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KNOWLEDGE AND PERCEPTION OF ANAEMIA AMONG ADOLESCENT AND YOUNG ADULT WOMEN

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ABSTRACT:

A major health problem among young women is anaemia, which arises due to dietary deficiencies in iron, vitamin B12, and folate. The purpose of this study was to test young women's knowledge of anaemia, including its causes, symptoms, and prevention. The study design was descriptive, using a structured questionnaire using Google Forms. The study used a snowball sampling, technique to obtain responses from 65 female participants, the majority of whom were between the ages of 18 to 25. The information was analysed using descriptive statistics. The study found 61.53% of patients reported iron deficiency as the main reason for their anaemia, with 40% having a diagnosis. The most frequent symptoms were hair loss (27.69%) and exhaustion (33.84%). Only 10.76% of respondents regularly took iron supplements, and 47.69% never did, despite the fact that 86.5% of respondents knew that anaemia reduces quality of life. The most frequently cited preventive measure was eating a balanced diet (81.53%). Supplements and other proactive preventive measures are conspicuously lacking, despite the fact that the effects of anaemia are widely recognized. Targeted interventions and educational programs are recommended to enhance the prevention and treatment of anaemia in young women.

KEYWORDS: *Anaemia, descriptive study, iron deficiency, proactive preventive measures.*

INTRODUCTION

A decrease in the percentage of haemoglobin in the blood is known as anaemia. Anaemia is a symptom of an actual illness rather than a diagnosis (Turner et al., 2022). Severe anaemia can lead to poor cognitive development in children, complications in pregnancy, and reduced work capacity in adults. Knowledge ensures better health-seeking behaviour. (butta et al., 2013)

The laboratory standards for haemoglobin (Hgb) range from 13.5-18.0 g/dL in males, 12.0-15.0 g/dL in females, and 11.0-16.0 g/dL in adolescents, with variations throughout pregnancy and typically exceeding 10.0 g/dL. Misdiagnosed or prolonged anaemia can lead to organ failure, death, and serious iron shortages. Early-life chronic anaemia can cause cognitive, psychological, and growth impairments. Pregnancy-related anaemia increases the risk of early labour and low birth weight, while pregnancy-related anaemia increases blood loss and fetal anaemia. Elderly people are more likely to experience complications due to numerous comorbidities. Chronic anaemia often impacts the heart and arteries, leading to myocardial infarction, coronary artery disease, high output cardiac failure, arrhythmia development, and heart hypertrophy. (Turner et al., 2022). Anaemia was classified as:

Iron deficiency anaemia:

Iron-deficiency anaemia is a condition where the body lacks iron, causing insufficient production of haemoglobin. Symptoms include fatigue and dyspnea, and are more common in women before menopause. Causes include internal bleeding, blood loss from heavy periods, or excessive blood cell donation. Symptoms include fatigue, sluggishness, light-headedness, and headaches. Iron supplements are used to treat iron-deficiency anaemia (Bhadra & Deb, 2020).

Vitamin B12 Anaemia:

Pernicious anaemia is caused by a vitamin B12 shortage, which results due to in insufficient synthesis of red blood cells, which are responsible for distributing oxygen throughout the body. The stomach produces an intrinsic factor protein which helps in the absorption of Vitamin B12 even in low concentrations. A family history, intestinal or stomach elimination, autoimmune illnesses, certain drugs, and restricted diets devoid of animal products are risk factors for vitamin B12 deficient anaemia (Bhadra & Deb, 2020).

Folate deficiency anaemia:

Anaemia is a condition resulting from folic acid deficiency, which is crucial for haemoglobin production. It leads to low red blood cell counts, resulting in megaloblastic anaemia with larger red blood cells. Causes include vitamin B9 deficient diet, excessive alcohol use, lower gastrointestinal system disorders, cancer patients, medication use, and expectant mothers. Neural tube defects, severe birth malformations, are associated with folate deficiency during pregnancy. Symptoms include pale skin tone, loss of appetite, irritability, low energy, or fatigue (Bhadra & Deb, 2020). Adequate consumption will help to prevent

anaemia. The study aimed to know the Knowledge among adolescents as it would help to improve their health status and also to plan intervention studies.

METHODOLOGY

SELECTION OF THE SAMPLE

The female participants belonging to the age group of 18 to above 35 willing to take part in the study were taken. Subject participation was voluntary. The questionnaire approach is a widely used method for gathering data in large-scale research, involving sending a questionnaire via postal service to individuals to respond to and return. This method is embraced by private citizens, researchers, organizations, and governments, as it involves multiple questions typed or printed in a specific order (Kothari, 2004). A questionnaire was used to gather information on their demographic profile, their knowledge towards anaemia. Google form was used to collect data from the age group of below 18 to above 35 the participants.

