Research article

A study to assess the effectiveness of planned teaching programme on knowledge regarding effects of junk foods on health among adolescents in selected high schools of Srinagar

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Abstract

"Junk food" generally refers to foods that contain lot of calories with little nutritional value. Adolescents suddenly seem to have stepped into a world of fast food and vending machines, totally unaware of havoc they are creating for themselves. Adolescents are at greater risk for nutritional problem both from physiological and psychological standpoint. Most of the adolescents have little knowledge about health hazards of junk foods. **Aim:** Aim of the study was to enhance knowledge of adolescents regarding effects of junk foods on health and in turn to reduce the incidence of consumption of junk foods by adopting healthier eating habits. **Materials and methods:** A pre- experimental study was conducted using one group pre- test, post -test design to assess the level of knowledge regarding effects of junk foods on health. The study was conducted in 2 selected schools of Srinagar (Radiant public school and Kashani memorial school). The sample was selected by Stratified simple random sampling. The sample size was 80. Structured questionnaire was used to assess the knowledge of adolescents. **Results:** The overall mean knowledge score 25.91 obtained by the subjects in post- test was higher than mean knowledge score 16.90 in the pre -test and with the improvement score as 9.01. There was significant difference between pre-test and post-test knowledge score at p<0.05. The results of the study revealed that the planned teaching program was significantly effective in improving the knowledge of adolescents. **Conclusion:** Hence, the study concluded that improved knowledge regarding health hazards of junk foods helps the adolescents to avoid junk foods and adopt healthy eating habits.

Key words: Planned teaching program, Effectiveness, Knowledge, Adolescents, junk foods.

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1. Introduction

Junk food is a term for food containing high levels of calories from sugar or fat with little protein, vitamins or minerals. The term implies that particular food has little "nutritional value" and contains excessive fat, sugar, salt, and calories. Junk foods are commercially prepared foods that are highly processed and pre- packaged. [1]In this fast and ever-changing world, people just do not have the time anymore to prepare and enjoy food like the old days. Everyone tries to grab a bite whenever and wherever they can in order to ensure that there will be more free hours to do something else. It does not help that items offered in fast food restaurants are admittedly pretty tasteful, easy to digest, and light on the pocket but of course; the health concern is another story.

The fast food industry in India has evolved with the changing lifestyles of the young Indian population. Many of the traditional dishes have been adapted to suit the emerging fast food outlets. Many research studies show that consuming junk food is nutritional hazard and it only provides empty calories. This kind of food has no vitamins and minerals. Fast food is loaded with saturated fat and high calories, and is low in fiber and nutrients. When these types of foods are eaten, the body is forced to produce its own enzymes to convert the empty calories into usable energy. From this it is clear that junk foods will cause obesity and associated health hazards.

In today's world scenario, junk food has become prominent feature of diet for adolescents. Eating frequent junk foods causes teens and young adults to gain more weight and they face an increased risk of developing obesity. The incidence of child obesity has

more than tripled in the past 30 years. The prevalence of obesity among adolescents aged between 12 to 19 years has been increased from 5.0% to 18.1%. [2]

Need for the study

"To eat is a necessity, but to eat intelligently is an art"
-La Rochefoucauld
Junk food is loaded with calories from refined sugar and fats (especially, the artery-clogging saturated and hydrogenated fats, which are repeatedly reheated to high temperatures for frying purposes). Another issue in the fast food industry is the health hazards that fast food chains are prone to. A particular hazard is the E-coli bacteria that meat products are susceptible to. Because of the long supply chain through which fast food chains operate in, the handling and sourcing of the meat is very hard to monitor [3].
Eating fast food and sedentary lifestyle leads to obesity. Obesity leads to other complications like increase in the cholesterol level, blocking of the arteries, the increased risk of coronary diseases, in addition to the general physical discomfort posed by the extra weight. Fast food is also addictive, it is very difficult to give up on their greasy, fatty foods and carbonated drinks and switch to healthier options. It is clear that eating too much of junk foods can lead to various health issues.
It was also identified by investigator's personal experience that consumption of junk foods is becoming more common especially among adolescents, they need to be informed about the ill effects or harmful hazards of junk foods on health. Hence the investigator felt there is a need to increase the level of knowledge of adolescents (boys and girls) regarding effects of junk foods on health in selected high schools of Srinagar through planned teaching Programme with attractive audio-visual aids.

Statement of the problem

"A study to assess the effectiveness of Planned Teaching Programme on knowledge regarding effects of junk foods on health among adolescents in selected high schools of Srinagar".

