

Uses of Drumstick & Its Leaves in the Treatment of Nutritional Anemia among Adolescent Girls

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ABSTRACT

“Nutritional anemia is not just a lack of iron—it is a lack of awareness, access, and balanced nutrition.”

Adolescence is a time of growth and pubertal changes according to WHO children of 10 to 19 years comes under adolescence age group. It was estimated that 12 million adolescences died in 2015. over 3000 every day, mostly from preventable and curable disease. This study is knowledge regarding use of drumstick and its leaves in the treatment of nutritional anemia among adolescent girls. In methodology the research design was adopted for the study was pre-experimental total 60 samples are selected for this study. The data was analyzed by descriptive and inferential statistics methods. Hence the study concluded that improve the knowledge regarding uses of drumstick & its leaves in the treatment of nutritional anemia among adolescent girls.

Keywords: Structure Teaching Programme, Use of Drumstick & its leaves, Treatment of nutritional anemia, Adolescence girls.

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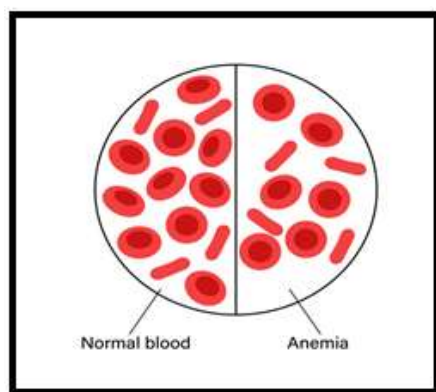
Conflict of interest: None

INTRODUCTION

Adolescence is a journey from the world of the child to the world of the adults. It is a time of physical, physiological and emotional change as the body matures. Adolescence is a critical transitional period that includes several biological changes of puberty as the need to negotiate key developmental task and it requires special protection and attention. Adolescent health is the range of approaches,

detecting or treating adolescent people's health and well-being

Anemia is a serious global public health problem that particularly affects young children, menstruating adolescent girls and women, and pregnant and postpartum women. WHO estimates that 40% of children 6–59 months of age, 37% of pregnant women, and 30% of women 15–49 years of age worldwide are anemia.



