A Study to Determine the Effectiveness of Child to Child Programme on Prevention of Vitamin-A Deficiency Among High School Students in Selected School of Vadnagar

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INTRODUCTION-This study assesses the effectiveness of a child-to-child program on vitamin A deficiency among high school children. School children represent a significant opportunity for promoting a healthier future, yet many suffer from health problems like vitamin A deficiency due to factors like overcrowding, poor hygiene, and inadequate nutrition. Vitamin A deficiency affects millions of children globally, leading to conditions like nutritional blindness. School health programs are crucial for raising health awareness and promoting positive health practices. The child-to-child approach leverages children's ability to disseminate health messages within their peer groups, families, and communities. By targeting children aged 6-14, the program aims to improve the overall health status of the community through peer-to-peer education and knowledge sharing.

METHOD AND MATERIAL-This research paper explores the methodology of sample selection and sample size determination in the context of studying vitamin A deficiency among high school students. A total sample size of 200 students from classes 8 to 10 was selected using a purposive convenient sampling technique, which allows the researcher to use personal judgment for selecting subjects deemed most representative. The criteria for inclusion mandated that participants were aged between 13-17 years, could communicate in Gujarati, and provided consent. Data collection was facilitated through a structured knowledge questionnaire designed to assess students' understanding of vitamin A deficiency. The questionnaire, developed through literature review, expert consultation, and validation processes, consisted of two sections: baseline demographic data and a knowledge assessment encompassing various aspects of vitamin A deficiency. The tool's content validity was ensured through expert evaluation, leading to a refined instrument aimed at accurately measuring knowledge levels among high school students regarding vitamin A deficiency and preventive measures. This study contributes to the understanding of nutritional knowledge in a key demographic and informs potential educational interventions.

CONCLUSION-This study investigates the level of knowledge regarding vitamin A deficiency among high school students to inform educational interventions. A purposive convenient sampling approach was employed to select 200 students aged 13 to 17 from classes 8 to 10, based on criteria including language proficiency and consent. Data collection involved a structured knowledge questionnaire, developed through literature review and validated by experts, covering demographic information and students' understanding of vitamin A deficiency and its prevention. Results revealed variable awareness levels, with notable gaps in nutritional knowledge among participants. These findings underscore the need for targeted health education programs to improve awareness and promote preventive strategies against vitamin A deficiency. The study emphasizes the importance of enhancing nutritional literacy among adolescents to support public health initiatives aimed at reducing deficiency prevalence and improving overall health outcomes.

KEY WORDS: Knowledge, vitamin A deficiency and its prevention, high schools students.

INTRODUCTION

This study assesses the efficacy of a peer-led child-to-child health education program designed to combat vitamin A deficiency among school-aged children in India. With approximately 42.7 million children affected by this deficiency largely due to poor

nutrition and hygiene, the intervention was implemented in high school environments to enhance students' understanding and attitudes toward nutrition. Results indicated a significant increase in awareness among participating students, who in turn positively influenced their families and communities. This research highlights the effectiveness of peer-based education in addressing nutritional deficiencies and suggests that incorporating child-centered, peer-led health initiatives into school curricula can promote sustainable health improvements and support broader public health objectives.

NEED OF THE STUDY

This study investigates the development and evaluation of a child-to-child health education program aimed at preventing vitamin A deficiency among school-aged children. A structured teaching module was created and implemented in selected schools to enable peer-led dissemination of knowledge surrounding vitamin A deficiency and its prevention strategies. The methodology involved training students to act as health ambassadors, who subsequently educated their peers, thereby promoting self-learning and community involvement. Findings revealed that children who participated in the program exhibited enhanced awareness, positive attitude changes, and improved health behaviors related to vitamin A intake. The results indicate that child-led health education represents an effective, cost-efficient, and scalable method for improving health knowledge among children and the broader community. This approach holds significant promise as a sustainable strategy for promoting nutritional awareness and disease prevention, empowering children to become active agents of change in public health.

OBJECTIVE

1. To assess the existing knowledge of high school students about the prevention of vitamin A deficiency
2. Develop and implement child-to-child program on prevention of vitamin A deficiency
3. Assess the effectiveness of child-to-child program on knowledge of students regarding prevention of Vitamin A deficiency.