Objectives

1. To assess the pre-test knowledge score regarding the effects of junk foods on health among adolescents in selected high schools of Srinagar.
2. To assess the post-test knowledge score regarding effects of junk foods on health among adolescents after planned teaching programme.
3. To compare the pre- test and post – test knowledge scores regarding effects of junk foods on health among adolescents in selected high schools of Srinagar.
4. To determine the association of pre-test knowledge scores regarding effects of junk foods on health among adolescents with their selected demographic

variables i.e. Age, Gender, Type of family, Dietary habit, Pocket money per month, Monthly Family income, Educational status of parents, Source of information regarding junk foods.

Hypothesis

H_1: There is significant difference between pre-and post test knowledge scores regarding effects of junk foods on health among adolescents at $p \leq 0.05$ level of significance.
H_2: There is significant association of pretest knowledge scores regarding the effects of junk foods on the health among adolescents with their selected demographic variables i.e. Age, Gender, type of family, Educational status of parents, Sources of information, Dietary habit, Pocket money per month, Monthly family income.

Conceptual frame work.

The conceptual framework of study was based on 'Imogene Kings Goal Attainment Theory (1971). [4]

2. Materials and methods

The research design used in this study was Pre-experimental in nature. The study was conducted at selected 2 high Schools of District Srinagar, Kashmir. The sample of 80 adolescents on the basis of inclusion and exclusion criteria were selected by using stratified simple random sampling. The tool used for the study was structured knowledge questionnaire consists of section 1(Demographic Proforma consists of age, gender, type of family, dietary habit, pocket money per month, Monthly family income, educational status of parents, source of information regarding junk foods) and section 2 (consisting of 36 items related to Knowledge regarding effects of Junk food on health). The content validity of structured questionnaire was ensured by submitting the tool to the experts in the field of community health nursing, child health nursing, Paediatric medicine and nutrition. A pilot study was conducted on 10% of total sample size in Kashani Memorial School. Reliability of tool was established by Karl Pearson's Correlation coefficient. The reliability of tool was calculated and it was 0.95.

3. Results

In this study 80 adolescents participated. The data and the findings were entered in a master data sheet followed by the analysis and interpretation using descriptive statistics (i.e. frequency, percentage, mean, median and standard deviation) and inferential statistics (i.e. t-test and ANOVA) according to the objectives of the study. The results obtained were presented in the following headings: -

Section I: Findings related to demographic variables.

Table No 1: Shows frequency and percentage distribution of subjects according to demographic variables.

Variable		Frequency (f)	(%)
Age	Less than 15 years	64	80
	Greater than 15 years	16	20
Gender	Male	40	50
	Female	40	50
Type of Family	Nuclear	44	55.0
	Joint	36	45.0
Dietary Habit	Vegetarian	9	11.3
	Non-Vegetarian	2	2.5
	Both	69	86.3
Source of Information	Television	35	43.8
	Radio	0	0
	Magazines	7	8.8
	Friends	38	47.5
Educational Status of Father	Illiterate	10	12.5
	Middle pass	8	10.0
	Secondary	18	22.5
	Higher secondary	16	20.0
	Graduate	25	31.3
	P.G	3	3.8
Educational Status of Mother	Illiterate	31	38.8
	Middle pass	10	12.5
	Secondary	11	13.8
	Higher secondary	7	8.8
	Graduate	19	23.8
	P.G	2	2.5
Pocket money/month	Less than 500	55	68.75
	More than 500	25	31.25
Monthly Family income.	Less than 20,000	47	58.75
	More than 20,000	33	41.25

Section II. Knowledge of subjects regarding effects of junk foods on health before and after implementation of planned teaching programme.

Table No 2: Shows Mean, Median, S.D, range of pre -test and post- test knowledge scores of subjects regarding effects of junk foods on health. N=80

Knowledge score	Mean	Median	Standard deviation	Minimum	Maximum	Range
Pre-test score	16.90	18.00	4.55	4.00	26.00	22.00
Post-test score	25.91	27.00	5.14	8.00	35.00	27.00

Comparison of pre- test and post -test mean knowledge scores of subjects regarding effects of junk foods on health.

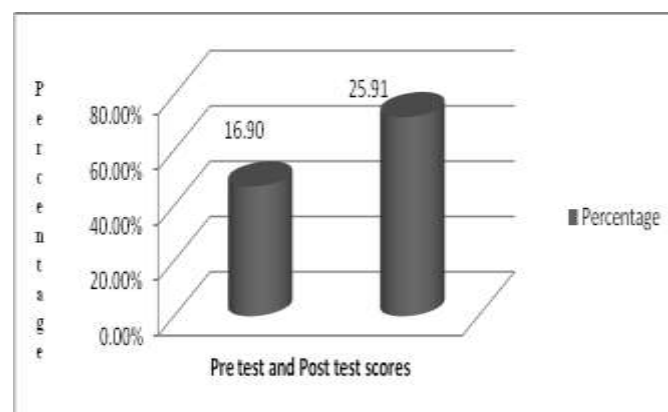To test research hypothesis following Null Hypothesis was formulated:

H_0 **:** There is no significant difference between the pre-test and post-test knowledge scores regarding effects of junk foods on health Among adolescents.