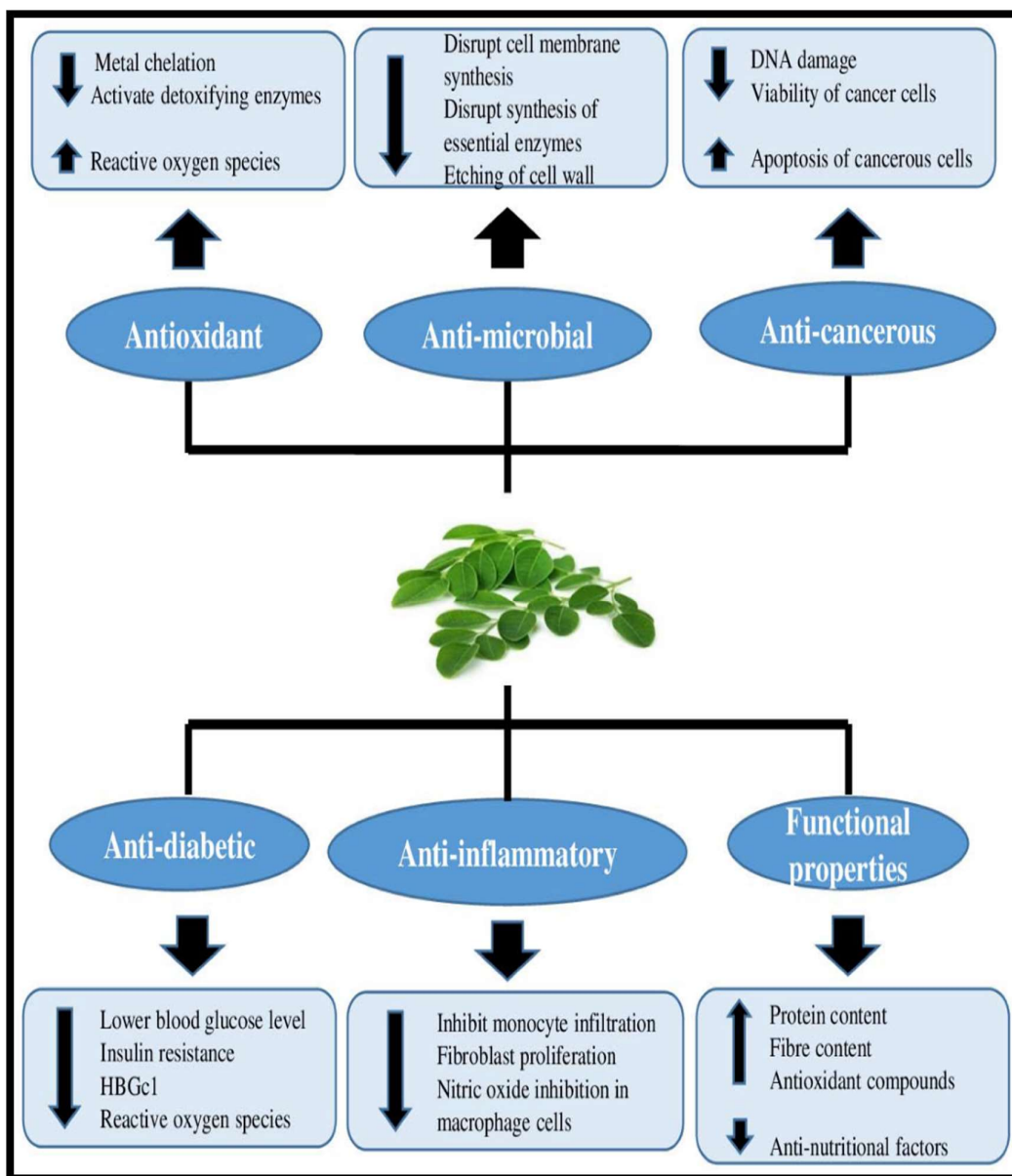
Nutritional anemia is one of the most common health problems among adolescent girls in India. The rapid growth during adolescence increases iron requirements, making girls more vulnerable to anemia. Poor dietary

intake, lack of awareness about iron-rich foods, and low consumption of green leafy vegetables contribute significantly to this condition

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Nutritional Anemia remains a major health crisis for adolescent girls in Madhya Pradesh, with prevalence rates often exceeding 50-60% (like NFHS-5 data showing 59.1% nationally, and local studies in MP showing 58-72%), driven by poor diet, menstruation, low awareness, and socioeconomic factors.

Moringa oleifera, popularly known as drumstick, is described as a highly nutritious, medicinal, and therapeutic plant. Its leaves are rich in iron, vitamins, calcium, proteins, antioxidants, and essential micronutrients which help in the formation of hemoglobin and prevention of anemia.



PROBLEM STATEMENT

A study to assess the effectiveness of structured teaching programme on knowledge regarding uses of drumstick & its leaves in the treatment of nutritional anemia among adolescent girls studying in Govt. Higher Secondary School at village Paliya, Indore City

OBJECTIVES

1. To assess the pre -test knowledge score regarding uses of drumstick & its leaves in the treatment of nutritional

anemia among adolescent girls studying in govt. higher secondary school at village Paliya, Indore city.

2. To evaluate the effectiveness of structured teaching programme on knowledge regarding uses of drumstick & its leaves in the treatment of nutritional anemia among adolescent girls studying in govt. higher secondary school at village Paliya, Indore city.

3. To assess the post -test knowledge score regarding uses of drumstick & its leaves in the treatment of nutritional anemia among adolescent girls studying in govt. higher secondary school at village Paliya, Indore city.
4. To find out association between pre–test knowledge score regarding uses of drumstick & its leaves in the treatment of nutritional anemia among adolescent girls with their selected socio-demographic variables.

