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A Study to Assess the Effectiveness of Health Teaching Program on Knowledge and Attitude Regarding Adverse Effects of Junk Foods Among Adolescent Students of Selected High School of Bagalkot

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ABSTRACT

Background: Food is of no exception; Healthy nutritious foods have been replaced by the new food mantra 'junk food'.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 in children. Varieties of junk foods are Pizza, Burgers, Cakes, Gobi, Butter chicken, chips, Ice creams, Chocolates, French fries and Sandwich, and harmful effects are such as Constipation, Heart attack, Dental problem, Indigestion, Weight gain, Cancer, Pimples, Nutritional deficiency, Fatigue.
Methods: In this study, the sample size is 120 adolescents in the age group of 13-15 years of selected English medium high school of Bagalkot. Convenient sampling technique was used for selection of high school in Bagalkot. A disproportionate stratified random sampling was used to select 120 adolescents. Data collection done by Structured knowledge questionnaire on health hazards of junk food and attitude scale on consumption of junk food which developed by researcher.
Results: The post-test results showed that (100%) of adolescents having good knowledge and the highest number of adolescents (88%) having unfavorable attitude, there was significant association between adolescent knowledge score with class studying in chi-square value is 6.2, and there was significant association between adolescent's attitude score with previous information chi-square value is 8.4.
Conclusion: After evaluation of knowledge and attitude on adolescents on adverse effects of junk foods among adolescents, it was found that most of adolescents had poor knowledge and unfavorable attitude regarding junk food.

Keywords: Attitude, Adolescents, Junk foods, Knowledge.

INTRODUCTION

Junk foods are rich in calories, salt and fats. Excess consumption of junk foods would lead rise to wide variety of health disorders. Junk foods are rich in calories, salt and fats. Excess consumption of junk foods would lead rise to wide variety of health disorders. Junk foods are rich in calories, salt and fats. Excess consumption of junk foods would lead rise to wide variety of health disorders Junk foods are rich in calories, salt and fats. Excess consumption of junk foods would lead rise to wide variety of health disorders

Junk foods are rich in calories, salt and fats. Excess consumption of junk foods would lead rise to wide variety of health disorders.[1] Young people who reported eating irregularly and consuming junk food daily were at a significantly greater risk of poorer mental and physical health. [2]

Junk food consumption among adolescents has become a serious issue that may lead to harmful effects on health. Dietary patterns of people are shifting from homemade foods to junk foods.

Junk food consumption among adolescents has become a serious issue that may lead to harmful effects on health. Dietary patterns of people are shifting from homemade foods to junk foods.[3]

Food is a part of Indian culture, species and flavours are the main identities of the Indian food system; over the period India has been started adopting western culture, it takes into the consumption of junk food that is very attractive and easily available.[4]

Adolescence came from a Latin word, adolescence meaning "to grow up". It is the period in development between the onset of puberty and adulthood.[5]

Adolescent is a period, which forms the base of future health and social life. The health problems and habits acquired during this phase prove a lifelong hindrance in wellbeing.[6]

Junk food consumption and its consequences has become a major public health concern globally because of its deteriorating health consequences and surging prevalence.[7]

Childhood nutrition has gained increasing attention in recent years, particularly in relation to the global obesity crisis. Dietary factors, such as consumption of fast food and sugar-sweetened drinks.[8]

Generally, junk foods are characterized as energy-dense, low in micronutrients and fibre, and high in fat, salt, and sugar.[9]

Balance diet is very important for healthy living & food plays a very important part of a balanced diet. Everyone needs food every day. Now a days healthy diet has been replaced by junk food. The food that is high in calories but low in nutritional content is called as Junk food.[10]

MATERIALS AND METHODS

Study design- A non-experimental descriptive design.

Study Population- The sample is comprised of subjects selected from the accessible population. In the present study, the population is adolescents in the age group of 13-16 years, studying in selected high school of Bagalkot.

