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A Pre Experimental Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Harmful Effects of Junk Food among Adolescents in Selected Rural Area at Dehradun

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Abstract: ***Background: Junk food is unhealthy food that is high in calories from sugar or fat, with little dietary fiber, protein, vitamins, minerals, or other important forms of nutritional value. It is also known as HFSS food (high in fat, salt and sugar). Junk foods are processed foods consisting of high calories, but that is considered only as a broad umbrella. These foods are prepared in a way that they look appealing and are enjoyable The current research To assess the knowledge regarding harmful effects of junk food among adolescents in selected rural area at Dehradun. Methods: For the purpose of investigation a pre experimental one-group pre-test and post-test was designed. The sample comprised of 50 Adolescents selected rural area. A Non-probability Convenient sampling technique was used for the selection of samples and selects 50 samples. The junk food harmful effects on the age group of 12>19 were taken into consideration. This research's conceptual structure was based on the model of the theory of "General System Model of Von Ludwig Bertalanffy (1968)". In order to analyses the categorical data, illustrative and inferential statistics were used. Results: 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. Hence null Hypothesis H0 was rejected. Conclusion: The junk food invites various health problems. The habit of the consumption of junk food is continuously increasing in young generation especially in adolescents that leads to various health problems.***

Keywords: Junk Food, Harmful Effects, Effectiveness, Structure Teaching Program, Knowledge, Adolescents

1.Introduction

Proper nutrition is one of the most fundamental things on which anyone's healthy and happy life can be based. If you want to radically change your being for the better, to feel satisfied about who you are, or to look slim and attractive no matter what age is stated in your passport, start with changing unhealthy eating habits to healthy ones-and make them your favorites.

Sahara Sanders

Junk food is unhealthy food that is high in calories from sugar or fat, with little dietary fiber, protein, vitamins, minerals, or other important forms of nutritional value. It is also known as HFSS food (high in fat, salt and sugar) [1]. Junk foods are processed foods consisting of high calories, but that is considered only as a broad umbrella. These foods are prepared in a way that they look appealing and are enjoyable[2].

According to Elaine Magee, MPH, RD it's the 21st century and "junk food" has gone global. For better or for worse (mostly worse), junk food is now available all over the world. We see it most everywhere we go--in grocery and convenience stores, fast-food restaurants, on television--usually looking very appealing. "Junk food" generally refers to foods that contribute lots of calories but little nutritional value[3]. One problem with junk foods is that they're low in satiation value--that is, people don't tend to feel as full when they eat them--which can lead to overeating. Another problem is that junk food tends to replace other, more nutritious foods. When people drink lots of soda, for example, they are usually not getting plenty of low-fat dairy or other healthful beverages like green tea or orange juice. When they're snacking on chips and cookies, they're usually not loading up on fruits and vegetables[3].

According to **Department of Health** eating junk food on a regular basis can lead to an increased risk of obesity and chronic diseases like cardiovascular disease, type 2 diabetes, non-alcoholic fatty liver disease and some cancers. We know Australian's eat too much junk food.35% of adults' daily energy intake (kilojoules) comes from junk food.41% of children's daily energy intake (kilojoules) comes from junk food. This means junk food is taking the place of other more nutritious foods in our diets[5].

According to Suraj Sujan Bohara etal, (2021) This study was carried out to explore the junk food consumption and its associated factors among adolescent students. Method of the study is used a cross sectional study was conducted among 538 adolescent students of Kaski district, Nepal. They used a stratified proportionate sampling technique to recruit the participants. A self-administered questionnaire was used for data collection.

Descriptive and bivariate statistical analysis was performed. The odds ratio was computed to test the association. The study found that more than half of the participants (60.30%) consumed junk foods over the last 30 days, more prevalent among public school participants (65.1%) followed by participants of private school (56.3%). More than half of the participants consumed salty snacks (58.7%) followed by sweets (57.5%). The time of consumption was found to be higher together with friends (83.9%). Similarly, it was consumed more while the participants were on a trip (70.1%). And then conclusion of the study is an appropriate intervention targeted to adolescents to improve food behaviors is recommended[4].

