

A Study on the Effectiveness of Health Education in Promoting Healthy Lifestyle Practices among Students

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Abstract: Health education plays an important role in developing healthy attitudes, knowledge, and behaviours among students. The school and college years are critical stages for establishing lifestyle practices that may influence health throughout adulthood. Students are increasingly exposed to unhealthy dietary habits, physical inactivity, inadequate sleep, stress, excessive screen time, and other behaviours that may negatively affect their physical and psychological well-being. Health education can provide students with appropriate knowledge and practical skills to make informed decisions regarding nutrition, physical activity, personal hygiene, mental health, sleep, and disease prevention. This article examines the effectiveness of health education in promoting healthy lifestyle practices among students. It discusses the concept and importance of health education, major components of healthy lifestyles, the role of educational institutions, and the influence of health education programmes on students' behaviour. The article also identifies challenges in implementing health education and suggests measures for strengthening health promotion among students. Across all seven dimensions of student perception, **none of the Kruskal-Wallis test statistics reached statistical significance at the 5% significance level.** This demonstrates that students across Arts, Science, and Engineering streams hold broadly comparable perceptions regarding teacher support, health education, teaching methods, health service accessibility, nutrition, digital media use, and academic pressure. Effective health education, when supported by families, educational institutions, and the wider community, can contribute significantly to the development of healthier and more responsible young people.

Keywords: Health Education, Healthy Lifestyle, Students, Health Promotion, Nutrition, Physical Activity, Health Behaviour

Introduction

Health is an essential component of individual and social development. Students represent an important section of society because their physical, mental, and social well-being directly influences their academic performance, personal development, and future productivity. During adolescence and young adulthood, students develop habits related to food consumption, physical activity, sleep, personal hygiene, substance use, and stress management. These habits may continue into later life. Therefore, educational institutions have an important responsibility to provide students with knowledge and skills that encourage healthy lifestyle practices.

Health education refers to the process of providing individuals with information, skills, attitudes, and motivation to maintain and improve their health. It is not limited to communicating information about diseases. Rather, it encourages individuals to understand health risks, make appropriate decisions, and adopt behaviours that promote well-being. In educational institutions, health education can be delivered through classroom teaching, workshops, awareness campaigns, counselling, health clubs, practical activities, physical education, and digital



learning programmes. The effectiveness of health education depends not only on the amount of information provided but also on whether students are able to apply that knowledge in their daily lives. A successful health education programme should therefore combine knowledge with practical skills, behavioural motivation, supportive environments, and continuous reinforcement.

Importance of Healthy Lifestyle Practices among Students

A healthy lifestyle involves a combination of behaviours that support physical, mental, and social well-being. For students, important lifestyle practices include consuming a balanced diet, engaging in regular physical activity, obtaining adequate sleep, maintaining personal hygiene, managing stress, avoiding harmful substances, and using digital devices responsibly. Healthy eating provides the nutrients required for growth, concentration, learning, and physical activity. Students who regularly consume nutritious foods are better positioned to maintain energy and overall well-being. In contrast, frequent consumption of foods high in sugar, salt, and unhealthy fats may contribute to unhealthy weight gain and other long-term health risks.

Physical activity is another essential component of a healthy lifestyle. Regular exercise supports physical fitness and may also contribute to emotional well-being and cognitive functioning. However, academic demands, sedentary habits, and increased screen use can reduce the amount of time students spend in physical activity.

Adequate sleep is equally important. Students require sufficient rest to support concentration, memory, emotional regulation, and physical health. Health education can help students understand the importance of establishing regular sleep routines and managing activities that interfere with sleep.

Mental health should also be incorporated into student health education. Academic pressure, examinations, social relationships, financial concerns, and uncertainty about the future can contribute to stress among students. Education about stress management, emotional well-being, help-seeking, and healthy coping mechanisms can encourage students to take appropriate care of their mental health.

Role of Health Education in Promoting Healthy Lifestyles

Health education can influence student behaviour through several mechanisms. First, it improves health knowledge. Students who understand the consequences of unhealthy behaviours are more likely to recognise the importance of making healthier choices. For example, information about the nutritional value of different foods can help students make informed dietary decisions.

Second, health education can influence attitudes. Knowledge alone does not always result in behavioural change. Students must also develop positive attitudes towards healthy behaviours. Interactive discussions, demonstrations, group activities, and peer education can help students develop more favourable attitudes towards exercise, nutritious food, hygiene, and mental health.