Data Collection Procedure- A Non-experimental design was adopted for the study. The area has been selected by convenient sampling technique and A disproportionate stratified random sampling was used to select 120 adolescents from each stratum that is 8^{th}, 9^{th} and 10^{th} standard. The study was conducted in two selected high schools in Bagalkot. These schools were selected because of easy access to the population under study and availability of junk foods around the schools. Participants: The sample comprised of 120 adolescents between 13-16 years of age in the selected high schools of Bagalkot. The present study data were collected between 9 am to 4 pm depending upon the availability of subjects. The period of the data collection was from 29- 07-2022 to 18-08-2022.

STATISTICAL ANALYSIS

The data was analyzed by using SPSS 18 statistical package. The data obtained from the sample was organized and summarized with the help of descriptive statistics like mean and SD. Calculating mean, standard deviation, standard mean error, 't'-test of stress and level of cope. Application of chi-square test to find the association between socio-demographic variables with pre-test, post-test score knowledge and attitude of adolescents between 13-16 years of age.

Ethical Consideration- Ethical clearance certificate was obtained from Shri B.V.V.S

Sajjalashree Institute of Nursing Sciences, the institutional ethical committee. Written Consent was obtained from each participant.

RESULTS

Percentage wise distribution of adolescents according to their socio-demographic variables as age, majority of them belongs to 14 years old with 38% and 75% of adolescents are residing in urban areas, 59% of adolescents are getting pocket money ranging from Rs. 1-100 per month and 32% of them are not getting pocket money. Then 59% of adolescents having ≥ 10,001, and 33% having 5,001-10,000, and 8% having ≤5,000 family income per month (Table 1).

Table:1 Distribution of sample according to socio-demographic variables.

S. No	Variables	Frequency (f)	Percentage (%)
1	Age in years		
	a. 13	32	27
	b. 14	46	38
	c. 15	42	35
2	Area of residence		
	a. urban	90	75
	b. Rural	30	25
3	Pocket money (rupees per month)		
	a. No pocket money	38	32
	b. 1-100	71	59
	c. 101-200	11	9
	d. >200	0	0
4	Family income (rupees per month)		
	a. ≤5,000	9	8
	b. 5,001-10,000	39	33
	c. ≥10,001	71	59

In the pre-test, no one had very poor and good knowledge about the adverse effects of junk foods, with the highest number of adolescents (82%) having poor knowledge, and the average percentage of adolescent (18%) having average knowledge. Following Health Teaching Program, a post-test revealed that (100%) of adolescents having good knowledge regarding adverse effects of junk foods, and no one is having very poor, poor and average knowledge as distributed percentage wise level of knowledge among adolescent students (Table 2).

Table:2 Percentage -wise distribution of adolescents according to level of Knowledge in pre-test and post-test

Level of Knowledge	Pre-test		Post-test	
	No. of respondents	Percentage (%)	No. of respondents	Percentage (%)
Very Poor	0	0	0	0
Poor	92	82	0	0
Average	22	18	0	0
Good	0	0	120	100

In the pre-test, no one had highly favourable attitude about the adverse effects of junk foods, with the highest number of adolescents (90%) having unfavorable attitude, and the average percentage of adolescent (6%) having highly unfavorable attitude and (4%) with favorable. Following Health Teaching Program, a post-test revealed that no one had highly unfavourable attitude about the adverse effects of junk foods, with the highest number of adolescents (88%) having unfavorable attitude, and the average percentage of adolescent (8%) having highly favorable attitude and (4%) with unfavorable. (Table 3).

Table:3 Percentage -wise distribution of adolescents according to level of Attitude in pre-test and post-test

Level of Attitude	Pre-test		Post-test	
	No. of respondents	Percentage (%)	No. of respondents	Percentage (%)
Highly favourable	0	0	9	8
Favourable	5	4	106	88
Unfavourable	108	90	5	4
Highly unfavourable	7	6	0	0

Since a determined 't' value (53.6) for the hypothesis is significantly greater than table 't' value (1.96): H_1: There is a significant difference between pre-test and post-test knowledge score of adolescents regarding adverse effects of junk foods. Results showed a substantial change between pre-test and post-test knowledge levels, as a result, health teaching program was successful (Table 4).

