International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 10 Issue 4, Jul-Aug 2026 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

A Pre-Experimental Study to Assess the Effectiveness of a Structured Teaching Program on Knowledge Regarding Prevention of Anaemia among Adolescent Girls in a Selected School in a Selected School of District Amritsar, Punjab

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ABSTRACT

Background: Iron deficiency anaemia is an important nutritional and public health problem, particularly among adolescent girls. Increased nutritional requirements during adolescence, menstrual blood loss, inadequate dietary intake, poor dietary practices and lack of awareness may increase the risk of anaemia. The present study was conducted to assess the effectiveness of a Structured Teaching Programme on knowledge regarding prevention of anaemia among adolescent girls. **Aim:** To assess the effectiveness of a structured teaching programme on knowledge regarding prevention of anaemia among adolescent girls. **Methods:** A quantitative research approach with a pre-experimental one-group pre-test and post-test design was adopted. The study was conducted among 100 adolescent girls aged 11–19 years at Guru Sagar Public School, Amritsar, Punjab. Purposive sampling technique was used. Data were collected using a socio-demographic proforma and a 30-item self-structured knowledge questionnaire. A structured teaching programme on prevention of anaemia was administered after the pre-test, and a post-test was conducted after seven days. Descriptive and inferential statistics were used for analysis. **Results:** In the pre-test, 57% of adolescent girls had average knowledge and 43% had poor knowledge regarding prevention of anaemia. In the post-test, 73% had good knowledge and 27% had average knowledge. The mean pre-test knowledge score was 12.66 ± 3.78, whereas the mean post-test score was 22.44 ± 2.71. The mean difference was 9.78. The calculated paired t value was 22.13 with 99 degrees of freedom and p = 0.001, showing a statistically highly significant improvement in knowledge. **Conclusion:** The findings demonstrate that the structured teaching programme was effective in improving knowledge regarding prevention of anaemia among adolescent girls.

How to cite this paper: Mehra Pallavi | Kaur Harjinderpal | Kaur Arpandeep "A Pre-Experimental Study to Assess the Effectiveness of a Structured Teaching Program on Knowledge Regarding Prevention of Anaemia among Adolescent Girls in a Selected School in a Selected School of District Amritsar, Punjab" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-10 | Issue-4, August 2026, pp.1169-1173, URL: www.ijtsrd.com/papers/ijtsrd141966.pdf

IJTSRD141966

KEYWORDS: *Anaemia, adolescent girls, structured teaching programme, knowledge, prevention, nursing education.*

INTRODUCTION

Adolescence is a transitional period between childhood and adulthood characterized by rapid physical, psychological and emotional development. During this period, nutritional requirements increase considerably. Adolescent girls are particularly vulnerable to iron deficiency anaemia because of rapid growth, increased iron requirements and menstrual blood loss. Iron deficiency anaemia is characterized by reduced haemoglobin levels and inadequate oxygen-carrying capacity of the blood. Inadequate dietary intake, poverty, poor dietary practices, menstrual blood loss and insufficient awareness may contribute to the development of anaemia among adolescent girls.

Adolescent girls require adequate nutrition for normal growth and development. Consumption of iron-rich

foods, vitamin C-rich foods, appropriate supplementation, prevention of meal skipping and regular health screening are important preventive measures. Nutrition education can play an important role in improving awareness and encouraging healthy practices.

Previous studies cited in the thesis have demonstrated inadequate knowledge regarding anaemia among adolescent girls and have also reported significant improvement following structured teaching interventions. Therefore, the present study was undertaken to assess the effectiveness of a structured teaching programme on knowledge regarding prevention of anaemia among adolescent girls in a selected school of Amritsar, Punjab.

METHODOLOGY

RESEARCH APPROACH

A quantitative research approach was adopted for the study to assess the knowledge of adolescent girls regarding prevention of anaemia before and after administration of the structured teaching programme.

RESEARCH DESIGN

A pre-experimental one-group pre-test and post-test research design was used.

RESEARCH SETTING

The main study was conducted at Guru Sagar Public School, District Amritsar, Punjab. The school was approximately 1 km from the college and had approximately 650 students, including about 150 adolescent girls. The pilot study was conducted at Little Flower Senior Secondary School, Amritsar, where approximately 100 adolescent girls were studying.

SAMPLE AND SAMPLE SIZE

The target population comprised adolescent girls aged 11–19 years. A total 100 adolescent girls were selected for the main study.

SAMPLING TECHNIQUE

A purposive sampling technique was used to select 100 adolescent girls who fulfilled the specified eligibility criteria.

SAMPLING CRITERIA

Inclusion Criteria: Adolescent girls who:

1. Were in the age group of 11–19 years.
2. Were willing to give consent.
3. Were cooperative and willing to participate.