Table No 3:   N=80

| Knowledge score	Mean ± S. D	Mean difference	P value
Pre-test score	16.90±4.55	9.01	≤ 0.001
Post-test score	25.91±5.14		

Figure No 1:

The data in table 3 and figure 1 showed that over all pre -score mean 16.90 as against post score mean of 25.91 with mean difference of 9.01. The difference between the two scores (46.9% v/s 25.91%) showed a significant association (p value ≤ 0.001). Hence the Null hypothesis (H0) was rejected and on contrary Research hypothesis H1 "There is significant difference between the pre-test and post-test knowledge scores regarding effects of junk foods on health Among adolescents" is accepted.

Table No 4: Shows comparison between pre -test & post -test level of knowledge of subjects regarding effects of junk foods on health among adolescents.

Level of knowledge	Percentage score	Pre -test		Post- test	
		Frequency	Percentage	Frequency	Percentage
Inadequate	≤50%	47	59	6	7.5
Moderately adequate.	51-75%	33	41	40	50
Highly Adequate	≥75%	0	0	34	42.5
Total		80	100	80	100

Figure No 2:

Pre test and Post test level of knowledge score of subjects.
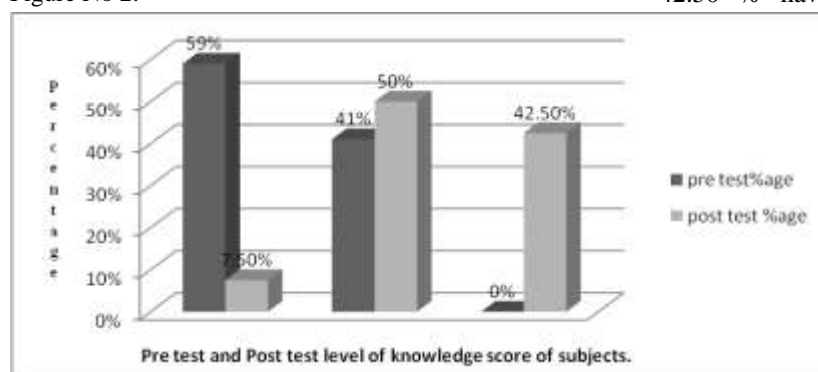
The data in the table 4 and figure 2 showed that in pre- test 59% having inadequate, 41% moderately adequate and no one having highly adequate knowledge and in post- test 42.50 % having highly adequate, 50% moderately adequate and 7.50% having inadequate knowledge regarding effects of junk foods on health. This indicates that Planned Teaching Programme was effective in increasing knowledge regarding effects of junk foods on health.

Section III: Findings related to association of pre –test knowledge scores of subjects with their selected demographic variables.

Here the researcher tests the null hypothesis H_0 that there is no significant association between pre-test knowledge scores of subjects with their selected demographic variables.

Table No 5:   N=80

Variables	Category	Pre- test Mean ± standard deviation	Mean difference	P value
Age	Less than 15 years Greater than 15 years	16.79±4.81 17.31±3.43	0.51	0.68 N. S
Gender	Male Female	17.77±4.56 16.02±4.44	1.75	0.08 N. S
Type of Family	Nuclear Joint	16.59±5.33 17.27±3.41	0.68	0.01 S
Dietary Habit	Vegetarian Non-Vegetarian Both	14.55±4.77 16.00±5.65 17.23±4.48		0.24 N. S
Source of Information	Television Radio Magazines Friends	15.68±5.12 0 16.28±3.77 18.13±3.85		0.06 N. S
Educational status of father	Illiterate Middle pass secondary Higher secondary Graduate P.G	15.70±5.43 16.00±5.37 15.55±4.91 16.50±3.05 18.72±4.32 18.33±3.78		0.22 N. S
Educational status of mother	Illiterate Middle pass Secondary Higher secondary Graduate P.G	15.90±5.41 15.00±2.35 18.45±4.36 16.57±4.07 18.63±3.62 18.00±5.65		0.01 S
Pocket money/month	Less than 500 More than 500	16.81±4.38 17.08±4.99	0.26	0.81 N. S
Monthly family income	Less than 20,000 More than 20,000	16.68±4.37 17.21±4.85	0.53	0.61 N. S

Note: N.S –Not significant.   S-Significant at p≤ 0.05 level

The data presented in Table 5 indicates that there is significant association of pre- test knowledge score with demographic variables as type of family (p= 0.01), educational status of mother (p= 0.01), at (p ≤0.05) level of significance. No association was found with variables as age, gender, dietary habit, source of information, education status of father, pocket money per month, Monthly family income.