RESEARCH DESIGN

In this study descriptive research design is used to gather information about the people's knowledge on awareness, lifestyle, personal experience and their perspectives of anaemia among young women. In descriptive research, a phenomenon and its features are described. It is more important to focus on what happened in this study than on how or why. (Nassaji, 2015)

SAMPLING METHODS

Participants are encouraged to distribute the survey with their friends and peers (only females) in order to gather data using a snowball sampling technique. Through word-of-mouth and referrals, participants in the non-probability sampling strategy known as "snowball sampling design" expand the sample size by enlisting possible participants from friends, family, or others. (Kothari, 2019). The data were tested using numbers and percentage.

RESULTS AND DISCUSSION

Demographic data such as age, gender, socioeconomic status, education level, and geographic locationis essential in anaemia research because it helps identify at-risk populations and contributing factors. Factors such as reproductive age, menstruation, pregnancy, poor food, or inadequate access to healthcare can all increase the risk of anaemia in children and people from low-income homes. Understanding these

demographic profiles enables researchers to target interventions, allocate resources effectively, and design context-specific public health strategies. The table 1 displays the demographic profile of subjects.

TABLE 1: DEMOGRAPHIC DATA ABOUT THE PARTICIPANTS

VARIABLE	GROUPS	N	%
Age	Below 18	1	1.53%
	18 - 25	60	92.3%
	26 - 35	1	1.53%
	Above 35	3	4.61%
Education level	High school	2	3.07%
	Undergraduate	33	50.76%
	Postgraduate	28	43.07 %
	Others (NEET/JEE aspirant)	2	3.07%
Employment level	Student	53	81.53%
	Homemaker	1	1.53%
	Employed	7	10.76%
	Unemployed	4	6.15%

The table 1 shows demographic data of females, focusing on age, education level, and employment status. The majority (92.3%) are aged between 18-25 years, with 50.76% being undergraduates and 43.07% postgraduates. A small percentage (3.07%) had only a high school education. The majority (81.53%) of the subjects were students (81.53 %), 10.76% employed, 6.15% unemployed, and 1.53% were homemakers. Anaemia is a prevalent nutritional deficiency in India, primarily caused by iron deficiency. About Over 55% of teenage boys and girls suffer from anaemia, with girls being more susceptible due to fast growth and menstrual blood loss. About 56% of teenage girls between 15 and 19 have anaemia, with 39% having mild and 15% and 2% having moderate and severe anaemia. Anaemia is also a health risk among Indian women aged 15 to 49, with 58.7% of pregnant women having anaemia (K & N, 2016). Demographic profiling helps design age-appropriate, literacy-sensitive educational materials, particularly for adolescent girls and women with limited access to health services. Thus, the study was done to elicit information from the subjects as how demographic influence on anaemia.

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Assessment of anaemia

Anaemia affects over 40% in children and 30% were seen between the ages of 15 and 49, 37% were noted in pregnant women. By 2025, the World Health Organization's Assembly neeeds a 50% reduction in adult female anaemia, but only one minority community is achieving this target, requiring more efforts to achieve this goal (Lopez de Romaña et al., 2023). The National Nutritional Anaemia prevention program, in place since 1970, has not effectively reduced anaemia rates among ever-married women. The prevalence of anaemia increased from 51.8% in the NFHS 2 survey to 56.2% in the NFHS 3 study. The assessment will help to plan strategies to overcome deficiency.

TABLE 2: ANAEMIA AMONG YOUNG WOMEN

VARIABLES	RESPONSE	N	%
Have you ever been diagnosed with anaemia	Yes	26	40%
	No	39	60%
What do you think cause of anaemia	Blood loss	4	6.15%
	Genetic condition	1	1.53%
	I don't know	6	9.23%
	Iron deficiency	40	61.53%
	Poor diet	8	12.32 %
	Vit B12 deficiency	6	9.23 %
How is anaemia detected?	Daily routine hospital checkup	8	12.3%
	Others	20	30.76%
	Routine blood test	37	56.92%
Do you eat foods high in iron frequently?	Everyday	8	12.30%
	Every week	31	47.69 %
	Every month	11	16.92%
	Occasionally	10	15.3%
	Always	5	7.69%
Do you experience any of anaemia symptoms	Fatigue or weakness	22	33.84 %
	Pale skin	5	7.69%
	Dizziness	7	10.76 %
	Shortness of breath	1	1.53%

