Occurrence of Anaemia and Its Risk Factors among Adolescent Girls

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Abstract: *Anemia is a common nutritional problem in the world which occurs due to lack of red blood cells and, oxygen in the blood[1]Adolescentgirls are mostly affected due to social and economic reasons. They must be advised for changes in lifestyle, such as proper dietary intake, regular exercise and weight gain.[4]The main purpose of the study was to assess the occurrence and risk factors of anemia among adolescent girls.* <u>Method:</u> *Cross sectional descriptive study was done on 146 adolescent girls of 13-19 years. Sample were selected by purposive sampling technique. Data was collected by administering tools to the participants and booklet on prevention and management of anaemia was explained and handed to them.* <u>Result:</u> *Study findings shows that 12.3% of the participants were anemic. Intake of iron rich food, jaggery, dry fruits and salad was less, frequency of taking non-vegetarian food was 1-2 days in a month, and there was lack of deworming among adolescent girls.* <u>Conclusion:</u> *The study concludes that most of the adolescent girls were anemicand there is a need of awareness regarding reducing risk of anemia among adolescent girls.*

Keywords: Anemia, Occurrence, risk factors, adolescent girls

1. Introduction

Globally anemia is a common nutritional problem. It is a condition that affects both developing as well as developed countries. According to World health Organization anemia is a condition which occurs due to lack of red blood cells and their capacity to carry oxygen in the blood.[2]Adolescent represents approximately 22% of the global population. Adolescence is the duration of the process of life between the age group of 10-19 years[3]Anemiais commonly present in adolescent girls causing factors may be poor eating habits, obesity, monthly cycle, and heavy physical activities. These factors can be diminished by providing appropriate health education regarding lifestyle changes, proper intake of iron rich diet, proper hand washing, environmental hygiene, regular deworming etc.[4]

2. Literature Review

Anemiais common problem worldwide. World Health Organization assessed that about 30% global population was anemic in 1985. In 1992, 37% women were anemic. 24.8% of the world's population was affected by anemia in the year 2008 among them 42% female were expectant, 30 % were not expectant.[2]In India anemia is a serious health condition especially among adolescent girls. In the comparison of all India figures of 55.8%, Orissa has a high prevalence rate (61.4%) of anemia in girls between the age of fifteen to nineteen years.[5]

Problem Statement

A Study on occurrence of anemia and its risk factors among adolescent girls with view to develop a booklet regarding prevention and management of anemia in selected community area of Doiwala Dehradun.

Objectives

1. To determine the occurrence of anemia among adolescent girls.
2. To assess risk factors of anemia among adolescent girls.
3. To develop and administer a booklet regarding prevention and management of anemia among adolescent girls.

3. Material and Methods

In this study researcher has adopted quantitative approach with cross sectional design. The aim of the study was to assess the occurrence of anaemia and its risk factors among adolescent girls.The study was conducted in a village of Doiwala, Dehradun. 146 adolescent girls between the age group of 13-19 years were selected by purposive sampling technique who fulfilled the selection criteria of the study. After getting administrative permission, the data was collected by administering tools to the participants. Tool consists baseline data, symptom checklist and questionnaire on risk factors. After data collection booklet on prevention and management of anaemia was explained and handed to participants.

4. Analysis and Interpretation

Sample characteristics

Majority of the adolescent girls 78% were between 13-16 years of age, More than half 59% of the participants had 40-48 kg of weight. Majority seventy six percent of participants were from 5[th]to 10th class.Majority77% of participants belongs to nuclear family. More than half of the participants 54% had 3-6 members in the family. Only 11% of the participants had family history of anaemia. Majority 74% of the mothers of participants had primary education and 91% of the participant's fathers had high school and intermediate education. Most 99% of the mothers of participants were housewife and 89% of the

