students had normal platelet count followed by (15%) had high platelet count and (13%) had low platelet count.
- Packed cell volume of boys/girls depicts that majority (76%) had normal packed cell volume followed by (14%) had low and (10%) had high packed cell volume.

Section II: Assessment of Prevalence of anaemia among young adolescent of college of nursing

- Prevalence of anemia among young adolescent of college of nursing PIMS having highest percentage of 47% normal student followed by 27% students having mild anemia, 20% having moderate anemia and 6% student have severe anemia.

Section-III: Assessment of health status of young adolescents of college of nursing.

- **Head & scalp:** 5% students having abrasion & 2% students were having pediculosis as well as Lesions.
- **Eyes:** 53% students having pale eyes followed by 20% students having blurred vision among them 10% having short sightedness and 10% having long sightedness and 10% students having dry eyes.
- **Ears:** 25% students having impacted wax as an obstruction.
- **Nose:** 8% students having discharge from nose followed by 6% student having respiratory distress.
- **Mouth:** 2% having gum bleeding and 1% having oral ulcers.
- **Respiratory system:** 2% students having dyspnea, cough, wheezing shound.
- **Cardio vascular system:** - There is no any abnormality.
- **Gastrointestinal system:** 47% student having discoloration followed by 31% having loss of appetite, 23% having fatigue and 7% having indigestion and abnormal bowel sound.
- **Musculoskeletal system:** 33% student is having iron deficiency and 10% student is having weakness.
- **Reproductive system:** Among 68% females students (14) 20.58% students having abnormal menstrual cycle.

Section IV: Comparison between prevalence of anaemia and socio-demographic profile.

Table 1

Socio-demographic profile		Prevalence of anaemia			
		Normal	Mild	Moderate	Severe
Age					
1)	17-18 years	6	4	4	1
2)	19-20 years	17	8	5	2
3)	21-22 years	19	13	7	2
4)	23-24 years	5	2	4	1

Above table depicts how that the prevalence between anaemia and age of young adolescent students where majority students found had mild 13(21-22 years) and least found as severe was 1(17-18 years, 23-24 years) had prevalence of anaemia.

Table 2: Comparison between prevalence of anaemia and gender of young adolescent students of CON

Socio-demographic profile	Prevalence of anaemia			
	Normal	Mild	Moderate	Severe
2. gender				
1. Male	26	3	2	1
2. Female	21	24	18	15

Table shows the prevalence of anemia and gender of young adolescent students where majority found was mild 24 and least was 15 among female, whereas majority found was mild 3 and least was severe 1 among the males.

Table 3: Comparison between prevalence of anaemia and type of family of young adolescent students of CON

Socio-demographic profile	Prevalence of anaemia			
	Normal	Mild	Moderate	Severe
3. Type of family				
1. Nuclear	22	7	8	2
2. Joint	25	20	12	4

Table shows prevalence of anemia and type of family of young adolescent students where majority students found prevalence were 20 that belong to joint family whereas least were severe as 2 belonging to nuclear family.

Table 4: Comparison between prevalence of anaemia and family size of young adolescent students of CON

Socio-demographic profile	Prevalence of anaemia			
	Normal	Mild	Moderate	Severe
4. Family size				
1. <3 members	38	18	10	3
2. 3-5 members	8	8	10	2
3. >5 members	1	1	0	1

Table shows that the prevalence of anaemia and family size of young adolescent students where majority prevalence found was mild 18 (<3 members) and least was severe 1 (>5 members).

Table 5: Comparison between prevalence of anaemia and education of young adolescent students of CON

Socio-demographic profile	Prevalence of anaemia			
	Normal	Mild	Moderate	Severe
5. Education				
1. III year B.Sc	12	5	5	3
2. IV year B.Sc	12	7	5	1
3. II year GNM	11	8	5	1
4. III year GNM	12	7	5	1

Table shows the prevalence of anemia and education of young adolescent students where majority prevalence found was 8 (II year GNM) and least was found as severe 1 (IV year B.Sc, II and III year GNM).

Table 6: Comparison between prevalence of anaemia and diet patter of young adolescent students of PIMS

Socio-demographic profile	Prevalence of anaemia			
	Normal	Mild	Moderate	Severe
7. Diet pattern				
1. Vegetarian	16	13	8	3
2. Non-Vegetarian	11	6	5	1
3. Mix	20	8	7	2

Table shows the prevalence of anemia and diet patter of young adolescent students where majority prevalence was found mild 13 (Vegetarian) and least was severe as 1(Non-Vegetarian)

Table 7: Comparison between prevalence of anaemia and family income of young adolescent students of CON

Socio-demographic profile	Prevalence of anaemia			
	Normal	Mild	Moderate	Severe
10. Family monthly income (RS.)				
1. ≤ 3907	3	1	1	0
2. 3908-11707	11	5	3	1
3. 11708-19515	19	10	11	2
4. 19516-29199	9	8	3	1
5. 29200-39032	3	2	1	1
6. ≥39033	2	1	1	1

Table shows the prevalence of anemia and family income of young adolescent students where majority prevalence found in students was mild 10 (11708-19515) and least was severe 1(≤ 3907)

Summary

The study related that more than youn adolescents (53%) had anemia out of which (20%) had moderate and (27%) had mild anemia. The adolescent had health problems associates with presence anemia Frequent screening of the students for the presence of anaemia and regular health checkups is mandatory in all the college going and university students, irrespective of their socioeconomic class, including students undergoing professional courses. Also, nutritional programs, to help them recognize healthy nutritional habits, body nutritional requirements, quality and quantity of diet should be implemented

Discussion

The prevalence of anemia and religion of young adolescent students where majority prevalence was found mild16 (Hindu) and least was found as moderate and severe 1 (Christian). Similar study was conducted by M E Bentley and P L Griffiths on the burden of anemia among women in India the result of the study was Muslim women were observed to be significantly less likely to be mildly, moderately of severely anemic than Hindu women.

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