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A pre-experimental study to assess the effectiveness of planned teaching program on knowledge and attitude among adolescence students regarding health hazard of junk food in selected senior secondary schools, district Hisar (Haryana) India

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Abstract

Background: A study was conducted to assess the effectiveness of planned teaching program on knowledge and attitude among adolescence students regarding health hazard of junk food in selected senior secondary schools, district Hisar (Haryana) India. Evaluative research approach was used in this study. Pre-experimental (one group pre- test post-test) research design was used in the study. Sixty adolescent students were selected by using the convenient sampling technique. The data was collected from the participants by using a self-structured knowledge questionnaire and likert scale. The data collected were analyzed using both descriptive and inferential statistics, i.e., frequency, percentage, mean, mean percentage, standard deviation, chi-square, paired 't' test.

Aim: to assess the effectiveness of planned teaching program on knowledge and attitude among adolescence students regarding health hazard of junk food in selected senior secondary schools, district Hisar (Haryana) India.

Research design: Pre-experimental research design (one group pre- test post-test) was used in the study.

Results: The present study reveals that in the pre test the mean knowledge score obtained by the adolescent students was 10.28 and standard deviation 2.585. In the post test the mean knowledge score obtained by the adolescent students was 16.35 and standard deviation 1.849. It is evident that the obtained "t" value 30.107 is greater than the table value at 0.05 level of significance. The study also reveals that in the pre test the mean attitude score obtained by the adolescent students was 63.72 and standard deviation 2.805. In the post test the mean attitude score obtained by the adolescent students was 85.40 and standard deviation 2.853. It is evident that the obtained "t" value 39.312 is greater than the table value at 0.05 level of significance. Hence, H₁ and H₂ hypothesis was accepted.

The Chi-square value shows that there is no significance association between the pre test knowledge and attitude score with demographic variables (Age, religion, class of studying, education of father, education of mother, residence, type of family, family income and previous source of information). The calculated chi-square values were less than the table value at the 0.05 level of significance.

Conclusion: After the detailed analysis, this study leads to following conclusions. The overall mean of the post test knowledge and attitude score is higher than the mean pre test knowledge and attitude score regarding health hazard of junk food. So planned teaching program was effective. Hence, H₁ and H₂ hypothesis was accepted. Study also reveals that there is no association between pre test knowledge and attitude score with their demographic variables. Hence, H₃ and H₄ hypothesis was rejected.

Keywords: effectiveness, planned teaching program, adolescence, health hazard, junk food

Introduction

Food is a substance, usually composed of carbohydrates, fats, proteins and water that can be eaten or drunk by an animal or human for nutrition or pleasure. Food is necessary for energy, for growth, repair, and for health. Our health depends on what we eat daily. Now in these days most people like junk food and it is very popular among adults as well as in children. Socio economic trends, such as longer

work hours, more women employed outside the home and a high number of single households have changed the way families obtain their meals^[1].

Healthy nutritious foods have been replaced by the new food mantra - JUNK FOOD! Junk food comprises of anything that is quick, tasty, convenient and fashionable. It seems to have engulfed every age, every race and the newest entrants are children. Wafers, colas, pizzas and burgers are

suddenly the most important thing. The commonest scenario is a child who returns from school and plunks himself in front of the television, faithfully accompanied by a bowl of wafers and a can of cola. Children suddenly seem to have stepped into a world of fast foods and vending machines, totally unaware of the havoc they are creating for themselves [2].

The term “junk food” is used to describe food that is low in nutritional value, with a comparatively high caloric value. Many people try to avoid or limit such food in their diets, out of concerns that it is not healthy, despite the fact that numerous food manufacturers produce a range of products which could be considered junk. Nutritionists, doctors, and other health advocates often work to educate people about junk food, encouraging them to eat well balanced diets which contain a high of healthy foods proportion [3].

Adolescence periodic characterized by heavy demands of calorie and proteins. The appetite of the child increases and he tends to consume more carbohydrate foods. Intake of vitamin C and vitamin A may be low due to improper habits of eating snacks. Many people try to avoid or limit Junk food in their diets, out of concerns that such food is not healthy despite the fact numerous food manufacturer produce a range of products which could be considered junk food. Nutritionist, doctors, and other health advocates often work to educate people about junk food, encouraging them to eat well balanced diets which contain a high proportion healthy food [4].

According to WHO (2010) report 40,000 deaths occur per year in world due to excessive intake of junk food. It has been found that India’s over’s weight rates increased by 20%. Now India is in the grip of an obesity epidemic. Experts say the restricting food advertisements and making food labeling clearer. World’s adolescence population is 1200 million persons in 10-19 years of age, or about 19% of the total population faces a series of serious nutrition challenges. At this stage caloric and protein requirements are maximal but poor eating habit leads to nutritional challenges. The main nutrition problem affecting adolescence populations worldwide include under nutrition and obesity. The consultation’s recommendation for action are emphasis on nutritional adequacy for adolescence girls, mass information and awareness program are needed to alert government and communities to the importance of health and nutrition for adolescence. Promotion of healthy eating habit and education about junk foods needs to be strengthened [5].