fathers of participants had own business, near to half 49% of the participants had monthly family income of 11000-20000 rupees. More than half 61% of the participants were non vegetarian. Only 7.5% participants were aware about their haemoglobin level. Only 17% of the participants had history of any other disease and only 3.4% had received treatment for that. Majority 75% of the participants were aware of anaemia. Most 97% of the participants take 3-4 meal per day.
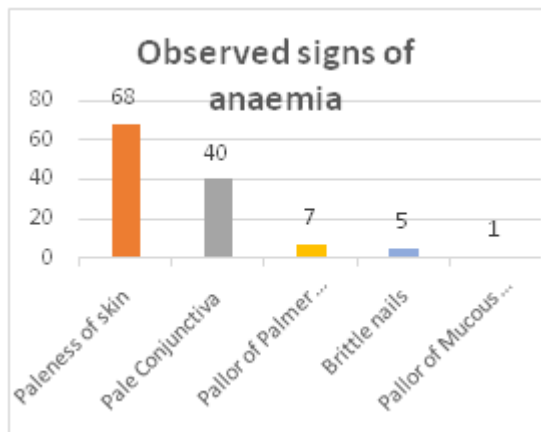
Symptoms of anaemia

Figure 1.1 shows that 68 participants had paleness of skin followed by pale conjunctiva (40), paleness of palmer crease (7), brittle nails (5) and pallor of mucous membrane (1).
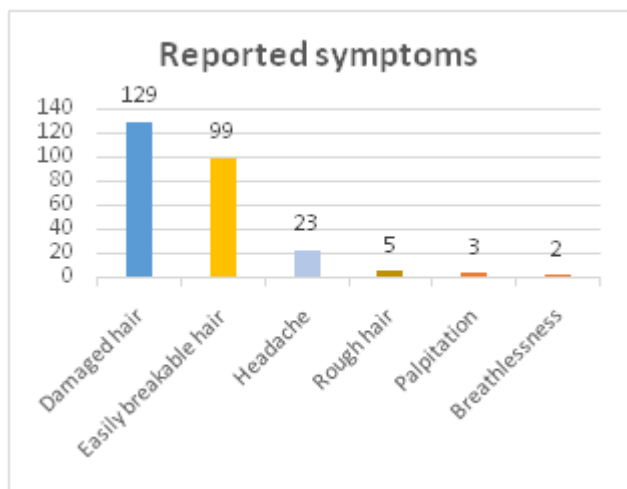

Figure 1.2 shows that most 129 participants reported for damaged hair followed by breakable hair (99), headache (23), rough hair (5), palpitation (3) and breathlessness (2).

Major symptoms of anemia

On the basis of observed signs and reported symptoms of anemia major symptoms such as paleness of skin, pale conjunctiva, damaged hair and easily breakable hair were commonly found among participants.

Data of Table 1 shows that participants who were between 13-16 years of age had paleness of skin 79%, paleness of conjunctiva 78%, damaged hair 76%, and easily breakable hair 79%. Participants who had 41-48 kg weight had paleness of skin 56%, paleness of conjunctiva 52%,

damaged hair 60%, and easily breakable hair 66%. Participants who were non vegetarian had paleness of skin 60%, paleness of conjunctiva 58%, damaged hair 60%, and easily breakable hair 54%. Participants who were on treatment had paleness of skin 4%, paleness of conjunctiva 8%, damaged hair 2%, and easily breakable hair 2%. Participants who were aware regarding anemia had paleness of skin 74%, paleness of conjunctiva 62%, damaged hair 76%, and easily breakable hair 81%, . Participants who take 3-4 meals in a day had paleness of skin 52%, paleness of conjunctiva 92%, damaged hair 96%, and easily breakable hair 97%.

Table 1: Percentage distribution of major symptoms of anaemia with selected demographic variables

S no	Demographic variable	Paleness of skin (N=68)	Pale conjunctiva (N=40)	Damaged hair (N=129)	Easily breakable hair (N=99)
1.	Age a) 13-16years b) 17-19years	**79** 21	**78** 22	**76** 24	**79** 21
2.	Weight a) 30-40kg b) 41-48kg	44 **56**	48 **52**	40 **60**	34 **66**
3.	Type of diet a) Vegetarian b) Non-vegetarian	40 **60**	42 **58**	40 **60**	46 **54**
4.	Recently receiving any treatment a) Yes b) No	**04** 96	**08** 92	**02** 98	**02** 98
5.	Awareness regarding anemia a) Yes b) No	**74** 26	**62** 38	**76** 24	**81** 19
6.	Average Frequency of taking meal in a day a) 1-2 b) 3-4	48 **52**	08 **92**	3.9 **96**	03 **97**