HYPOTHESIS

H1: there will not be any significant difference between pre and post test knowledge scores of high school Students on prevention of vitamin A deficiency.

H2: there will not be any significant association between the knowledge scores of high school students and their demographic variables.

METHOD AND MATERIAL

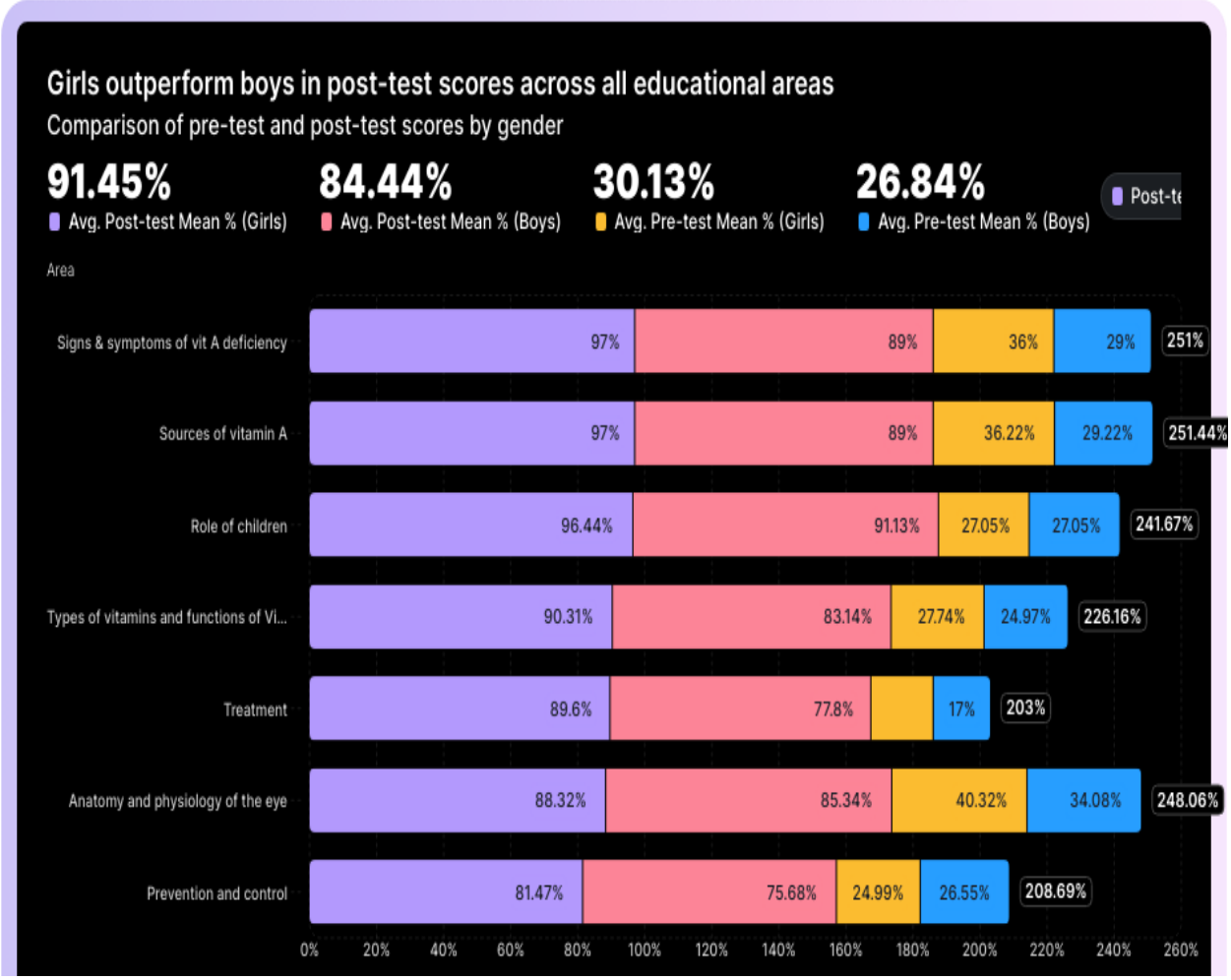
This study assessed vitamin A deficiency knowledge among 200 high school students (grades 8-10) at Sarswati Vidhya Mandir High School in Vadnagar, using a structured questionnaire. The tool, developed through literature review and expert consultation, covered demographics, importance, sources, symptoms, treatment, and prevention of vitamin A deficiency. A pilot study ensured feasibility and reliability. Following a teaching program, data was analyzed using descriptive and inferential statistics to evaluate knowledge levels and intervention effectiveness. The findings aim to identify knowledge gaps and inform educational strategies to combat vitamin A deficiency.