HYPOTHESIS

RH₀₁ -There will be no impact of structured teaching programme on knowledge regarding the use of drumstick leaves in the treatment of nutritional anemia among adolescent girls.

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REVIEW OF LITERATURE

Abhik Sarkar (2024) Conducted study to assess the effectiveness of drumstick leaf powder for the prevention of anemia among adolescent girl. investigate anemia is leading cause of mortality among adolescent girls worldwide. It is necessary to improve the hemoglobin level for preventing anemia. This study was aimed to assess the effectiveness of DSLP intervention on anemia

among adolescent girls with Iron Deficiency Anemia. This study was done with the intention of finding an efficient substitute in the form of non-haem iron of vegetable origin in drumstick leaves by administering as supplementation to treat nutritional anemia.

The research design selected for this study was true experimental (pre and posttest control group design). The samples are selected by systemic random sampling technique. Sample size was 60 anemic adolescent girls (10 to 19 years).

The study findings revealed that there is a significant difference in the pre and post-test Hb level score with drumstick leaves powder intervention ('t' value 12.042). Therefore, it is evident that the DSLP intervention is effective in reducing iron deficiency anemia among adolescent girls.

RESEARCH METHODOLOGY

A quantitative evaluatory approach design was used for the study. Sample underwent a pre - experimental (one group pre- test post – research design) research design. They were chosen by non-probability purposive convenient sampling technique. A study was conducted on 60 adolescence girls which were chosen who underwent a self-structured questionnaire. We have given structured teaching programme to assess their knowledge regarding use of drumstick and its leaves in the treatment of nutritional anemia.



RESULT:

Pre-test Analysis indicated prior to administration of structured teaching programme that the level of knowledge of 60 (78.34%) adolescences was poor (0-10) about uses of drumstick and its leaves in treatment of nutritional anemia.

Further, analysis indicated that large chunk (13.33%) of

population of adolescences of schools showed average (10-20) knowledge level about uses of drumstick and its leaves in treatment of nutritional anemia before administration of structured teaching programme.

At baseline stage, the level of knowledge of very few (8.33%) adolescences of selected schools found to be good (20-30) about uses of drumstick and its leaves in treatment of nutritional anemia.

Table 1: Frequency and percentage distribution of pre- test knowledge score.

S.NO	DEMOGRAPHIC VARIABLE	FREQUENCY	PERCENTAGE
1	Age		
	12-14	06	10%
	15-16	40	66.7%
	17-18	14	23.3%
2	Religion		
	Hindu	55	91.7%
	Muslim	5	8.3%
	Christian	0	0%
3	Dietary Patten		
	Vegetarian	44	73.3%
	Non-vegetation	1	1.7%
	Mediterranean	0	0%
4	Previous Knowledge about nutritional anemia		
	Yes	18	30%
	No	42	70%
5	Source of information		
	News paper	1	1.66%
	Television	5	8.34%
	Internet	12	20%
	Book	0	0%

Pre -test knowledge level of study subjects (Adolescent Girls)	Frequency	Percentage
POOR	47	78.34%
AVERAGE	08	13.33%
GOOD	05	8.33%
TOTAL	60	100%

Pre-test mean score- 9.07

This Table 2- depicts the majority 78.34% of the subjects had poor knowledge, 13.33% had average knowledge and 8.33% good knowledge in pre-test.