Third, health education develops practical skills. Students can be taught how to plan balanced meals, read food labels, perform basic exercises, manage stress, maintain personal hygiene, and seek professional assistance when necessary. Such skills make health information more applicable to everyday life.

Fourth, health education can increase students' confidence in adopting healthy behaviours. When students are given opportunities to practise healthy behaviours and receive positive reinforcement, they may develop greater confidence in maintaining those behaviours.



Major Areas of Health Education

1. **Nutrition Education:** Nutrition education helps students understand the relationship between food and health. It can cover balanced diets, food groups, portion control, hydration, healthy snacks, and the risks associated with excessive consumption of processed foods. Practical demonstrations and nutrition awareness programmes can make such education more meaningful.
2. **Physical Activity Education:** Students should be encouraged to understand the importance of regular physical activity. Educational institutions can promote participation in sports, yoga, walking, fitness programmes, and recreational activities. Physical education classes can provide students with practical opportunities to develop active lifestyles.
3. **Personal Hygiene:** Health education can promote habits such as regular handwashing, oral hygiene, bathing, clean clothing, safe food practices, and appropriate sanitation. These behaviours can reduce the risk of infectious diseases and contribute to overall well-being.
4. **Mental Health Education:** Mental health education helps students recognise stress, anxiety, emotional difficulties, and other challenges. It can also reduce misconceptions and encourage students to seek help when required. Counselling services, peer-support programmes, relaxation techniques, and awareness sessions can complement classroom-based education.
5. **Substance Abuse Prevention:** Students may encounter substances such as tobacco, alcohol, and other harmful substances. Health education can explain their potential health and social consequences and strengthen students' ability to resist harmful influences. Preventive education is particularly valuable when it is age-appropriate, interactive, and supported by families and institutions.
6. **Digital Health:** The increasing use of smartphones, computers, and social media has created new health considerations. Health education can encourage responsible screen use, adequate physical activity, appropriate sleep, online safety, and healthy digital habits. Students should understand the importance of balancing technology use with academic, physical, social, and recreational activities.
7. **Effectiveness of Health Education:** The effectiveness of health education can be assessed by examining changes in students' knowledge, attitudes, and practices. A health education programme may be considered effective when students demonstrate improved understanding of health issues and increasingly adopt healthier behaviours.

For example, a nutrition education programme may initially assess students' knowledge of healthy foods and eating practices. After the programme, the same measures can be used to identify changes in knowledge and attitudes. Changes in dietary practices can also be assessed through questionnaires, interviews, or food-related activity records. Similarly, physical activity education can be evaluated by measuring students' participation in exercise before and after an intervention. Programmes addressing mental health can assess awareness of stress-management strategies and willingness to seek help. However, behavioural change is often gradual. Short-term improvement in knowledge does not necessarily guarantee long-term changes in lifestyle. Therefore, health education should be continuous rather than limited to occasional awareness programmes. Regular reinforcement, supportive institutional policies, parental involvement, and opportunities for practical participation can improve the sustainability of behavioural changes.

Role of Educational Institutions

Educational institutions provide an ideal environment for promoting healthy lifestyles because they reach students regularly and can integrate health promotion into academic and extracurricular activities. Schools and colleges can

incorporate health education into the curriculum and organise health awareness programmes, seminars, workshops, health camps, sports activities, and counselling services.

The physical environment of an institution also influences student behaviour. Availability of safe drinking water, hygienic sanitation facilities, healthy food options, sports facilities, and clean surroundings can reinforce the messages delivered through health education.

Teachers have a particularly important role because they interact with students frequently. By demonstrating healthy behaviours and encouraging positive practices, teachers can reinforce health education messages. Health professionals, counsellors, parents, and community organisations can also contribute specialised knowledge and support.

Challenges in Promoting Healthy Lifestyle Practices

Despite its importance, several challenges may limit the effectiveness of health education. One major challenge is the gap between knowledge and behaviour. Students may understand the importance of healthy food or exercise but may not consistently practise these behaviours.

Limited time within academic schedules can also restrict health education activities. In some institutions, academic achievement may receive greater attention than health and well-being. In addition, unhealthy food availability, sedentary lifestyles, social influences, financial constraints, and excessive screen use can make healthy choices difficult.