In the area of the study, adolescence student are many problems such as; less knowledge and attitude in the health units, low income, low education and distance away from health units which increase difficulties to change their life style behavior as diet. So it is necessary to give the planed teaching program for improve the knowledge and attitude of adolescence students regarding health hazard of junk food. The outcome of the study results can be used in the future as a tool for health hazard of junk food and controlling programs aimed at overcome problem and improve the adolescence student knowledge and attitude.

Objectives of the study

1. To assess the pre-test knowledge and attitude score regarding health hazards of junk food among

adolescence students.

2. To administer the planned teaching program regarding health hazards of junk food among adolescence students.
3. To evaluate the effectiveness of planned teaching program on knowledge and attitude regarding health hazards of junk food.
4. To find out the association between the pre-test knowledge and attitude score regarding health hazards of junk food among adolescence students with their demographic variables.

Hypothesis of the study

The study is based on the following hypothesis:

H1: The mean post-test knowledge score will be significantly higher than the mean pre-test knowledge score after administering planned teaching program at 0.05 level of significant.

H2: The mean post-test attitude score will be significantly higher than the mean pre- test score after administering planned teaching program at 0.05 level of significant.

H3: There will be significant association between mean pre-test knowledge score and selected demographic variable at 0.05 level of significance.

H4: There will be significant association between mean pre-test attitude score and selected demographic variable at 0.05 level of significance.

Methods and Material

Pre-experimental research design (one group pre- test post-test) was used in the study to achieve the objectives of the study. The samples were collected by using the convenient sampling technique. The data was collected from the participants by using a self-structured knowledge questionnaire and likert scale. Both descriptive and inferential statistics was used for data analysis.

Results

The findings are discussed under following sections:

Section I: Description of demographic variables of the sample

Distribution among adolescence students shows that the large number 30(50%) of the subjects belong to 15-16 years, 15(25.0%) of subjects belong to 14-15 years, 14(23.3%) belong to 13-14 years, and 1(1.7%) subject belongs to 12-13 years. Also large number 60(100%) of the subjects belong to female. Also large number 58(96.7%) of subjects belong to Hindu and 2(3.3%) belong to Sikh. Also large number 33(55%) subject belongs to 11th class, 20(33.3%) belong to 9th class and 7(11.7%) belong to 10th class. According to education of father that the higher percentages of the father 31(51.7%) were Secondary qualified, 18(30%) were primary qualified, 7(11.7%) were graduate & above and 4(6.7%) illiterate. According to education of mother that the higher percentage of the mother 28(46.7%) were Secondary qualified, 18(30%) were primary qualified, 2(3.3%) were graduate & above and 12(20%) illiterate. 38(63.3%) of the children belong to rural area and 22(36.7%) of the children belong to urban area. 34(56.7%) of the children belong to joint family, 24(40%) of the children belong to nuclear family and 2(3.3%) of the children belong to single family. According to family income the higher percentage of the 22(36.7%) belong to Rs.5000-10000, 16(26.7%) belong to

Rs.10000-12000, 14(23.3%) belong to below Rs. 5000 and 8(13.3%) belong to above Rs. 15000. According to previous source of information of the adolescent students that the higher percentage of the students 22(36.7%) were health professional, 17(28.3%) were family members, 11(18.3%) were others and 10(16.7%) were mass media.

Section- II Description of pre test knowledge and attitude score of adolescent student regarding health hazard of junk food

Table II.1: Analysis of pre test knowledge score of adolescent students regarding health hazard of junk food

N=60

Criteria Measure of Pre Test knowledge Score	
Score Level	Frequency Percentage
Inadequate (0-7)	3(5%)
Moderate (7-14)	55(91.7%)
Adequate (15-20)	2(3.3%)
Maximum=20 Minimum =0	

The above Table depicts that 5% of adolescent students have inadequate knowledge regarding health hazard of junk food, 91.7.0% of adolescent students have moderate knowledge regarding health hazard of junk food and 3.3% of adolescent students have adequate knowledge regarding health hazard of junk food.

Table II.2: Analysis of pretest attitude score of adolescent students regarding health hazard of junk food.

