

## Effect of interaction through child to child approach on knowledge towards junk foods among adolescents at selected private school, Kelambakkam, Kanchipuram district, Tamil Nadu, India

### ABSTRACT

**Background:** 'Home and school is the primary source for beginning the food habits and in school, it is a place for learning and nurturing' it is an important priority to provide intervention to improve their knowledge and competency of junk foods among adolescents. **Materials and methods:** The study aimed to assess the effect of interaction through child to child approach on knowledge towards junk foods among adolescents. A quantitative evaluative approach with a one group pre-test post-test design. The purposive sampling technique was used to collect data from 150 adolescents aged between 13-15 years, who were studying in Bhuvana Krishnan Matriculation Higher Secondary School, Kelambakkam, Chengalpattu district. The students were trained with instructional teaching programme based on child to child approach in the ratio of 1:10 for a period of one month. The structured standardized questionnaire on junk foods was used to assess the pre-test and post- test was conducted after 14 days. **Results:** The study findings revealed that the post test level of knowledge of junk foods among adolescents was found to be statistically significant compared to the pre test level at  $p < 0.001$ . **Conclusion:** The instructional teaching programme on junk foods was effective in improving the level of knowledge of junk foods among adolescents. **Key-words:** Junk foods, Instructional teaching programme, Knowledge, adolescents, child to child approach

### INTRODUCTION

Food is very important for all human beings nowadays healthy nutritious foods have been replaced by the new food Mantra-Junk foods<sup>1</sup>. Michael Jacobson coined the term junk foods, 1972 director of centre for science to create awareness among the people to insist junk foods contains low nutritive and high calorie value. 'Home and school is the primary source for beginning the food habits and in school, it is a place for learning and nurturing'<sup>2</sup>. According to Wikipedia, Junk foods is a term describing food that is perceived to be unhealthy or having poor nutritional value Junk foods are deemed to be trash foods as they are high in fat and sugar components regardless of how they are labeled by manufacturers. Junk foods comprises that is quick, tasty, convenient and fashionable. **It seems to have engulfed every age, every race and the newest entrance in children.** Any food that has poor nutritional value is considered unhealthy and may be called a junk food and it has high in fat- especially sodium, sugar and trans-fat is known as junk foods<sup>3</sup>. **Its Intent was to boost up awareness among children regarding junk foods because it contain low nutritional value, high sugar, high calorie and high fat and it may lead to cause many life threatening ailments<sup>3,4</sup>. In terms of unhealthy foods it has an empty calorie foods and have little enzyme producing vitamin, Minerals, Amino acid and**

contains high level of calorie from sugar or fat. The food commonly consider junk foods include salted snacks foods, soft drinks, chips, candy, Gum, fried fast foods, burger, pizza, French fries, sugary carbonated beverages, wafers etc<sup>5</sup>. Life style practices especially sedentary life style are easy to access the unhealthy food items and it cause the risk of incidence like life style related diseases. In 2015 World Bank said that coronary heart disease was the major cause for premature death occurs in India<sup>6</sup>. In both developing and developed countries there will be increasing problems in both undernourishment and over nourishment and the snacking is a well-established eating pattern among adolescents especially the people who are in higher socio economic status<sup>7</sup>. Teenagers are typically fond of eating junk foods, not only for its taste, but because of peer group habits.

Nowadays most of the parents do not understand the ill effects of poor eating habits and they forced the child to eat junk foods. Studies reveal that the children and parents do not have awareness towards junk foods. Junk food consumption leads to childhood obesity and cause ill effects to health<sup>8,9</sup>.

**Objectives of the study:** To assess the existing level of knowledge towards junk foods among adolescents. To assess the effectiveness of interaction through child to child approach on knowledge of junk foods among adolescents. To find out the association between the pretest level of knowledge of junk foods with selected demographic variables among adolescents.