Hence the Researcher accepted the Null hypothesis (H0- There is no significant association between pre-test knowledge scores of subjects with their selected demographic variables) and rejects Research hypothesis (H2-There is significant association of pre -test knowledge scores regarding effects of junk foods on health among adolescents with their selected demographic variables i.e. age, gender, type of family, educational status of parents, sources of information, dietary habit, pocket money per month, Monthly family income) at p ≤ 0.05.

4. Discussion

The findings of the study revealed that knowledge level of adolescents regarding effects of junk foods is inadequate and there is a great need to improve this knowledge. In pre- test knowledge scores 47(59%), were having inadequate knowledge, 33(41%) were having moderately adequate knowledge and no one was reported to have highly adequate knowledge about effects of junk foods on health. This reveals that majority of adolescents were having inadequate knowledge, so it was imperative to impart education to them regarding effects of junk foods on health. The above results are consistent with the findings of the study conducted by Sharma V, in 3 selected schools of District Jalandhar (2013) among 60 teenage students regarding knowledge of harmful effects of junk foods. The results revealed that 81.67% had below average knowledge regarding harmful effects of junk foods followed by 18.33% adolescents who had average knowledge and no adolescent had good knowledge about harmful effects of junk foods [5].

The findings in post- test revealed that 34(42.5%) were having highly adequate knowledge, 40(50%) were having moderately adequate & 6(7.5%) were having inadequate knowledge regarding effects of junk foods on health after implementation of planned teaching Programme.

The overall mean knowledge score 25.91 obtained by the adolescents in post- test was higher than mean knowledge score 16.90 in the pre- test and with the improvement score as 9.01. There was significant difference between pre-test and post- test knowledge score at p<0.05. This indicates that Planned Teaching Programme was highly effective in enhancing the knowledge of adolescents regarding effects of junk foods on health. The present findings of the study were supported by pre- experimental one group pre-test and post- test study conducted in selected school at institute of education, university of London UK (2008), to evaluate the effectiveness of teaching program on knowledge regarding junk foods and their hazards on health. Questionnaire was used to collect the data. Their findings revealed that pre- test knowledge score was 37% as against post – test knowledge score which was 76%. The paired t value for overall knowledge score was found to be (8.69) and the difference was shown to have a significant association at (p< 0.05). Like our study they concluded that that there was a significant improvement in knowledge regarding junk foods and their hazards on health [6].

The association of demographic variables with pre -test score of knowledge by using ANOVA revealed that there is statistically significant association with variable as type of family (p= 0.01) and educational status of mother(p= 0.01) at(p<0.05) level of significance. In the meantime, no association was found with variables as age, gender, educational status of father, dietary habit, and source of information, family income and pocket money per month. Hence the (H2: There is significant association of pre -test knowledge scores regarding the effects of junk foods on the health among adolescents with their selected demographic variables i.e. Age, Gender, type of family, Educational status of parents, Sources of information, Dietary habit, Pocket money per month, Monthly Family income) is rejected. Similar results were found in a study conducted by Northstone K and Emmett P, (2005) to assess the relationship of knowledge with selected socio –demographic variables among adolescents in a selected area of Bristol UK. Data were collected by questionnaire. Analysis of data is done by using chi- square tests. Study results revealed that there was no association with variables like age, religion, gender, and family income at (p< 0.05) [7].

From the above findings, it can be concluded that the knowledge level of adolescents regarding effects of junk foods on health can be enhanced by conducting different teaching Programmes. By imparting this kind of knowledge among adolescents it can help in reducing consumption of junk foods and can prevent number of non- communicable disease like coronary heart disease, hypertension, obesity, diabetes, digestive problems, endocrine problems etc. Furthermore, from the above findings it has been seen that there was significant association between pre- test knowledge and mother's educational status i.e., those whose mothers were highly qualified were having good knowledge regarding effects of junk foods. So, we can reveal that mother's education level and knowledge have great impact on child's knowledge and behavior.

Recommendations

- Similar study may be replicated on large samples.
- A comparative study may be conducted between urban & rural adolescents.

- A study may be conducted among college students, health clinics & community organizations that have access to adults & want to have an impact on health of community.
- A comparative study may be conducted between Government and private schools.
- A descriptive study can be conducted on knowledge regarding effects of junk foods on health.
- A study can be conducted by including additional demographic variable e.g. religion.
- Awareness programs can be conducted on large scale regarding harmful hazards of junk foods on health through Mass Media.

Manuals, information booklets and self-instruction module may be developed regarding harmful effects of junk foods on health among students.

Conclusion

Based on the findings of the study it can be concluded that there was evident increase in the knowledge scores in all the areas included in the study after administration of PTP. Thus it was proved that PTP was effective for creating awareness regarding effects of junk foods on health among adolescents of selected high schools in Srinagar.

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