Table:4 Significance difference between the pre-test Knowledge and post-test Knowledge score of Adolescents

Test	Mean	Mean difference	S. D	't' Value	Table value	
Pre-test (O1)	16	39	2.53	53.6	1.96	
Post-test (O2)	38					

Since a determined 't' value (34.03) for the hypothesis is significantly greater than table 't' value (1.96): H_2: There is a significant difference between pre-test and post-test attitude score of adolescents regarding adverse effects of junk foods. Results showed a substantial change between pre-test and post-test attitude levels, as a result, health teaching program was successful (Table 5).

Table:5 Significance difference between the pre-test Attitude and post-test Attitude score of Adolescents

Test	Mean	Mean difference	S. D	't' Value	Table value	
Pre-test (O1)	10.6	5.8	8.37	34.03	1.96	
Post-test (O2)	13.9					

The result shows, there was significant association between adolescents' knowledge score with class studying in, and there was no association with their age, sex, parental occupation, family monthly income, area of residency (Table 6).

Table:6 Association between knowledge score and socio-demographic variables.

S. No	Variables	Chi- square	d. f.	Level of significance
1	Parental occupation	0.42	1	p>0.05 NS
2	Age	0.27	2	p>0.05 NS
3	Class studying in	6.2	2	p<0.05 Significant
4	Sex	7.5	1	p>0.05 NS
5	Income	0.09	1	p>0.05 NS
6	Residential area	0.4	1	p>0.05 NS

The result shows, there was significant association between adolescent's attitude score with previous information, and there was no association with their age, sex, parental occupation class studying in, family monthly income, area of residency (Table 6).

Table:7 Association between attitude score and socio-demographic variables.

S. No	Variables	Chi- square	d. f.	Level of significance
1	Previous information	8.4	1	p<0.05 Significant
2	Parental occupation	0.3	1	p>0.05 NS
3	Age	0.17	2	p>0.05 NS
4	Class studying in	1.5	2	p>0.05 NS
5	Sex	1.54	1	p>0.05 NS
6	Income	0.27	1	p>0.05 NS
7	Residential area	0.1	1	p>0.05 NS

DISCUSSION

In the present study result showed that the pre-test, no one had very poor and good knowledge about the adverse effects of junk foods, with the highest number of adolescents (82%) having poor knowledge, and the average percentage of adolescent (18%) having average knowledge. Following Health Teaching Program, a post-test revealed that (100%) of adolescents having good knowledge regarding adverse effects of junk foods. A study published by Kanagamani, G et. al [11] with Level of knowledge regarding fast food related health hazards among adolescent boys with adequate knowledge 75%, moderate knowledge 51-75%, inadequate knowledge less than 50% in experimental group. Over all paired 't' test was found in experimental group pre-test and post- test score to evaluate the effectiveness of video assisted teaching program on knowledge regarding fast food related health hazards among adolescent boy's 't' value is 8.58 and p value $p < 0.001$ was highly significant.

The present study pre-test and post-test of attitude towards adverse effects of junk foods shows that 10.6±8.37 and 13.9±6.2. Similarly a study was conducted by Kumar Singh U et.al [12] result shows that a paired t-test as pretest and posttest [5.43 ± 1.3 and 7.96 ± 0.3]. Then, the average scores of attitudes towards junk food consumption were 11.9 ± 1.5 and 16.3 ± 1.6.

As in the present study the highest number of adolescents (82%) having poor knowledge, and the average percentage of adolescent (18%) having average knowledge. A study was conducted by Sahu P et. al [13]. Knowledge on ill effects of junk food revealed that 51.5% (majority) pointed out stomach problem and 16.8 % mentioned obesity as ill effect of junk food consumption while 22.4% of the participants do not know the ill effect of junk food consumption. In the present study the adolescents age group between 13-15 years. The result shows that chi-square value is 0.27 whereas not significance for $P>0.05$. A descriptive study was conducted by Shanthini US et.al [14] has been chosen the age group between 13-15years of age, the result showed that chi-square value is10.71 for $P>0.05$ level of significance, there is significant association between age and level of knowledge.