**Materials and methods:** A Quantitative research approach and the one group pre-test and post-test design was found suitable for the study. The study was conducted in Bhuvana Krishnan Matriculation School, Kelambakkam, Chengalpattu district, Tamil Nadu, India. The population included in the study was adolescents studying in selected school. The samples of the present study were adolescents in the age of 13-15 years who were studying in Bhuvana Krishnan Matriculation School, Kelambakkam, Chengalpattu District. The study includes the adolescents who were in the age group of 13-15 years, who were willing to participate in the study, who were having the habit of eating junk foods, who were available during data collection procedure. The study excludes the adolescents who were having adequate level of knowledge regarding junk foods in pretest observation, sick on the day of data collection. The sample size of the present study was 150 adolescents, calculated by using open epi formula. Considering a attrition rate of five percentage, the sample size considered for the main study was 150. The samples were selected by using non- random purposive sampling technique based on pre-determined inclusion criteria.

**Research tool:** The research tool were developed based on literature review, as there is no standardized tool available to assess the effect of interaction through child to child approach on knowledge on junk foods among adolescents.

The research tool consists of two sections

**Section-I:** Selected demographic variable of adolescents such as age, gender, area of residence, type of family, family income, educational status of father, educational status of mother, dietary pattern and source of information.

**Section-II:** A self administered structured questionnaire to assess the knowledge on junk foods was used in this study

The questionnaire consists of 16 multiple choice questions to assess the knowledge regarding junk foods.

**0 Scoring:** Each questions had 4 options and each correct answer carries "1" (One) mark and wrong answer carries "0" (zero) mark. The maximum score was 16 and minimum score was 0.

**Categorization of level of knowledge on junk foods:** On the basis of score attained, the level of knowledge was categorized as inadequate knowledge (Score 1-7), moderately adequate knowledge (Score 8-12) and adequate knowledge (Score >12)

**Procedure for data collection:** The main study data collection procedure before conducting the main study the researcher obtained permission from the school authority to conduct the study. Obtained informed consent from each study participants and legally accepted representatives. A pre test was conducted to assess the knowledge towards junk foods. After that the student trainees were selected based on few criteria (good language, communication skill, maintaining rapport, good voice modulation, appropriate time management) to administer instructional teaching programme in the ratio of 1:10, after 14 days of intervention the post test was conducted to evaluate the effectiveness of child to child approach on knowledge towards junk foods.

**Ethical Consideration:** Informed consent was obtained from the study participants and legally accepted representatives, anonymity and confidentiality was maintained during the study

**Data analysis:** The data was analyzed and interpreted by descriptive and inferential statistics by using SPSS-20 software. Descriptive statistics was done to analyze the frequency and percentage distribution, mean and standard deviation. Inferential statistics was done to analyze the Paired t test for the effectiveness of interaction on knowledge towards junk foods. **Cohen's d test was used to evaluate the effect size.** Chi square test was used to find out the association between the pre test level of knowledge towards junk foods with selected demographic variables among adolescents.

## RESULTS AND DISCUSSION:

**Table-1 Frequency and percentage distribution of pre and post-test level of knowledge on junk foods among adolescent(N=150)**

Level of Knowledge	Pre test		Post test	
	N	P	N	P
Inadequate	124	82.7	-	-
Moderately adequate	12	14.7	-	-
Adequate	14	2.6	150	100

Pre-test level of knowledge score shows that 82.7% of adolescents were had inadequate knowledge, 14.7% of adolescents were had moderately adequate knowledge and only 2.6% were had adequate knowledge on junk foods among adolescents. In the post test, all of them (100%) gained adequate knowledge.

The reason for low score in pre test level of knowledge due to the lack of information regarding junk food consumption and its ill effects among family members and also wrong information projected through mass media. In the post test all of them had adequate knowledge. The reason might be most of the adolescents showed keen interest to learn about junk foods and also most of them were having previous experience of junk foods related health problems, which make the adolescents to show more interest to learn.