According to Junxiu Liu et al, (2021) this study held on trends in junk food consumption, a risk for obesity, are not well established. The aim of the study was examined national trends in types of junk food (excluding beverages) and their sources (grocery, restaurants, schools, etc.), overall and in population subgroups. The method they used they assessed 29, 970 children (aged 2-19 y) and 44, 501 adults (aged ≥20 y) with 24-h dietary recall data from 9 NHANES cycles (2001-2002 to 2017-2018). Trends in junk food were assessed over time using 1-d values for individuals with single recalls and 2-d means for others. The result of the study was 2001 to 2018, percent energy (%E) from junk food remained stable for children (from 18.1% to 17.5%, P-trend = 0.25) and decreased for adults (14.1% to 13.0%, P-trend = 0.002). Among children, increases occurred in %E from crackers (1.19% to 1.35%) and snack/meal bars (0.38% to 0.69%) and decreases in candy (2.58% to 1.96%) and other desserts (3.11% to 2.48%) (all P-trends < 0.01). Among adults, increases occurred in snack/meal bars (0.31% to 0.78%, P-trend < 0.001) and decreases in candy (1.97% to 1.55%; P-trend < 0.001), sweet bakery products (5.52% to 4.98%; P-trend = 0.04), and other desserts (2.19% to 1.86%; P-trend = 0.001) and the conclusion of the study 2001 to 2018, %E from junk food represented nearly 1 in 5 calories among children, without change, and nearly 1 in 7 calories, with modest decrease, among adults, with disparities in subgroups[9].

According to Ashmita Karki et al, (2019) this study was carried out to determine the prevalence and associated factors of childhood overweight/obesity among urban primary school children. Aim of the study was a major public health concern globally because of its adverse health consequences and escalating prevalence. The factors underlying the disease conditions manifested during adulthood commonly originate in childhood by a cross-sectional survey method was conducted. data were collected using a structured self-administered questionnaire with parents of children aged 6-13 years old in grades 1-5 studying in private schools of Lalitpur district in Nepal. Study participants were selected using two-stage cluster random sampling techniques from 10 private schools. The result of the study was found that out of 575 students, 107 (18.6%) were overweight and 41 (7.1%) were obese. Among 328 male children, 62 (19.0%) were overweight and 35 (10.6%) were obese. Likewise, among 247 female children, 45 (18.2%) were overweight and 6 (2.4%) were obese. The conclusion of the study was one-quarter of the children in urban Lalitpur were found to be overweight/obese. High junk food consumption and sedentary activity were found to be significantly associated with childhood overweight/obesity. School health and awareness programs aiming to reduce the intake of energy-dense foods and promote an active lifestyle including active transportation to school among children are imperative[7].

According to Tawheed Amin etal, (2017) Fast food consumption pattern was studied on 51 children aged 16-20 years in India using a pre-tested and pre-designed Performa to collect information about age, family type, dietary history, consumption of junk foods, food habits and food consumption pattern, food intake per day, nutritional status data, anthropometric measurement such as height, weight, etc. and body mass index (BMI). An awareness of fast food among the respondents. The respondents know various names like burger, pizza, hamburgers, cake, French fries, ice-creams, hot dogs, chips as examples of fast food.31.9% of the respondents are aware about high sugar content of fast foods, 68.8% of the respondents 6. The high salt content of fast foods, 74% of the respondents know that fast foods have high saturated fat content and 51.5% respondents have knowledge about the high cholesterol level in fast foods. However, only 3.92% know that fast foods contain additives and 21.56% know about the low fiber content even then they do not stop themselves from consumption. The results of the present study indicate that the children falling in the age group of 19-20 years have reached the border line of basal mass index and approaching towards obesity. It was revealed that the adolescents consume more calories, fats and carbohydrates and less proteins, vitamins, iron and dietary fiber than the RDA requirements which is a serious concern and may also be another predisposing factor for obesity[6].