Exclusion Criteria: Adolescent girls who:

1. Were sick or ill.
2. Were on leave during the period of data collection.

STUDY INSTRUMENT

Self-structured knowledge questionnaires were used to assess the effectiveness of a Structured Teaching Programme on Knowledge Regarding Prevention of Anaemia Among Adolescent Girls in a Selected School of Amritsar, Punjab.

ETHICAL CONSIDERATION

Ethical principles were maintained throughout the study.

- Approval was obtained from the Ethics Committee of Sri Guru Ram Dass Nursing Institute, Pandher, District Amritsar.
- Permission was obtained from the concerned authority of the selected school.
- Written informed consent was obtained from the participants.
- Privacy and confidentiality of participants were maintained.
- Participants were informed about the purpose and procedure of the study and their voluntary participation was ensured.

PILOT STUDY

A pilot study was conducted among 10 adolescent girls to assess the feasibility of the study and the clarity and relevance of the research instrument.

DATA COLLECTION

The main data collection was conducted during February–March 2025 at Guru Sagar Public School, Amritsar, Punjab. A total of 100 adolescent girls were selected. The researcher introduced the study, explained its purpose and assured the participants regarding voluntary participation and confidentiality. Written informed consent was obtained. The pre-test knowledge assessment was conducted using the structured questionnaire. The structured teaching programme regarding prevention of anaemia was then administered. A post-test was conducted after seven days to assess the change in knowledge.