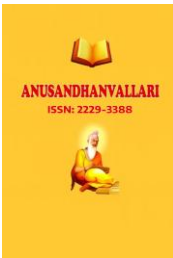
Another challenge is the lack of trained personnel and adequate resources for delivering comprehensive health education. Programmes may also be conducted as one-time events without follow-up evaluation. Such approaches may produce temporary awareness but may not result in sustained behavioural change.

Research Gap

Although numerous studies have examined health education and healthy lifestyle practices among students, significant gaps remain in understanding the effectiveness of health education in producing sustainable behavioural changes. Existing studies have largely focused on health knowledge, awareness, nutrition, physical activity, or specific health behaviours separately, rather than examining healthy lifestyle practices as a comprehensive outcome. There is also limited evidence regarding how factors such as teaching methods, family support, peer influence, institutional environment, motivation, and access to health facilities affect the effectiveness of health education. Furthermore, differences in students' socio-economic and educational backgrounds may influence their response to health education programmes. Therefore, there is a need for systematic research that evaluates whether health education effectively translates knowledge and awareness into regular healthy lifestyle practices among students.

Importance of the Study

The study is important because students are at a formative stage of life when long-term health-related behaviours and habits are developed. Effective health education can help students understand the importance of balanced nutrition, regular physical activity, personal hygiene, adequate sleep, mental well-being, and avoidance of unhealthy behaviours. Examining its effectiveness can provide useful information about whether existing health education initiatives are achieving their intended outcomes. The study can also identify factors that support or hinder students in adopting healthy lifestyle practices. The findings may be useful to educational institutions, teachers, health professionals, parents, and policymakers in developing appropriate health promotion programmes. By strengthening



health education, institutions can create a supportive environment that encourages students to make informed health decisions and maintain healthier lifestyles.

Statement of the Problem

Students today face several challenges that may negatively influence their lifestyle and overall well-being, including unhealthy dietary habits, physical inactivity, inadequate sleep, academic stress, excessive screen time, and poor health practices. Although health education is widely recognised as an important means of promoting healthy behaviours, the provision of health information does not always result in corresponding changes in students' daily practices. There may be a gap between what students know about health and how they actually behave. The effectiveness of health education may also vary according to students' attitudes, motivation, family support, peer influence, institutional environment, and access to health resources. Therefore, the present study focuses on assessing the effectiveness of health education in promoting healthy lifestyle practices among students and identifying the factors that influence its effectiveness.

Objectives and Methodology

The primary objective of this study is to assess whether a student's chosen academic stream leads to significantly different experiences and evaluations within these operational and educational domains.

A non-parametric, observational research design was employed to assess variations in student perceptions across different academic disciplines. The study utilizes the Kruskal-Wallis -test to evaluate whether differences exist among three independent academic groups (Arts, Science, and Engineering) regarding key dimensions of health education, institution-provided support, and personal lifestyle factors. Convenience sampling was chosen primarily due to its practicality, cost-effectiveness, and time efficiency in gathering primary data from an active student population within an academic institution. Given the constraints of campus access, class schedules, and voluntary student participation, this approach allowed for the efficient collection of responses across all target academic disciplines.

Analysis and Findings

The Kruskal-Wallis test was conducted to determine whether students' academic streams—specifically Arts, Science, and Engineering—influence their perceptions across a variety of institutional, educational, and personal experience factors. The Kruskal-Wallis test is used to evaluate differences among three or more independent groups when data are measured on an ordinal scale or do not meet the assumption of normality.

In this analysis, student perceptions were examined across seven distinct dimensions:

- Teacher Support and Guidance
- Quality of Health Education Programmes
- Teaching Methods and Learning Materials
- Accessibility to Health Services
- Nutritional Environment and Food Availability
- Digital Media and Technology Use
- Time Management and Academic Pressure

Table 1:

Academic stream and perception of the among Students -Kruskal Wallis test

Perception	Stream	N	Mean Rank	Chi-Square (df-2)
Teacher Support and Guidance	Arts`	42	56.10	3.485
	Science	31	49.15	
	Engineering	27	43.35	
Quality of Health Education Programmes	Arts`	42	56.10	3.818
	Science	31	49.15	
	Engineering	27	43.35	
Teaching Methods and Learning Materials	Arts`	42	47.38	3.485
	Science	31	52.32	
	Engineering	27	53.26	
Accessibility to Health Services	Arts`	42	47.38	4.062
	Science	31	52.32	
	Engineering	27	53.26	
Nutritional Environment and Food Availability	Arts`	42	44.01	.904
	Science	31	58.06	
	Engineering	27	51.91	
Digital Media and Technology Use	Arts`	42	52.33	4.563
	Science	31	46.23	
	Engineering	27	52.56	
Time Management and Academic Pressure	Arts`	42	50.69	.434
	Science	31	48.31	
	Engineering	27	52.72	
	Total	100		

1. Teacher Support and Guidance

- **Mean Ranks:** Arts (56.10), Science (49.15), Engineering (43.35)
- **Interpretation:** The test statistic is lower than the critical value Arts students reported the highest mean rank, while Engineering students reported the lowest. However, the difference in perceptions of teacher support and guidance across the three academic streams is **not statistically significant**.