According to Najlaa Mandoura, et al, (2017) this study held on factors associated with consuming junk food, the aim of the study was to examine the prevalence and compare the trends of junk food consumption. The method of the conducted in five different Primary Health Care centers (PHCCs) of Jeddah working under Ministry of Health was cross-sectional study. The subjects were men (n = 146) and women (n = 254) aged 18-67 years visiting these centers. Structured validated close ended questionnaire was filled by all the participants. The result of the study was JF consumption in subjects with mean age 33.69 ± 12.29 years was highly prevalent in both genders (86.5%); (men = 85.6% and women = 87.4%). Controlling for some demographic and socioeconomic variables, increased junk food consumption was independently associated with education (OR = 2.47, 95% CI: 1.088-5.605, p = 0.031), individuals who had limited time (OR = 3.82, 95% CI: 1.690-8.642, p < 0.001), for the change of routine and taste (OR = 7.64, 95% CI: 3.145-18.563, p < 0.001 and OR = 11.031, 95% CI: 4.219-28.843, p < 0.001, respectively). And the conclusion of the study was the study findings provide evidence on the high prevalence of junk food consumption among Saudi adults. Junk food has influence in the dietary patterns of

Saudi adults and this trend is likely to rise. This growing widespread use of junk food is of concern which may cause obesity-related non-communicable diseases[8].

2.Need of the Study

Adolescence is the only time following infancy when the rate of growth actually increases. This sudden growth spurt is associated with hormonal, cognitive, and emotional changes that increases the nutritional demands of adolescents. If we discuss about eating pattern of adolescents or teenagers, it is found that after-school activities, social lives and busy schedules may lead to meal skipping or eating away from home. Their diet includes burgers, pizza, and cold-drinks. However by eating junk food, a teenager will not get any nutrients required for proper functioning of the body. Junk food is full of fat and calories; a lot more than what is required for the body on daily basis. This makes the teenager more prone to heart disease.

According to NFHS (National Federation of State High School Associations) there is a list India ranked in order of percentage of people who are overweight or obese in which Punjab is in first position. Government surveys have shown that at least 16% of children and adolescents age 6 to 19 years old are considered overweight and at least 11% adolescents now are classified as obese.

According to NSS (National Sample Survey), Research has shown that Junk food consumption is linked to behavioral disorders. Many people, especially children, suffer from ADHD (Attention deficit hyperactive disorder) due to additives and added sugar in Junk food. Drinking a single 330 ml can a day of sugary drinks translates to more than one pound (0.45 kg) of weight gain every month. According to NSS (National Sample Survey) data for the category beverages, refreshments and processed foods, the money spent on Junk food in India was almost 25 per cent higher than the Rs 33, 000-crore spent on edible oils.

Breznitz Z. Conducted a survey of what children eat for lunch in nine schools across Jaipur. The study covered 200 children in the age group of 9 to 14 years. It found that 65% of the children ate junk food and fast food and 43% guzzled aerated drinks along with it. The survey showed that pizza was the most preferred food. Noodles were a close second.

Kaur M conducted a pre experimental study to assess effectiveness of planned teaching program regarding bad effects of excessive intake of junk food and fast food in daily life among school children. Study was conducted on 10 different schools, comprising of 2636 children selected by using convenient sampling technique. The result revealed that mean pre-test score of children was 6.87, maximum (66%) had poor level of knowledge. The mean post-test score of adolescents was 12.98, maximum (59%) had good level of knowledge. It showed that today‟s children are behind junk foods without knowing their hazardous effect.