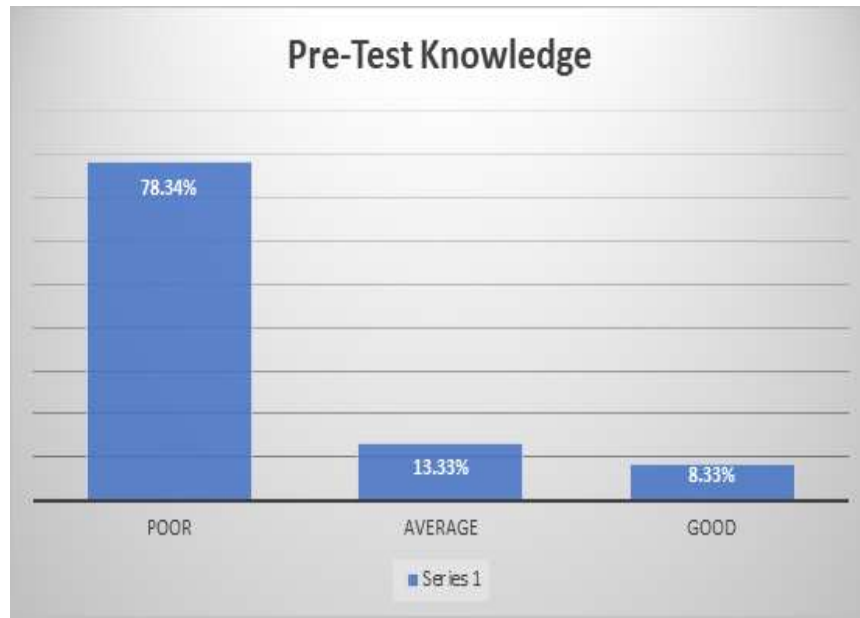


Figure 1: The bar diagram depicts the pre-test score regarding uses of drumstick & its leaves in the treatment of nutritional anemia.

Post-test After administration of structured teaching programme, the level of knowledge of major par: (70%) of population of adolescences of schools found to be more frequently good (20-30) and that much aware about uses of drumstick and its leaves in treatment of nutritional anemia post administration.

Table 3: Frequency and percentage distribution of post- test knowledge score.

Post- test knowledge level of study subjects (Adolescent Girls)	Frequency	Percentage
POOR	0	0%
AVERAGE	18	30 %
GOOD	42	70%
TOTAL	60	100%

Post-test mean score- 22.5

This Table 3- depicts the majority 70% of the subjects had good knowledge, 30% had average knowledge, 0% had poor knowledge in post-test.

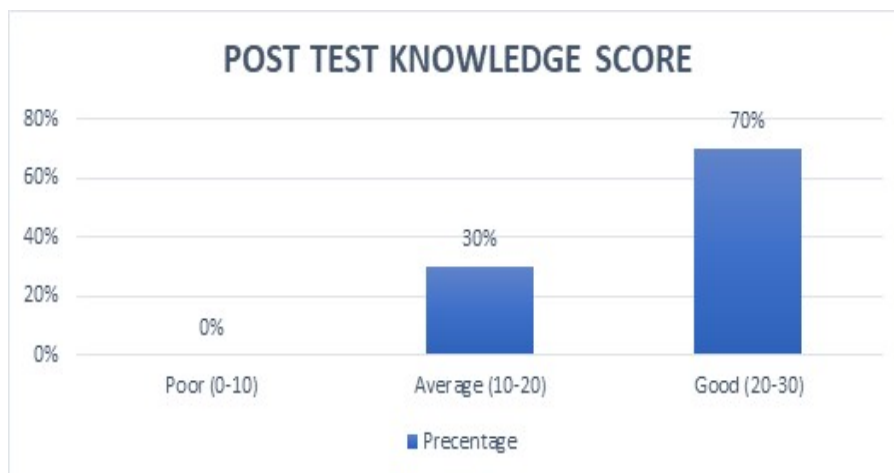


Figure 2: The bar diagram depicts the post-test regarding uses of drumstick & its leaves in the treatment of nutritional anemia.