**Table 2- Comparison of mean and standard deviation with dependent variables of adolescents before and after the instructional teaching programme on junkfoods.**

S.NO	DEPENDENT VARIABLES	MEAN	STANDARD DEVIATION	T VALUE
1	KNOWLEDGE PRETEST	5.66	1.36	4.03
	POST TEST	15.69	0.46	
	IMPROVEMENT SCORE	10.03	0.9	

The reason for lack of knowledge of adolescents on junk foods might be due to lack of awareness of the students on junk foods, lack of awareness of parents on junk foods and also it is due to attractive advertisement through mass media and also tasty junk food preparation. This is the reason for inadequate knowledge of adolescents on junk foods in pre-test. In the post test all of them had adequate knowledge from this result it clearly shows that the instructional teaching programme through child to child approach is more effective in improving the interest, concentration and attention of the adolescents.

S.no	Demographic Variables	Inadequate Knowledge	Moderate Knowledge	Highly Adequate Knowledge	$\chi^2$

		n	P	N	p	N	P	
1	Age in years	37	24.7%	12	8%	0	0%	18.670 (df-4)
	13	37	24.7%	13	8.7%	0	0%	
	14	49	32.7%	0	0%	2	1.3%	
	15							
2	Gender Male Female	32	21.3%	0	0%	1	0.7%	9.121 (df-2)
		91	60.7%	25	16.7%	1	0.7%	
3	Area of residence	72	48%	25	16.7%	0	0%	19.343 (df-2)
	Urban Rural	51	34%	0	0%	2	1.3%	
4	Type of family							6.676 (df-4)
	Joint family	52	34.7%	12	8%	0	0%	
	Nuclear family	53	35.3%	13	8.7%	2	1.3%	
	Single parent Family	18	12%	0	0%	0	0%	
5	Family income per month							12.478 (df-4)
	<10,000	44	29.3%	14	9.3%	0	0%	
	10,000-20,000	39	26%	11	7.3%	1	0.7%	
	>20,000	40	26.7%	0	0%	1	0.7%	

**Table-3 Association between demographic characteristics and pre-test knowledge toward**

**s junk foods among adolescents.(N=150)**

6	Educational status	18	12%	12	8%	0	0%	31.380 (df-6)
	of father	26	17.3%	4	2.7%	0	0%	
	No formal	19	12.7%	9	6%	0	0%	
	Primary/secondary							

	High school/Higher	60	40%	0	0%	2	1.3%	
	Secondary							
	Diploma/graduate							
7	Educational status of mother							
	No formal	45	30%	24	16%	0	0%	32.952
	Primary/secondary	38	25.3%	1	0.7%	1	0.7%	(df-6)
	High school/Higher	19	12.7%	0	0%	0	0%	
	Secondary							
	Diploma/graduate	21	14%	0	0%	1	0.7%	
8	Dietary pattern	24	16%	12	8%	0	0%	25.989
	Vegetarian Non-vegetarian	35	23.3%	13	8.7%	0	0%	(df-4)
	Mixed	64	42.7%	0	0%	2	1.3%	
9	Source of Information							
	Family members	9	6%	12	8%	0	0%	42.125
	Friends and Relatives	56	37.3%	13	8.7%	0	0%	(df-8)
	Printed material	20	13.3%	0	0%	1	0.7%	
	Mass media	21	14%	0	0%	0	0%	
	Health care							
	Personnel	17	11.3%	0	0%	1	0.7%	

UNDER PEER REVIEW

The study results reveals that there was a strong association between gender and the level of knowledge of adolescents because majority of the adolescents were female so the female had more knowledge when compared to male, that is the reason for strong association.

There was a strong association between source of information and the level of knowledge of adolescents it shows that the adolescents who had previous experience on junk foods had more knowledge when compared to those who are not having previous knowledge on junk foods, that is the reason for strong association.

**CONCLUSION:** This study concluded that the instructional teaching programme on junk foods was effective in improving the level of knowledge among adolescents.

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