N=60

Criteria Measure of Pretest Attitude Score	
Score Level	Frequency percentage
Low (20-47)	0(0%)
Average (48-74)	60(100%)
High (75-100)	0(0%)
Maximum=100 Minimum =22	

The above Table depicts that 100% of adolescent students

Table IV.1: Descriptive statistics of pre and post-test mean knowledge score

N=60

Paired T Test	Mean	S.D.	Mean %	Mean Difference	Paired T Test	P value	Table Value at 0.05	Result	
Knowledge	PRE	10.28	2.585	51.42	6.067	30.107	0.0000	2.00	Significant
	POST	16.35	1.849	81.75					

Maximum= 20 Minimum= 0

The above table reveals that in the pre test the mean knowledge score obtained by the adolescent students was 10.28 and standard deviation 2.585. In the post test the mean knowledge score obtained by the adolescent students was

have average attitude score regarding health hazard of junk food.

Section- III Description of post test knowledge and attitude score of adolescent student regarding health hazard of junk food

Table III.1: Analysis of posttest knowledge score of adolescent students regarding health hazard of junk food.

N=60

Criteria Measure of Post Test Knowledge Score	
Score Level	Frequency Percentage
Inadequate (0-7)	0(0%)
Moderate (7-14)	10(16.7%)
Adequate (15-20)	50(83.3%)
Maximum=20 Minimum =0	

The above Table depicts that 16.7% of adolescent students have moderate knowledge regarding health hazard of junk food and 83.3% of adolescent students have adequate knowledge regarding health hazard of junk food.

Table III.2: Analysis of post test attitude score of adolescent students regarding health hazard of junk food

N=60

Criteria Measure of Post Test Attitude Score	
Score Level	Frequency percentage
Low (20-47)	0(0%)
Average (48-74)	0(0%)
High (75-100)	60(100%)

Maximum=100 Minimum =22

The above Table depicts that 100% of adolescent students have high attitude level regarding health hazard of junk food.

Section- IV Comparison between pre and post test of knowledge and attitude score regarding health hazard of junk food in adolescent students.

16.35 and standard deviation 1.849. It is evident that the obtained "t" value 30.107 is greater than the table value at 0.05 level of significance.

Table IV.2: Descriptive statistic measures of pre and post test mean attitude score

N=60

Paired T Test	Mean	S.D.	Mean %	Mean Difference	Paired T Test	P value	Table Value at 0.05	Result	
Attitude	PRE	63.72	2.805	63.72	21.683	39.312	0.0000	2.00	Significant
	POST	85.40	2.853	85.40					

Maximum= 100 Minimum= 20

The above table reveals that in the pre test the mean attitude score obtained by the adolescent students was 63.72 and standard deviation 2.805. In the post test the mean attitude score obtained by the adolescent students was 85.40 and standard deviation 2.853. It is evident that the obtained "t" value 39.312 is greater than the table value at 0.05 level of

significance. Hence, H₁ and H₂ hypothesis was accepted.

Section V: Association between the pretest knowledge score regarding health hazard of junk food with selected demographic variables.

Table V.1: Association between demographic variables and pre knowledge score

Demographic Variables		Levels(N=60)			Association with pre knowledge score				
Variable	Opts	Adequate	Moderate	Inadequate	Chi Test	P Value	df	Table Value	Result
Age	12-13 yrs	0	1	0	2.164	0.904	6	12.592	Not Significant
	13-14 yrs	0	14	0					
	14-15 yrs	1	13	1					
	15-16 yrs	1	27	2					
Gender	Male	0	0	0	NA				
	Female	2	55	3					
Religion	Hindu	2	53	3	0.188	0.910	2	5.991	Not Significant
	Muslim	0	0	0					
	Sikh	0	2	0					
	Others	0	0	0					
Class of Studying	9th Std	0	20	0	4.463	0.347	4	9.488	Not Significant
	10th Std	0	7	0					
	11th Std	2	28	3					
	12th Std	0	0	0					
Education of the Father	Illiterate	0	3	1	5.823	0.443	6	12.592	Not Significant
	Primary school	0	17	1					
	Secondary school	2	28	1					
	Graduate& above	0	7	0					
Education of the Mother	Illiterate	0	11	1	5.380	0.496	6	12.592	Not Significant
	Primary school	2	15	1					
	Secondary school	0	27	1					
	Graduate& above	0	2	0					
Residence	Urban	1	20	1	0.170	0.919	2	5.991	Not Significant
	Rural	1	35	2					
Type of Family	Joint Family	1	31	2	0.335	0.987	4	9.488	Not Significant
	Nuclear Family	1	22	1					
	Extended Family	0	0	0					
	Single Parents	0	2	0					
Family Income	Below Rs 5000	1	12	1	5.917	0.433	6	12.592	Not Significant
	Rs 5000-10000	0	22	0					
	Rs10000-12000	1	13	2					
	Above Rs15000	0	8	0					
Previous Source of Information	Family	1	16	0	6.713	0.348	6	12.592	Not Significant
	Mass Media	0	10	0					
	Health Professional	1	18	3					
	Others	0	11	0					

The Chi-square value shows that there is no significance association between the pre test knowledge score and all demographic variables (Age, religion, class of studying, education of father, education of mother, residence, type of family, family income and previous source of information). The calculated chi-square values were less than the table

value at the 0.05 level of significance.