Centre for food policy and obesity (2010) conducted a study to analyze 277 individual cereal varieties across 115 brands and found that cereals marketed directly to children have 85% more sugar, 65% less fiber and 60% more sodium than cereals marketed for adult consumption. The report also found that cereal companies spend almost 150million dollars a year on advertising to children. Despite the fact that all the 19 cereal brands that were marketed directly to children meet industry's own standards for "better-for-you foods", none of them meet the nutrition criteria required to advertise to children in the United Kingdom.

Patil. V. D., (2010) stated that the increase in imports of unhealthy food to a rise in obesity numbers. Finally they conclude that free trade has influenced the "nutrition transition" in Central America, which sees low income families departing from their traditional diets and increasingly eating processed and fast food.

3.Statement of the Problem

"A Pre Experimental Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Harmful Effects of Junk Food among Adolescents in Selected Rural Area at Dehradun**"**

4.Objectives of the Study

1) To assess the pre test knowledge regarding harmful effects of junk food among adolescents in selected rural area at Dehradun.
2) To assess the post test knowledge regarding harmful effects of junk food among adolescents in selected rural area at Dehradun.
3) To assess the effectiveness of Structured teaching program regarding harmful effects of junk food among adolescents in selected rural area at Dehradun.
4) To determine the association between knowledge regarding harmful effects of junk food with selected socio demographic variables.

5.Research Hypothesis

The following hypothesis is tested at 0.05 level of significance.

- **Null Hypothesis**

The following null hypothesis is tested at 0.05 level of significance.

H1: There will be no significant difference between knowledge score regarding Harmful effects of junk food.

- **Research Hypothesis**

The following hypothesis is tested at 0.05 level of significance.

H2: There will be significant difference between pre test and post test knowledge scores of adolescents of selected rural area at Dehradun.

H3: There will be significant association between selected socio demographic variables and post test knowledge scores of students of rural area at Dehradun regarding harmful effects of junk food.

6.Methodology

The research design used in this study is pre-experimental one group pre test post test design. In this design, the investigator introduced the base measures before and after the administration of treatment. The base measures were the knowledge of adolescence and treatment was structured teaching programme regarding Junk foods Harmful Effects. Sample size in present study consists of 50 Adolescents of selected schools Dehradun.

The research plan is diagrammatically

Pre test (O_1) ⟶ Intervention (X) ⟶ Post test (O_2)

Symbol used:

O_1 = Pre-test to assess the level of knowledge regarding harmful effects of junk food among adolescents in selected rural area at Dehradun.

X = Administration of structured teaching programme regarding harmful effects of junk food.

O_2= Post-test to assess the level of knowledge regarding harmful effects of junk food among adolescents in selected rural area at Dehradun.

Frequency and percentage distribution of demographic characteristics of the subjects

