SJIF Impact Factor: 6.711

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

ISSN: 2457-0400
Volume: 8.
Issue: 9
Page N. 119-122
Year: 2024

Original Article www.wjahr.com

IMPACT OF AN EDUCATIONAL INTERVENTION ON ADOLESCENTS' KNOWLEDGE OF HEALTHY LIFESTYLE PRACTICES: A QUANTITATIVE STUDY

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Article Received date: 27 June 2024 **Article Revised date:** 17 July 2024 **Article Accepted date:** 07 August 2024

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ABSTRACT

Introduction: Unhealthy lifestyle choices among adolescents are a growing public health concern, leading to long-term health issues such as obesity, cardiovascular diseases, and diabetes. This study aims to assess the impact of an educational intervention on improving knowledge regarding healthy lifestyle practices among adolescents in selected educational institutes of Kota (Raj.). **Method:** A pre-experimental one-group pre-test-post-test design was employed. The sample comprised 100 adolescents aged 15-18 years, selected through convenience sampling. A structured knowledge questionnaire, validated by experts and with a reliability coefficient of 0.81, was used for data collection. The intervention consisted of an information booklet on healthy lifestyle practices. Pre-test data were collected, followed by the distribution of the booklet, and post-test data were gathered after one week. Data were analyzed using descriptive statistics and paired t-tests. **Results:** The mean pre-test knowledge score was 9.86 (SD = 6.23), while the mean post-test score significantly increased to 18.33 (SD = 6.10). The paired t-test results indicated a significant difference between pre-test and post-test scores ($t(99) = 17.192$, $p < 0.001$). Chi-square tests showed significant associations between pre-test knowledge levels and demographic variables such as family type, place of residence, parents' occupation, family income, and previous knowledge. **Conclusion:** The study demonstrates that educational interventions, like the information booklet, effectively improve adolescents' knowledge of healthy lifestyle practices. These findings underscore the importance of incorporating structured health education programs into school curricula to address the knowledge gaps and promote healthier lifestyle choices among adolescents. Further research is recommended to explore the long-term impact of such interventions on behavior change and health outcomes.

KEYWORDS: Adolescents, Healthy Lifestyle, Educational Intervention, Knowledge Improvement.

INTRODUCTION

Adolescent health behaviors significantly impact long-term health outcomes, making this developmental stage critical for establishing healthy lifestyle habits. Globally, there is growing concern over the prevalence of unhealthy behaviors among adolescents, including poor dietary habits, lack of physical activity, and sedentary lifestyles. According to the World Health Organization (WHO)[1], over 70% of adolescents engage in behaviors detrimental to their health. National surveys indicate that 60% of adolescents do not meet recommended physical activity levels, and 50% consume excessive amounts of sugary drinks daily.[2] These behaviors contribute to rising rates of obesity, diabetes, and other chronic health conditions in this age group.

Understanding the factors that contribute to unhealthy lifestyle choices during adolescence is essential for developing effective interventions. Adolescents are influenced by a complex interplay of socio-economic factors, peer pressure, and lack of knowledge about healthy behaviors. Research has shown that early intervention and education can significantly improve health outcomes. For instance, Brown et al.[3] found that health education programs targeting dietary habits and physical activity in schools led to significant improvements in students' knowledge and behaviors. Despite these positive outcomes, many adolescents still lack access to comprehensive health education, particularly in regions with limited resources.

Recent studies provide a detailed picture of the extent and impact of unhealthy lifestyle choices among adolescents. The National Health Survey[2] reports that 68% of adolescents have poor dietary habits, while 72% do not engage in sufficient physical activity. The survey also highlights disparities based on socio-economic status, with adolescents from lower-income families experiencing higher rates of unhealthy behaviors due to limited access to nutritious foods and safe recreational spaces.[4] These findings underscore the need for targeted interventions that address both knowledge and environmental factors.