2. Quality of Health Education Programmes

- **Mean Ranks:** Arts (56.10), Science (49.15), Engineering (43.35)
- **Interpretation:** Although Arts students showed higher mean satisfaction compared to Science and Engineering students, there is **no statistically significant difference** among the streams regarding the perceived quality of health education programmes.

3. Teaching Methods and Learning Materials

- **Mean Ranks:** Engineering (53.26), Science (52.32), Arts (47.38)
- **Interpretation:** Engineering and Science students recorded higher mean ranks than Arts students. Since the calculated chi-square value is below the critical value, the variation in perception regarding teaching methods and learning materials is **not statistically significant**.

4. Accessibility to Health Services

- **Mean Ranks:** Engineering (53.26), Science (52.32), Arts (47.38)
- **Interpretation:** Engineering students rated accessibility highest, followed by Science and Arts. However, the chi-square result indicates **no statistically significant difference** in how students from different academic streams perceive accessibility to health services.

5. Nutritional Environment and Food Availability

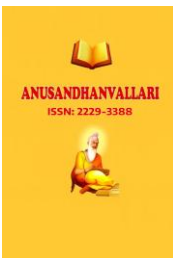
- **Mean Ranks:** Science (58.06), Engineering (51.91), Arts (44.01)
- **Interpretation:** Science students held the highest mean rank while Arts students held the lowest. With a very low chi-square statistic there is **no statistically significant difference** across streams in perception of the nutritional environment and food availability.

6. Digital Media and Technology Use

- **Mean Ranks:** Engineering (52.56), Arts (52.33), Science (46.23)
- **Interpretation:** Engineering and Arts students exhibited similar, higher mean ranks compared to Science students. Nevertheless, the chi-square value remains below the critical threshold demonstrating **no statistically significant difference** among the streams regarding digital media and technology use.

7. Time Management and Academic Pressure

- **Mean Ranks:** Engineering (52.72), Arts (50.69), Science (48.31)



- **Interpretation:** Engineering students reported slightly higher mean ranks, followed by Arts and Science. The test statistic is minimal showing **no statistically significant difference** in perceptions of time management and academic pressure based on academic stream.

Suggestions for Improving Health Education

The effectiveness of health education can be strengthened through a comprehensive and participatory approach. First, health education should be integrated into the regular curriculum rather than treated as an occasional activity. Second, programmes should use interactive methods such as group discussions, demonstrations, role plays, peer education, and practical activities.

Third, institutions should create environments that support healthy choices. Nutritious food options, clean sanitation facilities, drinking water, sports opportunities, and accessible counselling services can reinforce health messages.

Fourth, parents and families should be involved because many lifestyle practices are developed and maintained at home. Collaboration between educational institutions, families, health professionals, and community organisations can create a supportive health-promoting environment.

Finally, programmes should be evaluated regularly. Assessing knowledge, attitudes, and behavioural changes before and after interventions can help institutions identify strengths and areas requiring improvement. Long-term follow-up is particularly important for determining whether changes in lifestyle practices are sustained.

Conclusion

Health education is an important strategy for promoting healthy lifestyle practices among students. It can improve health knowledge, shape positive attitudes, develop practical skills, and encourage students to make informed decisions about their health. Nutrition, physical activity, personal hygiene, mental health, sleep, substance-use prevention, and responsible digital behaviour should form important components of student health education.

The effectiveness of health education depends on more than classroom instruction. Students require supportive environments, practical opportunities, positive reinforcement, family support, and access to appropriate health services. Educational institutions can play a central role by integrating health promotion into academic and extracurricular activities and by creating environments that make healthy choices easier.

Ultimately, effective health education can contribute to the development of healthy habits during the formative years of students' lives. By combining education, behavioural support, institutional commitment, and community participation, health education programmes can help students develop healthier lifestyles and contribute positively to their future well-being and society.

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