Occurrence of anemia

On the basis of observed and reported symptoms major symptoms of anemia among the participants were paleness of skin, pale conjunctiva; damaged hair and easily breakable hair which were present in 12.3% of participants.
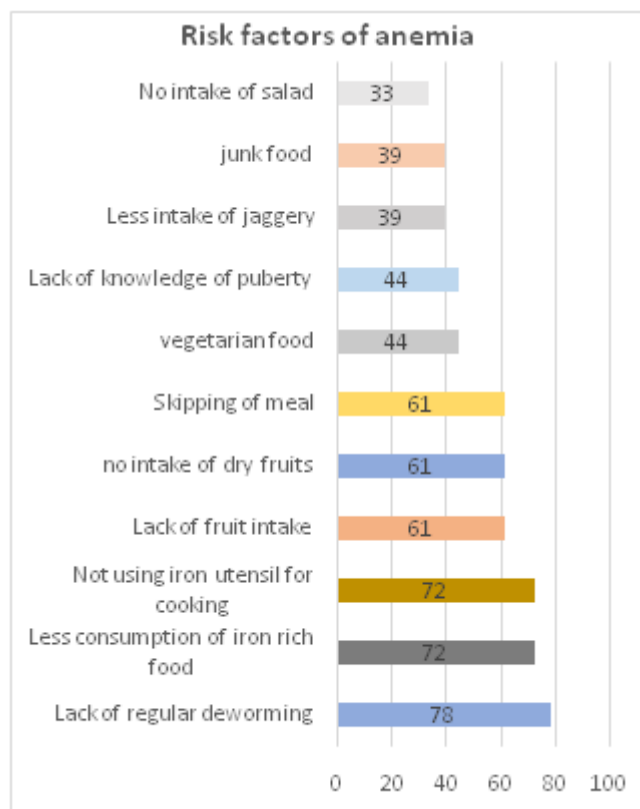
Risk factors of anaemia

Figure 2 shows that 78% of the participants did not received deworming treatment, 72% had less consumption of iron rich food, 72% never use iron utensils for cooking, 61% of participants had less intake of fruits, 61% never take dry fruits and skip their meal, 44% of participants were vegetarian and had lack of knowledge regarding puberty, only 39% take jiggery and junk food weekly, 33% of participants did not include salad in diet.

5. Discussion

In present study major symptoms of anemia was found among adolescent girls, paleness of skin among 47%, pale conjunctiva among 27%, damaged hair among 88% and easily breakable hair was found among 68% of the participants. Result re supported by study done by Swami P D, Kumar S in (2018) with im to ssess symptoms of nemi mong dolecnets. Result shows tht only11.8% were having paleness.

Regarding diet 60% of the adolescent girls take non-vegetarian food 1-2 days in a month. This result was supported by Engidaw MT, Wassie MM, Alemayehu ST. (2018) stated that 269(61.6%) take heme iron food less than once per month.[5]

The study findings shows that 17% of the adolescent girls were suffer from worm infestation. Similar findings reported by Ahemed AA, Yousef YE, Thabet AM, Ahlam E, Alzahrain in (2018) stated that 83 (21.1%) were having parasitic infestation. The study showed that 39% adolescent girls took jaggery, and 22% were dewormed in last 6 month to 1 year. This finding was supported by

Sharma ML, Verma N, Balgir RS, Singh A in (2017) stated that 51.2% take jaggery and 32.4% were dewormed during last one year.[6]

6. Conclusion

The study concludes that major symptoms of anemia were pallor skin, damaged hair, pale conjunctiva and easily breakable hair which were found among 12.3% of the adolescent girls. Booklet on prevention and management of anemia was administered to the participants. There is a need of awareness regarding reducing risk of anemia among adolescent girls.

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