In this study pre-test of knowledge score was 16±2.53 and post-test knowledge score was 38±5.36. A experimental study was conducted by Vardanjani AE et.al [15] the students' average score of knowledge before intervention was 28.94 ± 15.10 and 28.70 ± 12.51 in the two experimental and control groups, respectively, and reached to 93.52 ± 8.93 immediately and 90.27 ± 8.79 two months after the intervention in the experimental group ($P < 0.001$)

In the present study 59% of adolescents are getting pocket money ranging from Rs. 1-100 per month and 32% of them are not getting pocket money. Similarly, a descriptive study was conducted by Antony M et.al [16] as 87% belonged to the age group of 14 – 15, and 46.15% received no pocket money whereas 15.87% received pocket money between Rs 201-300 per week and only 1.44% received more than Rs 300 per week as pocket money. 46.15% teenagers had average knowledge about ill effects of junk foods, 11.54% teenagers had poor knowledge, 35.10% had good knowledge and 7.21% teenagers had very good knowledge regarding ill effects of junk food. The statistical value(F) computed by ANOVA and P value of 0.009 shows that there is significant relationship between knowledge score and age of teenagers.

The study result shows that the highest number of adolescents (82%) having poor knowledge, and the average percentage of adolescent (18%) having average knowledge. The chi-square value of Age is 0.27 and d. f. is 2 then $p>0.05$ where there is no significant association between knowledge and age, then Class studying in is with chi-square value is 6.2, and d. f. is 2 then $p<0.05$ hence, there is a significant association between knowledge and

studying of class. A descriptive study was conducted by Jamadar K et.al [17] The results showing majority of the sample that is 69% of students having average knowledge regarding harmful effects of junk food, 23% of students possess good knowledge and the rest 8% has poor knowledge. There is significant association between Age, Education, Sources of information about harmful effect of junk food and reason why people prefer junk food with knowledge regarding harmful effects of junk food.

In this study the post-test results showed that (100%) of adolescents having good knowledge and the highest number of adolescents (88%) having unfavorable attitude, there was significant association between adolescent knowledge score with class studying in chi-square value is 6.2, and there was significant association between adolescent attitude score with previous information chi-square value is 8.4. Similarly, a study published by Gowda S N et.al [18] results revealed that among 60 adolescents, level of knowledge on care of child in breathing difficulty, 35 (58.33%) had adequate knowledge and 25(41.67%) had moderate knowledge and none of the care givers had inadequate knowledge. The calculated t value was more than the table value at 0.05 level of significance which showed the effectiveness of the teaching program.

In this study pre-test of knowledge score was 16±2.53 and post-test knowledge score was 38±5.36. A quantitative study was conducted by Amoldeep et.al [19] majority adolescents (65%) had average level of knowledge but in posttest majority adolescents (55%) had good level of knowledge. There was significant difference between the mean pretest and posttest knowledge score ($t = 9.590$, $p = 0.0001$) at $p<0.05$ level. Then pre-test of knowledge score was 9.5±3.113 and post-test knowledge score was 13.72 ±3.124.

In the present study most of the participants are belongs to urban areas and sample about 120 with the pre-test of knowledge score was 16±2.53 and post-test knowledge score was 38±5.36. Similarly, an experimental study was conducted by Panchal S et.al [20] the sample comprised of 120 Adolescents selected rural area. The study revealed that the mean post-test knowledge score (20.06±1.95) is higher than the mean pre-test knowledge scores (12.5±3.09). It indicates the slight gain in the knowledge of the subjects. The suggested majority variables show no significance in association, it is evident that the gain in the knowledge is due to structured teaching programme.

Contribution Of Authors

Research Concept - Mr. Renukaraj Y. Nagammanavar
Research Design - Mr. Renukaraj Y. Nagammanavar
Supervision - Mr. Renukaraj Y. Nagammanavar
Data Collection - Mr. Renukaraj Y. Nagammanavar
Data Analysis and Interpretation - Mr. Renukaraj Y. Nagammanavar
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Declaration by Authors

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