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Effectiveness of structured teaching program on health promotion behavior for life-style disease prevention among adolescents

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Abstract
Background of the study: Adolescents are susceptible to diseases due to their limited awareness and lack of abilities in mitigating dangerous behaviors. The primary contributors to chronic diseases have been recognized as lifestyle risk factors, including smoking, alcoholism, dietary patterns, sedentary behavior, and physical inactivity.
Objective: The objective of this study was to assess the efficacy of a structured education program in enhancing information pertaining to health promotion behavior for the prevention of lifestyle illnesses among teenagers at Govt. Senior Secondary School, Pehrawar, Rohtak.
Methodology: The study was carried out on 100 adolescents utilizing a nonprobability convenient sampling technique and a quantitative approach with a pre-experimental one group pre-test and post-test design. A self-structured questionnaire schedule was used to measure adolescents' understanding of health promotion behavior and lifestyle illness prevention.
Results: The mean and standard deviation were used to describe the data, and the t-test was used to draw conclusions from the data. The average score on the pre-test was 10.9, and the standard deviation was 2.447. The average score on the post-test was 26.23, and the standard deviation was 2.309. The average difference between the scores on the pre-test and the post-test was 15.330, which is the same as the table number at the 0.05 level of significance.
Conclusion: The study demonstrates that the implementation of a structured training programme yielded significant improvements in the knowledge of adolescents pertaining to health promotion behavior aimed at preventing lifestyle diseases.

Keywords: Evaluate, effectiveness, structured teaching programme, health promotion behaviour, life style diseases

Introduction

Lifestyle disease is essentially any disease that is related with how a person lives. Obesity, cardiovascular disease, hypertension, type 2 diabetes, and cancer are among them. Lifestyle diseases were diseases of the wealthy that were uncommon in the underdeveloped countries. Health promotion is garnering increased attention in India due to the important role it plays in health. A high quality of life can be improved by adopting a healthful way of life. When a person practices a health-promoting lifestyle, he or she has a better chance of remaining healthy and maybe living longer without the burden of sickness.

Promoting health through schools is a "life-course" strategy for fostering healthy behavior in youth. Through health education, understanding, and motivation, many of today's and tomorrow's primary causes of disease and disability can be reduced significantly by preventing the initiation of risky behaviors in youth.

Tobacco use, alcohol consumption, consumption of fast food and an unhealthy diet, and inactivity are examples of ill lifestyles. In terms of fatalities attributable to noncommunicable diseases, high blood pressure (13%), tobacco use (9%), diabetes (6%), lack of physical activity (6%), and obesity (5%), are the most prevalent risk factors worldwide. In the present day, lifestyle maladies are becoming more prevalent, affecting even younger populations, especially the urban youth. According to the WHO, noncommunicable diseases are responsible for more than 40 million deaths worldwide, or 70% of all deaths worldwide. These four groups of diseases account for eighty percent of all premature NCD deaths, with cardiovascular disease bearing the heaviest burden (17.7 million deaths annually), followed by cancer (8.8 million), respiratory diseases (3.9 million), and diabetes (1.6 million).

In India, the types and patterns of diseases are changing in ways that are very scary. India has been named by the WHO as one of the countries that will have the most lifestyle-related diseases in the near future. India is already known as the place where the most people in the world have diabetes. The most common problems caused by an idle lifestyle are obesity, high blood pressure, and diseases of the heart. The WHO report says that the total number of deaths from NCDs is 2967600 for men and 2273800 for women. While 61.8% of NCD deaths happen to people under the age of 70 and 55.0% of NCD deaths happen to women, this shows that younger people are at a higher risk than older people. A study by the India Associated Chamber of Commerce and Industry (ASSOCHAM) found that 68% of working women between the ages of 21 and 52 had lifestyle-related diseases like obesity, depression, chronic backaches, diabetes, and high blood pressure.

Noncommunicable diseases (NCDs) kill 41 million people annually, 71% of all deaths. More than 15 million people between 30 and 69 die from an NCD each year, 85% of whom are "premature" in low- and middle-income countries. Low- and middle-income nations account for 77% of NCD fatalities. Cardiovascular disorders kill 17.9

million people annually, followed by malignancies (9.3 million), respiratory diseases (4.1 million), and diabetes (1.5 million). Over 80% of early NCD fatalities are from these four diseases. Tobacco, alcohol, inactivity, and poor diets increase NCD mortality.

