A study to evaluate the effectiveness of planned teaching programme on knowledge regarding prevention and management of Nutritional Anemia among B.Sc.Nursing 2nd semester students of Shova Rani Nursing College, Jadavpur, Kolkata, West Bengal

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***Abstract*—Anemia is a condition characterized by low hemoglobin level. A study was undertaken to evaluate the effectiveness of a planned teaching programme on knowledge regarding prevention and management of nutritional anemia among the B.Sc. nursing 2nd semester students of Shova Rani Nursing College, Jadavpur, Kolkata, West Bengal. The research design adopted for the study was one group pre-test, post-test design with 40 of B. Sc. nursing 2nd semester students selected by convenient probability sampling technique. A validated structured questionnaire was used to collect data. Participants received a planned teaching programme on prevention and management of nutritional anemia. The result revealed that the mean knowledge score of the students was higher in the post-test (27.5) than in the pre-test (18.5). The difference between the pre-test and post-test knowledge scores can be used to determine the effectiveness of the educational intervention using an appropriate for B. Sc. nursing 2nd semester students.**

I. Introduction

The period of adolescence is a period of intense growth and development. Iron is one nutrient that is particularly high in demand. Nutritional anemia is caused due to insufficient intake of iron, folate, Vit B6, Vit B12, Vit C, Folic acid and amino acid. Iron is present in all body cells and is fundamental for basic physiological processes such as hemoglobin production and enzyme function.

The World Health Organization (WHO) defines adolescence as the period of life between 10 and 19 years. These are the most formative years in terms of physical, intellectual, emotional, psychological, and behavioral development. Iron deficiency anemia (IDA) is a major public health concern both nationally and globally, especially among adolescent girls. It has been estimated that the prevalence of anemia in adolescent girls in India is around 56%. The prevalence of anemia among adolescents was 28.5% overall, corresponding to more than 72 million adolescents.

II. NEED OF THE STUDY

Many people are at risk for nutritional anemia because of poor diet, intestinal disorders, chronic diseases, infections, and other conditions. More than one-fifth of the world's population suffers from nutritional anemia. Approximately 80–90% of adolescent girls are suffering from nutritional anemia.

Globally adolescent anemia rate are 30%, in India the rate among Boys are 31.1% & among Girls are 59.1%. In West Bengal adolescent anemia rate is 70.8%.

III. METHODOLOGY

This study adopted a quantitative research approach with one group pretest and post test design to evaluate the effectiveness of planned teaching programmes on knowledge regarding prevention and management of Nutritional Anemia among the B.Sc. nursing 2nd semester students. This study was conducted at Shova Rani Nursing College, Kolkata, West Bengal. A total of 40 B.Sc. Nursing 2nd semester students were selected as samples for the main study using a convenient sampling technique. Content validity of the tool was established by five experts, with approximately 98% agreement. Necessary modifications were made based on their suggestions. Reliability of the tool was assessed by Karl Pearson's coefficient of correlation. Reliability of the tool was 0.74.

IV. RESULT

Frequency and Percentage Distribution of the B.Sc. nursing 2nd semester students According to Selected Demographic Variables.

N=40

Sl. No.	Demographic Variable	Category	Frequency (f)	Percentage (%)
1	Age (years)	15–16	10	25.0
		17–18	20	50.0
		19	10	25.0
3	Religion	Hindu	30	75.0
		Muslim	7	17.5
		Christian	3	7.5
4	Type of family	Nuclear	24	60.0
		Joint	13	32.5
		Extended	3	7.5
5	Dietary pattern	Vegetarian	14	35.0
		Non-vegetarian	26	65.0
6	Age at menarche	≤11 years	4	10.0
		12–13 years	27	67.5
		≥14 years	9	22.5
7	Previous history of anemia	Yes	9	22.5
		No	31	77.5
8	Previous information regarding anemia	Yes	24	60.0
		No	16	40.0
9	Source of information	Health professional	14	35.0
		Teacher	9	22.5
		Parents/family	5	12.5
		Internet/social media	7	17.5
		Television/radio	5	12.5

The above table presents the frequency and percentage distribution of 40 B. Sc. 2nd semester nursing students according to selected demographic variables. The majority, 20 (50.0%), were aged 17–18 years. The majority, 30 (75.0%), belonged to the Hindu religion and 24 (60.0%) belonged to nuclear families.