Section VI: Association between the pretest attitude score regarding health hazard of junk food with selected demographic variables.

Table VI.1: Association between demographic variables and pre attitude score

Demographic Variables		Levels(N=60)			Association with PRE ATTITUDE Score				
Variable	Opts	High	Average	Low	Chi Test	P Value	df	Table Value	Result
Age	12-13 yrs		1		2.164	0.904	6	12.592	Not Significant
	13-14 yrs		14						
	14-15 yrs		15						
	15-16 yrs		30						
Gender	Male		0		NA				
	Female		60						
Religion	Hindu		58		0.188	0.910	2	5.991	Not Significant
	Muslim		0						
	Sikh		2						
	Others		0						
Class of Studying	9th Std		20		4.463	0.347	4	9.488	Not Significant
	10th Std		7						
	11th Std		33						
	12th Std		0						
Education of the Father	Illiterate		4		5.823	0.443	6	12.592	Not Significant
	Primary school		18						
	Secondary school		31						
	Graduate& above		7						
Education of the Mother	Illiterate		12		5.380	0.496	6	12.592	Not Significant
	Primary school		18						
	Secondary school		28						
	Graduate& above		2						
Residence	Urban		22		0.170	0.919	2	5.991	Not Significant
	Rural		38						
Type of Family	Joint Family		34		0.335	0.987	4	9.488	Not Significant
	Nuclear Family		24						
	Extended Family		0						
	Single Parents		2						

The above table revealed that the statistical outcomes of association between socio demographic variable of adolescent students with their attitude regarding health hazard of junk food. In order to examine the association between these variables the chi-square test was worked out. The all characters were not found to be statistically significant i.e. $P > 0.05$. It evidenced that the attitude is not influenced by age, gender, religion, class of studying, education of father, education of mother, residence, type of family, family income, previous source of information. There is no significant relationship between attitude of adolescent students and socio-demographic variable.

Conclusion

The focus of this study was on assessment of the knowledge level of adolescent students on health hazard of junk food. This will help the adolescent students to gain knowledge in the certain aspects of health hazard of junk food. This knowledge will later help to prevent complication and improve the attitude regarding health hazard of junk food. The pre experimental research design was adopted to achieve the objectives of the study. The samples sizes of 60 adolescent students were selected by using the convenient sampling technique. The data was collected from the participants by using three parts tool such as demographic data, a structured knowledge questionnaire and likert scale. Reliability and validity of the tool was established by research committee of college of nursing.

Nursing implications

The findings of this study are important for the nursing

profession i.e. clinical practice, nursing education, nursing administration, nursing research. This will help student nurses to improve their knowledge by providing them information about health hazard of junk food. Nurses should have knowledge about health hazard of junk food. In the view of the results obtained from the study, several implications are made.

1. Nursing Education

- Students of Nursing can be taught about the health hazard of junk food.
- Formal and informal teaching can be conducted for the student nurses in the clinical & community areas so as to build and strengthen knowledge of adolescent students regarding health hazard of junk food.
- Exhibition/ Quiz contest for nurses in the clinical areas can be put up to improve their knowledge and practice.

2. Nursing Practice

- Nurses working in clinical & community nursing areas must arrange informal and formal teaching programs e.g. continue teaching education, seminars, conferences, Role play, counselling sessions for peoples of rural area regarding health hazard of junk food.

3. Nursing Administration

- Nursing Administration is the organization and direction of nursing personnel and material resources to achieve desired ends and also, focuses on formulating interventions directed toward knowledge and attitude of health hazard of junk food.

- Nursing has become a complex and highly practice discipline with a rapidly growing, well developed, well documented and humanistic knowledge base.
- Literature in the form of booklet can be provided to the nurses regarding health hazard of junk food for building and strengthening their knowledge and attitude.

4. Nursing Research

- The findings of the study will act as catalyst to carry out more extensive research on a large population sample in different setting.
- The findings of the study can serve as basis for the professional and student nurses for further studies on knowledge and attitude of adolescent students and the information contained in the study can be source of data for future researches.
- Nursing personnel can take initiatives in conducting the research as well as discussing the findings of the research study among nurses and to encourage them to implement the findings.
- Through publication of research findings, inadequate level of knowledge and attitude can be promoted to adequate level of knowledge and change the attitude towards health hazard of junk food by the nurse researcher.

Recommendations

Based on the findings, the following recommendations were offered for future research.

- The study can be replicated on a large sample to validate and generalize its findings.
- Similar study can be conducted in a different setting like school.
- A video-assisted study can be conducted to assess the effectiveness on knowledge and attitude of adolescence students regarding health hazard of junk food.

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