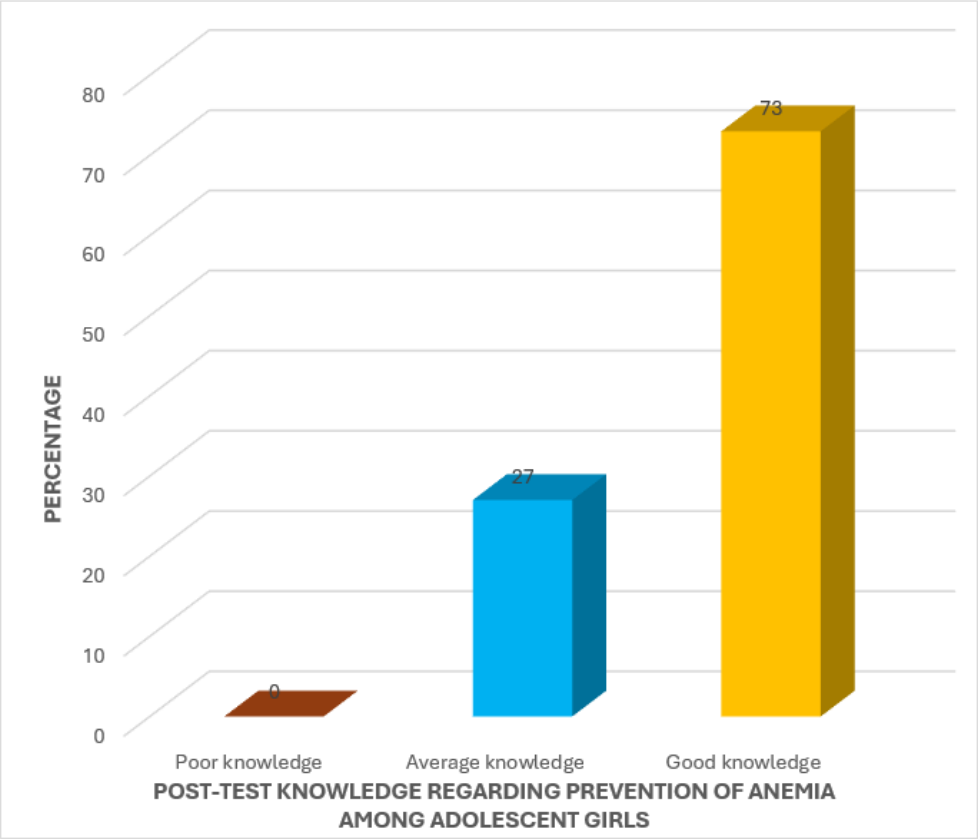
PLAN FOR ANALYSIS

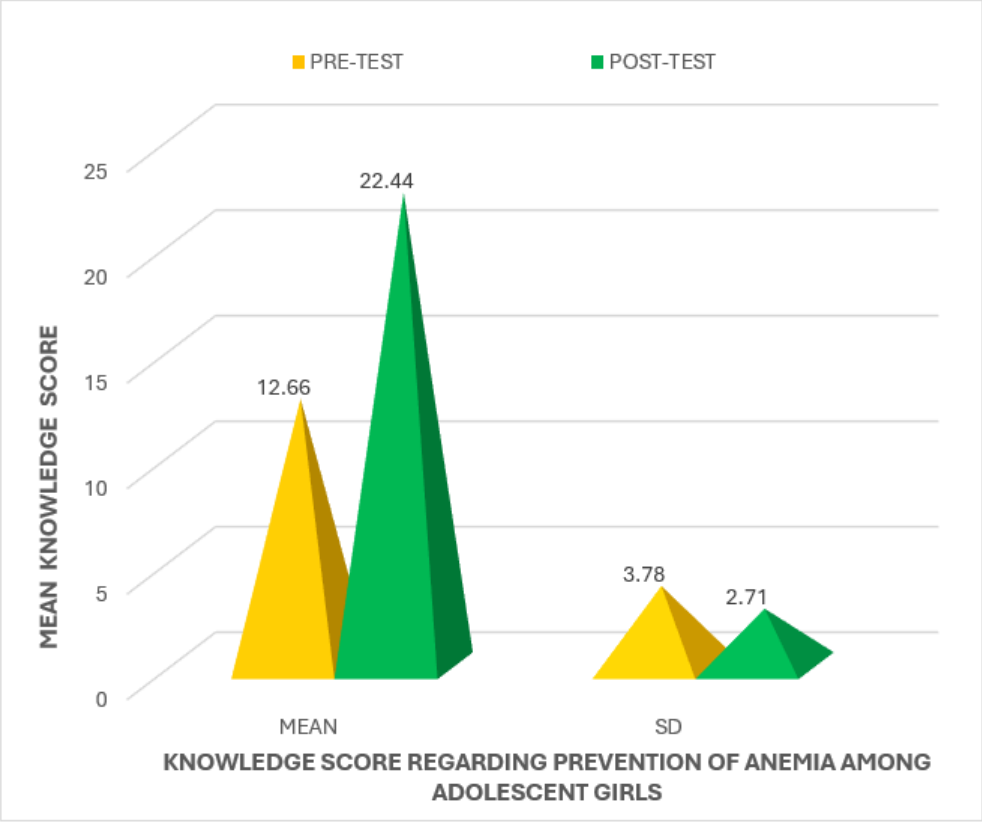
Data was analysed by using appropriate Descriptive and Inferential statistical methods. Data analysis included calculating frequency, percentage, mean, and standard deviation. Paired t test was used to test the hypothesis.

- Chi-square test was used for association.

RESULT:

The results showed that association between pre & post knowledge levels regarding prevention of anaemia among adolescent girls with selected socio-demographic variables, analysed through the chi-square test. The findings showed that variables such as age, class, parents' education, parents' occupation, area of residence, type of family, family income, source of information, personal history of anaemia, and family history which were not found significant statistically at level $p < 0.05$ level.





Conclusion

The pre-test knowledge showed that most (57%) adolescent girls moderate knowledge prevention of anaemia whereas only 43% adolescents' girls had knowledge prevention of anaemia. The post-test results revealed that the majority (73%) of adolescent girls had good knowledge prevention of anaemia, while other 27% adolescent girls had average knowledge about prevention of anaemia**.** The mean post-test knowledge score of 22.44 ± 2.71 was higher than the mean pre-test knowledge score of 12.66 ± 3.78, with a mean difference of 9.78 and a calculated (t=value 22.13 at df=99, p=0.001) was found statistically highly significant at $p<0.05$. Findings indicate that the structured educational program proved beneficial in raising awareness about anaemia prevention among adolescent girls. The results showed that association between pre & post knowledge levels regarding prevention of anaemia among adolescent girls with selected socio-demographic variables, analysed through the chi-square test. The findings showed that variables such as age, class, parents' education, parents' occupation, area of residence, type of family, family income, source of information, personal history of anaemia, and family history which were not found significant statistically at level $p < 0.05$ level.

Recommendations:

The following recommendations are made on the basis of the study: -

- The study can be conducted on large sample size.
- The study can be conducted at different settings with other study designs.
- The study can be conducted to assess the nutrition pattern to prevent iron deficiency anaemia among adolescent girls.
- A comparative study can be conducted to assess the knowledge of adolescent girls regarding iron deficiency anaemia between urban and rural areas.
- A study can be conducted to assess the knowledge of adolescent girls regarding other types of anaemia and its prevention.
- A study can be carried to assess the effect of education programmes on knowledge regarding iron deficiency anaemia among adolescent girls.
- A study can be done to determine the prevalence and risk factors concerning anaemia among adolescent girls in urban and rural areas.

FINANCIAL SUPPORT AND SPONSERSHIP: Nil

CONFLICT OF INTEREST: There is no conflict of interest

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