Kamar Sultana *et al*. (2018). A quasi-experimental study examined lifestyle disease awareness among 110 Delhi government schoolchildren. Data was acquired using self-designed questionnaires. The study found lifestyle illnesses are the major cause of mortality worldwide, rising from 68.2% to 79.8%. 95.1% of teens knew tobacco was hazardous. Diabetes was more common in teenagers (81.5%–95%) than hypertension (62%–80%). 2020, Dr. Priyanka Sharma *et al*. A cross-sectional study in Ujjain, Madhya Pradesh examined lifestyle disease risk variables in 400 teenagers. Cluster sampling selected the samples. The survey found 44.5% were inactive and ate junk food. 16.8% alcohol intake and smoking were lifestyle disease risk factors.

Based on the above studies, it was found that most teenagers don't know much about the risk factors for lifestyle diseases and how to avoid them. Most teenagers have a negative view of health promotion behaviors that could help avoid lifestyle diseases. So, the expert is genuinely interested in the problem and wants to study it.

Objectives

- To assess knowledge regarding health promoting behaviour towards life style diseases prevention among adolescents.
- To evaluate the effectiveness of structured teaching programme on knowledge regarding health promoting behaviour towards life style diseases prevention among adolescents.
- To determine the association between pre-test knowledge score and socio demographic variables.

Materials and methods

The quantitative research approach was employed to achieve the study's goals. This study used exploratory descriptive research, a pre-experimental methodology. The study took place in Govt. Senior Secondary School in Pehrawar, Rohtak. Students (15-19 years old) were the focus of this investigation. This study used non-probability convenient sampling. All accessible study subjects were sampled. The study included 100 9th–12th-graders. The structured knowledge questionnaire was two-part. The self-structured questions in this part cover subject and family details. Age, gender, and education of teenagers are included. Total household income, Religion, diet, family, father's and mother's education, occupations, domicile, and number of siblings. Included were 13 things. Participants were asked to check the right answers. Part 2 includes Question to assess adolescents' health promotion behavior for lifestyle disease prevention. Structured education program for adolescents on health promotion behavior for lifestyle illness prevention is offered to study samples after knowledge questionnaire. My guide created a structured instructional curriculum. It was done with books, literature, periodicals, and internet. STP focuses on cardiovascular, hypertension, diabetes, cancer, and obesity risk factors and prevention. Procedure for data collecting involves Legal administrative authorization was received from PGIMS, Rohtak nursing college principal Pt. B.D. Sharma. Formal signed permission from Govt. Senior Secondary School, Pehrawar, Rohtak Principal. Data was collected with consent from the above authority. Investigator introduced oneself, built rapport, and explained the study to the teens. Study subjects gave written consent. To improve adolescents' awareness, the investigator taught an organized health promotion behavior program for lifestyle conditions. The post-test was done 7 days later. According to the study's objectives, hypothesis, and experts' opinions, descriptive and inferential statistics were used to arrange, tabulate, analyze, and interpret the data.

Results

Section-A: Socio Demographic characteristics of the samples.

Table 1: Shows the frequency and percentage distribution of samples according to socio-demographic variables (n = 100)

S. No	Demographic Variables	Frequency	Percentage
1.	Age (Years)		
	a. 15 years	15	15.00
	b. 16 years	21	21.00
	c. 17 years	19	19.00
	d. 18 years	24	24.00
	e. 19 years	21	21.00
2.	Gender		
	a. Male	47	47.00
	b. Female	53	53.00
3.	Educational Status		
	a. 9^{th} standard	20	20.00
	b. 10^{th} standard	27	27.00
	c. 11^{th} standard	18	18.00
	d. 12^{th} standard	35	35.00
4.	Total Family Income (Rupees)		
	a. Up to 10,000	8	8.00
	b. 10,000 – 20.000	27	27.00
	c. 20,001 – 30,000	44	44.00
	d. Above 30, 000	21	21.00
5.	Religion		
	a. Hindu	93	93.00
	b. Muslim	6	6.00