Addressing unhealthy lifestyle choices in adolescents is critical for preventing the onset of chronic diseases and promoting overall well-being. Effective interventions can reduce healthcare costs, improve quality of life, and foster long-term healthy habits. Adolescence is a formative period where individuals are more receptive to behavioral changes, making it an opportune time for intervention. This study aims to assess the impact of an educational intervention on improving knowledge regarding healthy lifestyle choices among adolescents in selected educational institutes of Kota (Raj).

METHODOLOGY

Research Design

A pre-experimental one-group pre-test-post-test design was used to evaluate the impact of an educational intervention on adolescents' knowledge of healthy lifestyle practices.

Sample and Sampling Technique

The sample included 100 adolescents aged 15-18 years from selected educational institutes in Kota (Raj.). Convenience sampling was employed for its practicality and efficiency.

Data Collection Tool

A structured knowledge questionnaire was utilized, comprising, Socio-demographic profile (9 items), Multiple-choice questions on healthy lifestyle knowledge (30 items). The tool's validity was confirmed by experts, and its reliability was established with a coefficient of 0.81.for intervention An information booklet on healthy lifestyle practices was developed, covering topics like physical exercise, nutrition, and WHO health tips.

Data Analysis

Descriptive statistics (mean, standard deviation) and inferential statistics (paired t-test) were used to analyze the data and evaluate the intervention's effectiveness.

Ethical Considerations

Informed consent was obtained from participants, and confidentiality was maintained. The study received ethical approval from the institutional review board.

RESULTS

Table 1: Demographic Characteristics of Participants (N=100).

Variable	Frequency (n)	Percentage (%)
Age (years)		
15-16	52	52%
17-18	45	45%
19-20	3	3%
Gender		
Male	53	53%
Female	47	47%
Religion		
Hindu	76	76%
Muslim	17	17%
Christian	4	4%
Sikh	3	3%
Family Type		
Joint	78	78%
Nuclear	22	22%
Place of Residence		
Rural	78	78%
Urban	22	22%
Educational Level		
Secondary	55	55%
Senior Secondary	45	45%
Parents' Occupation		
Government Job	14	14%
Business	18	18%
Farmer	58	58%
Private Job	10	10%

Family Monthly Income		
< Rs. 25,000	60	60%
Rs. 25,000 - 65,000	37	37%
Rs. 65,001 - 1,00,000	3	3%
Previous Knowledge		
Yes	11	11%
No	89	89%

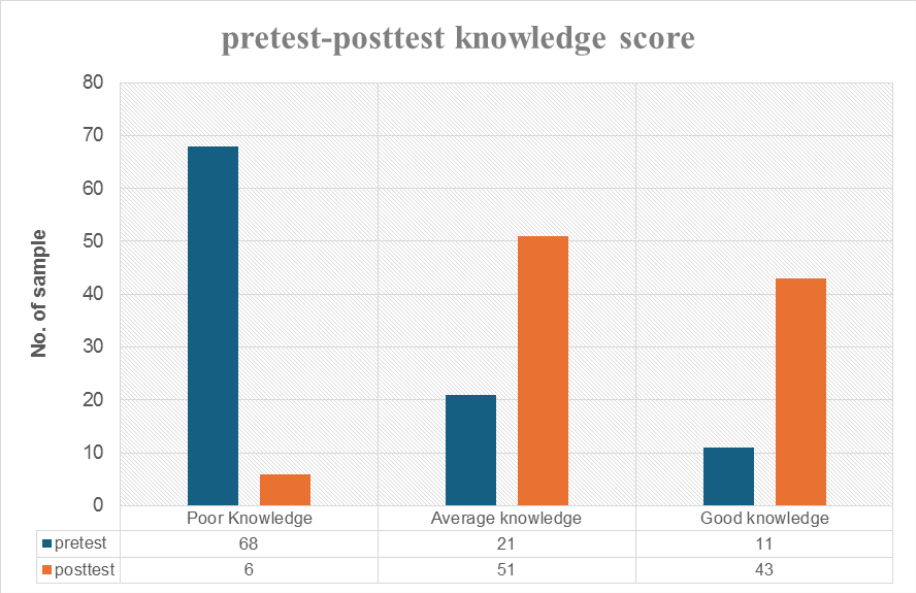

Figure 1: Bar graph showing comparison of pretest-posttest knowledge score.