RESULT AND CONCLUSION

The study investigates the effectiveness of a child-to-child program designed to enhance knowledge regarding the prevention of vitamin A deficiency among children. A total of 50% boys and 50% girls participated, primarily from the 15-year age group, with a significant representation of Hindu participants. The assessment of children's knowledge prior to the program revealed a low mean score of 14.70 out of 50 (29.40%). Following the implementation of the child-to-child program, knowledge scores rose dramatically to 88.54%, indicating a statistically significant improvement ($p < 0.05$). The analysis also identified significant associations between the effectiveness of the program and demographic variables such as dietary habits, family type, and parental occupation, while other variables showed no significant relationship. The findings suggest that tailored educational interventions can effectively enhance children's understanding of vitamin A deficiency prevention. The study emphasizes the need for community health strategies to sustain such

educational initiatives and improve overall child health outcomes. Recommendations for future research include extending studies to larger populations, evaluating the long-term impact of child-to-child approaches, and exploring factors influencing health status related to vitamin A deficiency.

DISTRIBUTION OF THE SAMPLE ACCORDING TO THE PRE TEST AND POST TEST LEVEL OF SCORE



The findings indicate a significant increase in knowledge for both boys and girls in all assessed areas. Girls showed a substantial overall mean percentage gain of 61.62%, while boys achieved a gain of 57.62%. Both genders demonstrated the most considerable improvement in areas with low baseline scores, such as Treatment and Signs & symptoms of vitamin A deficiency, which rose from below 20% to nearly 90% or higher. Overall, the program was highly effective in addressing knowledge gaps and promoting a statistically significant gain in knowledge, demonstrating its efficacy as a health education intervention.

EFFECTIVENESS OF SIGNIFICANCE BETWEEN PRE TEST AND POST TEST KNOWLEDGE SCORE

The study assessed the effectiveness of a child-to-child program on knowledge scores across different stages. Mean, standard deviation, and mean percentage of knowledge scores were calculated. Results indicated a decrease in mean percentage scores as the program stages progressed (I Stage: 97.50%, II Stage: 80.86%, III Stage: 66.86%). The study also examined the association between demographic variables and knowledge scores. Significant associations were found between knowledge scores and types of family (x2=7.44), occupation of parents (x2=13.51), and

dietary habits ($x2=5.22$) at $p < 0.05$. The hypothesis stating no significant difference between pre and post-test knowledge scores was rejected. The hypothesis stating no significant association between demographic variables and knowledge gain was partly accepted for gender, age, religion, income, mother's education, sources of information, and father's education, but rejected for types of family, dietary habits, and occupation of parents.

RECOMMENDATIONS

- Based on the findings of the study, numbers of recommendations for future research were identified.
- A similar study can be conducted on a larger samples spread over different school in an area.
- The teaching plan and the tool can be further re tested to increase the general ability for further studies.
- A study may be conducted to assess the long-term effects of child-to- child approach in families and communities.
- Studies can be conducted to assess the skill along with knowledge aspect of a topic.
- Similar studies can be conducted on children out of school like in industries, slums etc.

CONCLUSION

Key Findings of the Study on Vitamin A Deficiency Prevention:

This study assessed the impact of a child-to-child program on educating children about vitamin A deficiency. Pre-program knowledge was low (29.4%), but increased substantially to 88.54% post-implementation. Demographic variables showed significant associations with dietary habits, parental occupation, and family type influencing knowledge gains.

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