	c. Christian	0	0.00
	d. Sikh	1	1.00
6.	Type of Family		
	a. Nuclear	91	91.00
	b. Joint	9	9.00
	c. Extended	0	0.00
7.	Type of Diet		
	a. Vegetarian	80	80.00
	b. Non – Vegetarian	18	18.00
	c. Eggetarian	2	2.00
8.	Educational Status of Father		
	a. Illiterate	0	0.00
	b. Primary	3	3.00
	c. Middle	21	21.00
	d. High School	39	39.00
	e. Graduate and above	37	37.00
9.	Education of Mother		
	a. Illiterate	8	8.00
	b. Primary	11	11.00
	c. Middle	31	31.00
	d. High School	41	41.00
	e. Graduate and above	9	9.00
10.	Occupation of Father		
	a. Unemployed	0	0.00
	b. Govt job	20	20.00
	c. Private job	68	68.00
	d. Self - employed	12	12.00
11.	Occupation of Mother		
	a. Unemployed	37	37.00
	b. Govt job	0	0.00
	c. Private job	31	31.00
	d. Self – employed	32	32.00
12.	Area of Residence		
	a. Urban	76	76.00
	b. Rural	24	24.00
13.	Total number of Sibling		
	a. One	1	1.00
	b. Two	61	61.00
	c. Three	33	33.00
	d. More than three	5	5.00

Based on the data presented in Table I, it can be inferred that the age distribution of the study sample consisted of individuals belonging to different age groups. Out of the total sample size of 100, it was noted that 15% were in the age group of 15 years, 21% were in the age group of 16 years, 19% were in the age group of 17 years, 24% were in the age group of 18 years, and 21% were in the age group of 19 years. In terms of the gender distribution within the study sample, it was observed that 47% of the participants were male, while the remaining 53% were female. Regarding the educational composition of the samples, it is seen that 20% of the participants are enrolled in the 9th standard, 27% are pursuing studies in the 10th standard, 18% are engaged in educational activities at the 11th standard level, and the remaining 35% are currently enrolled in the 12th standard. In terms of family composition, it was found that 8% of the study sample belonged to families with a household income of up to 10000, while 27% of the subject sample had a household income ranging between 10001-20000. Additionally, 44% of the study sample had a household income between 20001-30000, and the remaining 21% of the study sample had a household income exceeding 30000. In relation to the religious affiliation of the study samples, it was found that 93% identified as Hindu, 6% as Muslim, and 1% belonged to the Sikh community. In terms of the familial composition of the samples, the bulk of the study participants (91%) were from nuclear families, while the remaining 9% belonged to joint families. In terms of dietary composition, the majority of the study samples adhered to a vegetarian diet (80%), whereas 18% followed a non-vegetarian diet, and 2% adhered to an eggetarian diet. In terms of the educational attainment of fathers, it was found that 3% had completed primary education, 21 dads had completed middle school, 39% had completed high school, and 37% had completed graduate or postgraduate education. In relation to the educational attainment of mothers, it was found that 8% of mothers had no formal education, 11% had completed elementary education, 31% had completed middle school education, 41% had completed high school education, and 9% had completed graduate or postgraduate study. Regarding the paternal occupational position. According to the data provided, it can be observed that 20% of the dads were employed in government positions, while 68% were engaged in private sector employment. Additionally, 12% of the fathers were self-employed. In relation to the occupational situation of the moms, it was found that 37% were unemployed, 31% were employed in private sector jobs, and 32% were self-employed. In terms of residential location, it was observed that 76% of the study samples were derived from urban areas, while the remaining

24% were sourced from rural areas. In relation to the overall number of siblings, the study sample indicates that 1% of participants have one sibling, 61% have two siblings, 33% have three siblings, and 5% have more than three siblings.