Table 2: Chi-Square Test for Pre-test Knowledge and Demographic Variables.

Demographic Variable	Chi-square (χ^2)	df	p-value	Significance ($p < 0.05$)
Age	3.007	4	0.557	NS
Gender	2.599	2	0.273	NS
Religion	5.134	6	0.527	NS
Family Type	9.741	2	0.008	S
Place of Residence	21.702	2	0.001	S
Educational Level	3.772	2	0.152	NS
Parents' Occupation	109.253	6	0.001	S
Family Monthly Income	46.361	4	0.001	S
Previous Knowledge	80.986	2	0.001	S

DISCUSSION

The pre-test results indicated that the majority of adolescents had poor knowledge regarding healthy lifestyle practices, with a mean score of 9.86. This baseline data highlights a significant gap in health literacy among the study population. Hashem et al.[5] reported similar deficiencies in adolescents' knowledge about nutrition and physical activity prior to any intervention. These findings suggest that without targeted educational efforts, adolescents may continue to engage in unhealthy behaviors due to a lack of awareness and understanding.

Regarding post-test, results showed a marked improvement in knowledge, with the mean score rising to 18.33. This significant increase underscores the effectiveness of the educational intervention. Kiki et al.[6] found that school-based health education programs substantially improved students' understanding of healthy lifestyle practices. The alignment of our findings with those of Kiki et al. reinforces the potential of structured educational interventions to enhance health literacy among adolescents.

The effectiveness of the intervention is further supported by Brown et al.[3], who demonstrated that health education programs focusing on dietary habits and physical activity led to significant improvements in both knowledge and behaviors among students. Our study primarily measured knowledge gains, but Brown et al.'s research suggests that such improvements can also translate into healthier lifestyle choices. This broader impact underscores the value of comprehensive health education in schools.

Despite the positive outcomes, our study found significant associations between pre-test knowledge levels and socio-demographic factors such as family type, place of residence, parents' occupation, and family income. These associations highlight the need for tailored interventions that address specific socio-economic contexts. Jones et al.[4] highlighted disparities in health knowledge based on socio-economic status, noting that adolescents from lower-income families often have limited access to health education and resources. Our findings support this view and suggest that customized educational strategies may be necessary to effectively reach and benefit all demographic groups.

Regina Lee et al.[7] found that socio-demographic factors significantly influenced health-related knowledge among adolescents. Their research emphasized the importance of considering these factors in designing effective health education programs, aligning with our study's implications. Tailoring interventions to fit the socio-demographic context of the target population can enhance the relevance and effectiveness of health education programs.

The significant associations between pre-test knowledge levels and socio-demographic variables observed in our study indicate that tailored interventions addressing specific needs and contexts may be more effective. Amal M et al.[9] found that educational interventions had varying impacts across different demographic groups, underscoring the necessity of customized educational strategies that consider the unique characteristics of diverse adolescent populations. Our study demonstrated that an educational intervention significantly improved adolescents' knowledge of healthy lifestyle practices. This finding is crucial as it highlights the potential of such interventions in promoting healthier behaviors among adolescents. Integrating structured health education programs into school curricula is essential. Schools provide an ideal platform for delivering consistent and comprehensive health information, ensuring that all students receive the necessary education to make informed health choices.

In conclusion, our study adds to the growing body of evidence supporting the effectiveness of educational interventions in improving adolescents' knowledge of healthy lifestyle practices. The significant improvement in post-test scores underscores the value of structured educational programs in enhancing health literacy among adolescents. Future research should focus on the long-term impacts and behavior changes resulting from these educational programs. Additionally, exploring the effectiveness of different types of interventions in diverse settings can provide further insights into optimizing health education for adolescents. The findings underscore the critical role of tailored, context-specific health education in fostering long-term healthy behaviors among adolescents.

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