	Hair loss Others	18 12	27.69 % 18.46 %
How often do you experience the symptoms	Daily Weekly Monthly Rarely	9 6 33 17	13.84% 9.32% 50.76% 26.15%
Do you take iron supplements	Yes Occasionally Rarely Never	7 15 12 31	10.76% 23.07 % 18.46 % 47.69 %

The table 2 shows that 40% of young women have been diagnosed with anaemia, with 61.53% attributing it to iron deficiency, poor diet, and vitamin B12 deficiency. Routine blood tests are the most common method of detection. 47.69% consume iron-rich foods weekly, while 7.69% never consume. Symptoms include fatigue or weakness, and hair loss, However, 47.69% never took iron supplements, and only 10.76% had regular intake.

Despite having good coverage of iron and folic acid nutrients, only 23% of pregnant women reported taking these supplements for at least 90 days. This low compliance and adverse effects are attributed to ignorance about anaemia, iron-rich foods, and misunderstandings leading to avoidance of iron supplements (Angadi & Ranjitha, 2015).

AWARENESS AND KNOWLEDGE ABOUT ANAEMIA IN YOUNG WOMEN

Anaemia, particularly iron deficiency anaemia, impairs cognitive and motor development in children, decreases work capacity in adults, and increases the risk of maternal and child mortality. Knowledge about the causes and prevention of anaemia can help mitigate these risks by encouraging appropriate dietary and health behaviours. In pregnancy, awareness about anaemia can reduce the risk of complications such as low birth weight and preterm delivery. Knowledge gaps and misconceptions about anaemia can hinder prevention and treatment efforts. Addressing these through education helps dispel myths, reduce stigma, and promote accurate understanding of the condition and its management (Binlian et al., 2024). Table 3 depicts knowledge and awareness of young women.

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VARIABLES	RESPONSE	N	%
Do you think anaemia affect quality of life	Yes No	56 9	86.5% 13.4%
What do you think are the best ways to prevent anaemia?	Eating balanced diet Awareness programme Taking supplements Regular health checkup	53 3 4 5	81.53% 4.61% 6.15% 7.69%
Have you ever attended an anaemia awareness programme?	Yes No	28 37	43.7% 64.61%

TABLE 3: AWARENESS AND KNOWLEDGE ABOUT ANAEMIA IN YOUNG WOMEN

The table 3, presents data on awareness and knowledge about anaemia among young women. It indicates that 86.5% believe anaemia affects quality of life, while 13.4% believe anaemia won't affect the quality of life. The most commonly suggested method for preventing anaemia is eating a balanced diet (81.53%), followed by regular health checkups (6.9%), taking supplements (6.15%), and awareness programs (4.61%). When asked about attending anaemia awareness programs, 43.7% reported having participated, while 56.3% had not attended the awareness programme. Kassebaum et al. (2014) opines Awareness helps individuals recognize symptoms such as fatigue, pale skin, and dizziness, allowing for early intervention before it becomes severe.

The findings indicate that anaemia is a serious health issue for young women, particularly those in the 18–25 age range. Preventive measures like regular iron supplementation and participation in awareness campaigns are not commonly used, despite the abundance of information regarding anaemia and its impact on quality of life. Common symptoms include fatigue and hair loss, and the causes are frequently found to be inadequate nutrition, iron deficiency, and vitamin B12 deficiency. While routine blood tests are often used for diagnosis, the primary focus of prevention efforts is to promote a balanced diet. Overall, the results show that in order to effectively treat anaemia in this population, better health interventions, prevention strategies, and education are needed.

CONCLUSION

Anaemia is a common nutritional disorder that affects young women especially more vulnerable due to socioeconomic, lifestyle, and biological factors. This vulnerability results from poor knowledge of nutrition, bad eating habits, and limited access to healthcare. By educating people about anaemia, one can also help to clear misunderstandings regarding iron deficiency and the need for ongoing treatment long after symptoms go away. Anaemia is frequently unknown to young women, but this ignorance does not convert into practical prophylactic actions. They frequently do not take iron supplements or take part in awareness efforts, even if they are aware of the symptoms and causes. This emphasizes the need for more accessible, hands-on learning. Increasing awareness of anaemia is essential to dispelling myths about its early detection and treatment and empowering young women to take control of their health. Young women with educational knowledge makes healthy lifestyle choices, seek medical attention when needed, and have a positive impact on their peers and communities. Therefore, improving anaemia education initiatives can significantly reduce the condition's prevalence, improve overall health, and foster a more educated and healthy society.

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