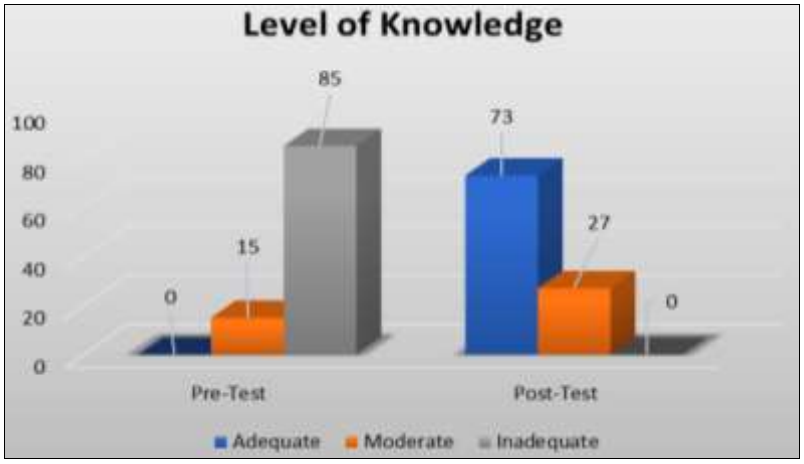

Fig 1: Percentage distribution of samples according to level of knowledge

Pre-test results show that 85% of the study sample has insufficient knowledge, whereas 15% has moderate knowledge. After participating in the study's structured instruction program, 27% of participants had a moderate level of knowledge and 73% had an appropriate level of knowledge about health promotion behaviors aimed at preventing lifestyle diseases.

Table 2: Effectiveness of structured teaching programme regarding health promotion behaviour towards lifestyle diseases prevention among adolescents. (n = 100)

Test	Mean	Mean Difference	S.D	Paired 't' test	p value
Pre-Test	10.9	15.3	2.45	73.37	0.01***
Post-Test	26.23		2.30		

**** Significant at p < 0.01*

Table - 2

This table Depicts that the mean value of overall pre-test knowledge score was 10.9 and SD was 2.45 whereas the mean value of post-test knowledge score was 26.23 and SD was 2.309. Mean difference between pre-test and post-test knowledge score was 15.330 obtained which is equal to table value at 0.05 level of significance.

In this study, the analysis reveals that, none of the socio-demographic variables wer found to have significant association with the pre-test knowledge lev at $p < 0.05$.

Discussion

The study's findings were analysed in light of the research questions asked.

The goal of this study is to evaluate how well adolescents understand the connection between healthy lifestyle choices and avoiding chronic diseases.

The results of the current study indicate that the majority of the study sample (85%) exhibited insufficient knowledge, while a smaller proportion (15%) shown moderate knowledge during the pre-test phase. Following the implementation of a structured education programme, it was seen that 27% of the study sample exhibited a moderate level of knowledge, while 73% demonstrated an adequate level of knowledge pertaining to health promotion behavior in the context of preventing lifestyle diseases.

Evangeline Mary A. *et al*. (2017) provide support for these findings. In Chennai, Tamil Nadu, 483 adolescents participated in a cross-sectional study to determine the prevalence of behavioral risk factors for lifestyle diseases. The study samples were identified using a technique of random sampling. The study revealed that 65.6% of participants had inadequate knowledge of a balanced diet, while only 10.1% had healthy eating practices. 78% of students led a hazardous lifestyle. The awareness of risk factors among non-professional pupils was significantly lower.

The goal of this study is to assess the impact of a well-designed curriculum on adolescents' understanding of how to adopt healthier lifestyles in order to reduce their risk of developing chronic diseases.

The results of this study show that the average score on the pre-test was 10.90, and the standard deviation was 2.45. The average score on the post-test was 26.23, and the standard deviation was 2.309. The average difference between the knowledge scores before and after the test was 15.33, which is the same as the table number at the 0.05 level of significance.

These conclusions are backed by a study carried out by Sandeep Kaur and colleagues in 2014. To evaluate the impact of a planned school health awareness program on the understanding and adoption of a healthy lifestyle among 50 teenagers in a chosen school in Dehradun, Uttarakhand. The study had a single group with a pre-test-post-test design. The researcher employed the convenient sampling strategy. With the aid of a self-administered questionnaire, the data was gathered. The study's findings revealed that a significant portion of students (94%) reported having knowledge of healthy lifestyle habits. Only (58%) pupils reported that their parents and friends were their main sources of information. In comparison to the mean of the pre-test knowledge and practice score (7.06 2.17) and (23.7 3.95), the post-test knowledge and practice score (11.72 3.26) and (27.38 3.48) were shown to be higher.

Conclusion

When comparing the pre- and post-test scores of the study's participants, researchers found that 85% of the people in the sample had insufficient knowledge. In contrast, 73% of the study population had good knowledge and 27% have only intermediate awareness about health promotion behaviors aimed at preventing lifestyle illnesses in the post-test.

After analyzing post-test information, the study found a statistically significant increase in all domains of health promotion behavior with the goal of preventing lifestyle diseases. A systematic education program was found to be highly successful in raising adolescent understanding of health promotion behavior for the prevention of lifestyle diseases. This study found no statistically significant association between teenagers' pre-test knowledge scores and a variety of socio-demographic factors.

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