Regarding dietary pattern, 26 (65.0%) participants were non-vegetarian. The majority, 27 (67.5%) attained menarche at 12–13 years. Most participants, 31 (77.5%) reported no previous history of anemia. 24 (60.0%) participants had previously received information regarding anemia. Among those 24 participants, the most common source of information was health professionals, 14 (35%).

Group	Sl. no	observation	mean	SD	SE	Paired z-test Calculated z-value	Tabulated z-value	p-value
Experimental group	1	**Pre-test**	**18.05**	**4.82**	0.8	11.5	2.0	P<0.05
	2	**Post-test**	**27.35**	**2.83**				

Findings related to pre-test and post -test knowledge score: Mean, standard deviation and 'z' value of pre-test and post-test knowledge scores of B. Sc. 2nd semester students. N = 40

Data present in table shows that the mean of the post- test knowledge mean score (27.35) higher than the pre- test knowledge mean score (18.05) after giving planned teaching with a mean difference (9.3) which is statistically as evident by calculated 'z' value of (11.5). It shows that obtain mean difference is true 0.05 level of significance. Thus, research hypothesis is accepted. Therefore, it can be interpreted that there is significant gain in knowledge score between pre-test and post-test after introduction of planned teaching programme on knowledge regarding prevention and management of Nutritional Anemia.

V. DISCUSSION

Major findings of the subject have been discussed with reference to the result often by other findings of similar studies. The findings of present study indicate that the planned teaching programme on prevention and management of Nutritional Anemia is to increase the knowledge of the B.Sc. Nursing 2nd semester students. In case of this study the mean posttest knowledge score (27.35) is higher than pretest knowledge score (18.05).

Manjula, Kanagadurga aet al. (2025) conducted a study on the effectiveness of a structured teaching programme regarding anemia among adolescent girls studying B.Sc. Nursing at Sri Gokulam College of Nursing, Salem. The researchers used a pre-experimental one-group pre-test/post-test design with 72 participants. Knowledge increased following the teaching programme, supporting the usefulness of structured education for improving anemia-related knowledge.

VI. CONCLUSION

Thus, a planned teaching programme can be considered a useful nursing educational intervention for improving knowledge regarding prevention and management of nutritional anemia among B. Sc. nursing 2nd semester students. Nurses can play an important role in providing health education, encouraging healthy dietary practices, promoting adherence to recommended preventive measures and guiding adolescents to seek appropriate health-care services when required. Overall, improving knowledge during adolescence may contribute to better awareness and adoption of appropriate preventive practices and may support broader efforts to reduce the burden of nutritional anemia among adolescent girls.

References

[1] Adams J, Khan HTA, Raeside R, White D. Research methods for graduate business and social science students. London: Response; 2007. Page no: 270.

[2] Alasuutari P. An invitation to social research. New Delhi: Sage Publication; 1998. Page no: 238.

[3] Berger AA. Media and communication research methods: An introduction to qualitative and quantitative approaches. New Delhi: Sage Publication; Page no: 2000. 293.

[4] Banter L, Hughes CD, Tight M. How to research. New Delhi: Viva Book; Page no: 1993. 263.

[5] Jorgensen DL. Participant observation: A methodology for human studies. Newbury Park: Sage Publication; Page no: 1989-133.

[6] Kothari CR. Research methodology: Methods and techniques. 3rd ed. New Delhi: New Age International; Page no: 2011-449.

[7] Kumar R. Research methodology: A step-by-step guide for beginners. 9th ed. New Delhi: Sage Publication; Page no: 2014- 400.