N=50

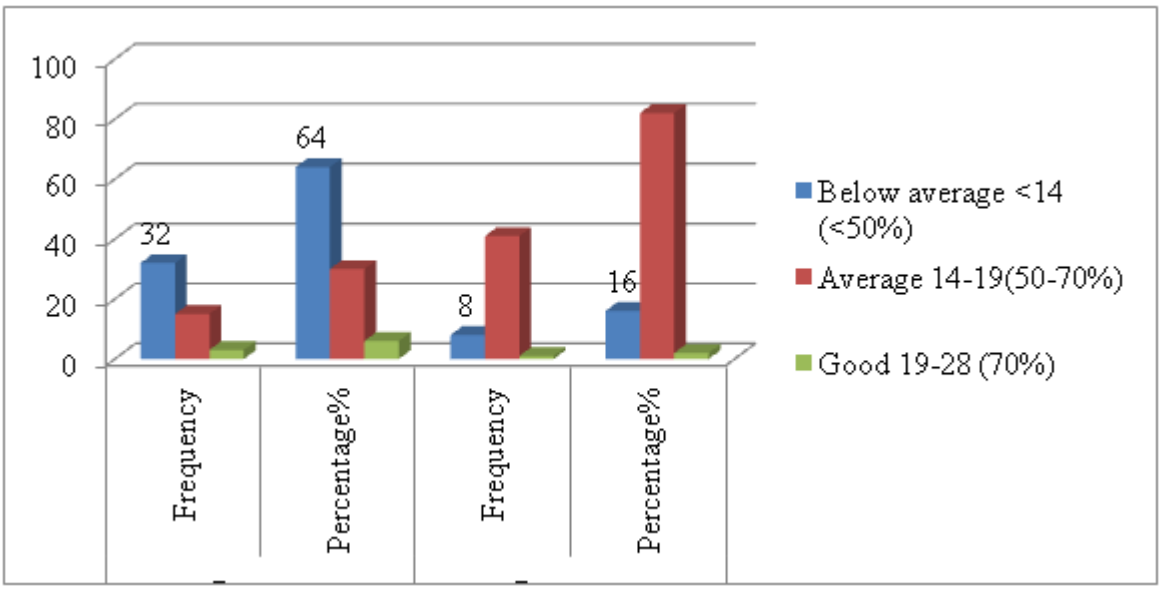
S. No.	Sample characteristics		Experimental	
			Frequency (f)	Percentage %
1.	Age Group	12-15 years	24	48
		16-19 years	26	52
2.	Gender	Female	27	54
		Male	23	46
3.	Standard	Higher Secondary (8^{th} – 10^{th})	30	60
		Senior Secondary (11^{th} – 12^{th})	20	40
4.	Type Of Family	Joint Family	4	8
		Nuclear Family	30	60
		Extended Family	16	32
5.	Monthly Income In Rupees	Below 5000	4	8
		5001-10000	17	34
		10001-15000	17	34
		Above 15001	12	24
6.	Monthly Pocket Money	No Pocket Money	10	20
		>50	16	32
		Rs.50-100	14	28
		Above Rs.100	10	20
7.	How Many Times Do You Eat Junk Foods?	Not at all	18	36
		Often	21	42
		Everyday	7	14
		Once in a month	4	8
8.	The Reason To Eat Junk Food	Feel hungry	17	34
		Time passing	19	38
		School interval	10	20
		Social gathering	4	8
9.	Source Of Previous Health Information Regarding Hazards Of Junk Food Through	Mass media	11	22
		Friends/ Relatives	6	12
		Health personnel	14	28
		Family members	19	38

The data presented in above Table depicts that nearly half of the participants were having age between 16-19 years. More than half (54%) of the participants were female. More than half (60%) of the participants were having education till higher secondary (8-10^{th} Standard). More than half (60%) of the participants were belong to nuclear family. Only few (24%) of the participants were having monthly income above Rs.15001. Approximately 32% of the participants were having monthly pocket money more than Rs.50. Nearly half (42%) of the participants were often eating junk food. Only few (08%) of the participants were having social gathering as a reason for consuming junk food. Less than half (38%) of the participants have got information regarding hazardous effects of junk food through family members.

Findings of the frequency and percentage distribution of pre test and post test knowledge of Adolescents regarding Junk food Harmful Effects.
n=50

Knowledge Level	Pre test		Post test	
	Frequency	Percentage%	Frequency	Percentage%
Below average <14 (<50%)	32	64	8	16
Average 14-19 (50-70%)	15	30	41	82
Good 19-28 (70%)	3	6	1	2

Above table reveals that in pre-test 32 (64%) had below average knowledge and 15 (30%) had average knowledge whereas in post-test it was seen that 41 (82%) had average knowledge. Hence it can be inferred that the structured teaching program was effective in enhancing the knowledge of Adolescents.



7.Conclusion

All children consumed junk food in a regular basis; the majority preferred it for taste and some as influenced by advertisements. Only half of them were aware of health risks associated with poor eating habits. Thus, there is a great need to maintain a practice of healthy eating habits among the adolescence in order to decrease the health risk associated with eating frequent junk food.

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