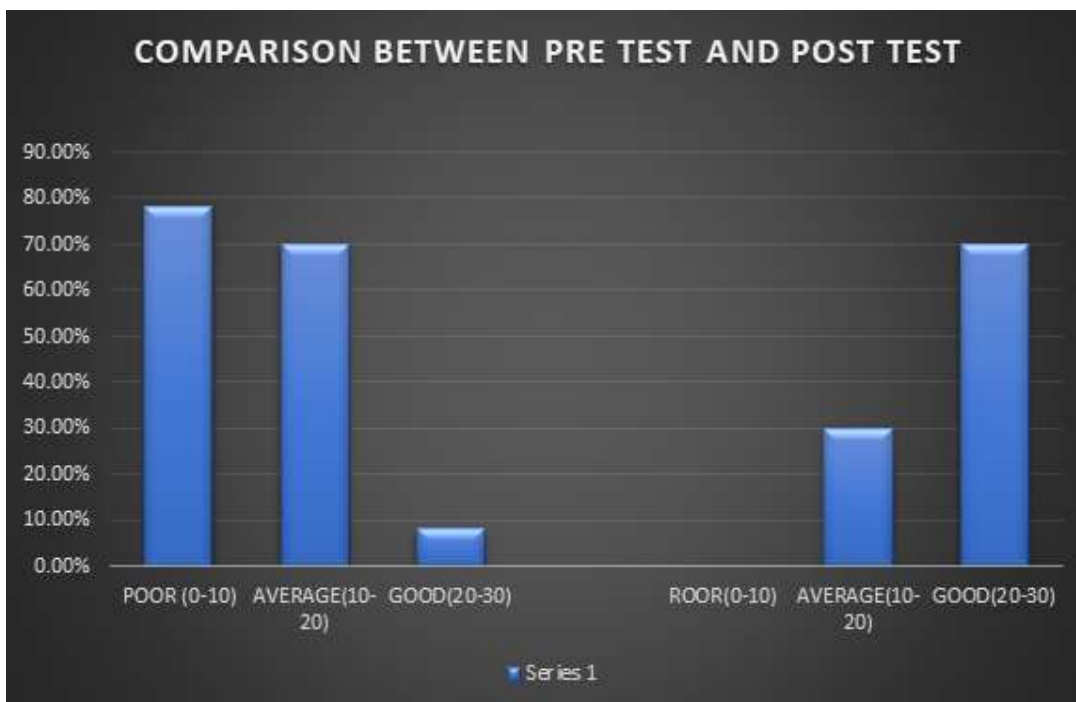


Figure 3: Comparison Between pre test and post test

Table 4: Association of Demographic Variables with Pre-test knowledge Score

S.no	Demographic Variable	Chi-square value	Level of significance	Significance
1	Age	8.74	P > 0.05	Not Significant
2	Religion	4.78	P > 0.05	Not Significant
3	Food- Pattern	7.08	P > 0.05	Not Significant
4	Previous knowledge	12.63	P < 0.05	Significant
5	Source of information	6.70	P > 0.05	Not Significant

CONCLUSION

Knowledge of adolescences of selected schools after structure teaching programme about uses of drumstick and its leaves in treatment of nutritional anemia found to be differed and found to be significantly improved at post-test stage as compared to preexisted knowledge

At post-test stage, average (Mean - Standard Deviation) knowledge scoring (22.05-4.15) among adolescences of schools found to be significantly increased and improved after administration of structured teaching programme as compared to average preexisted knowledge (9.07-4.94) scoring at baseline stage (pre-test). However, the difference in average knowledge scoring before and after administration of structured teaching programme among adolescences of schools found to be statistically strongly (p<0.05) significant Moreover, the statistical agreement indicated that the adolescences of schools intervened with reliable structure teaching programme had better and significantly improved knowledge of uses of drumstick and its leaves in treatment of nutritional anemia.

Henceforth, this is inference statistically that that the structure teaching programme preferred as an effective conservative program for improving the knowledge among

adolescences of schools regarding uses of drumstick and its leaves in treatment of nutritional anemia.

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