

# Awareness and Practice of Junk Foods among Adolescents in Secondary Level Students

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## ABSTRACT

**Introduction:** 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. Therefore, this study was undertaken to assess the awareness and practice of junk foods among adolescents.

**Methods:** A descriptive cross-sectional study was conducted among adolescents of secondary level students. A simple random sampling technique was used to select the sample and the sample size was 237. Data collection was done from April 15, 2019 to May 14, 2019. A set of semi-structured self-administered questionnaire was used for data collection. Descriptive and inferential statistics were used to analyse and interpret the findings.

**Results:** The findings showed that more than three-fifth (67.9%) of adolescents had a moderate level of awareness about junk foods. Half (49.4%) of them consumed junk foods highly. All (100%) adolescents have consumed junk foods regularly whereas two-fifth (42.2%) replaced meals once a week with junk foods. Four-fifth (82.3%) of adolescents did not bring tiffin from home. There was no significant association between the awareness and practice of junk foods ( $p < 0.05$ ).

**Conclusions:** This study concludes that most of the adolescents possessed a moderate level of awareness of junk foods. Majority of them did not bring tiffin from their home. Around half of them consumed junk foods in their daily life. Majority of them were aware of junk foods, although they still consumed junk foods.

**Key words:** adolescents; awareness; health effects; junk foods; practice; secondary school

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## INTRODUCTION

Junk foods contain a lot of unhealthy ingredients which are unsafe not just for children, but for people of all ages. The transition in lifestyle and dietary habits may be responsible for this trend and it is directly or indirectly leading to rise of many non-communicable diseases.<sup>1</sup> Most parents are hardly aware of the fact that local foods produced by them are far cheaper and more nutritious.<sup>2</sup> Despite this fact, consumption trend of junk foods is increasing all over the world.

Junk food consumption and obesity in childhood are emerging as a global epidemic. Various television and other commercials have such an impact on schoolchildren that they consider eating fatty foods as a fashion.<sup>3</sup> This impacts on psychological, physical, and economic conditions of adolescents, and also leads to various non-communicable diseases like type 2 diabetes mellitus, hypertension, hypercholesterolemia etc.<sup>4</sup> Reduction of consumption of junk foods and regular intake of nutritious and healthy food can have long term impact on the children's present and future.<sup>5</sup>

The present study thus was conceptualised among adolescents to assess their existing awareness and practice of junk foods among adolescents. This study can be beneficial in improving the health and wellbeing of adolescents. So it may be useful to prepare a nutritional policy to improve the nutritional status of adolescents in schools.

## METHODS

A descriptive cross-sectional study was conducted to assess the existing awareness and practice of adolescents regarding junk foods. Tilingatar higher secondary school, Dhapasi secondary school, and Bansbari secondary school of Kathmandu were selected randomly from a total of 600 Government high schools. The students studying in grades eight, nine and ten were taken as study population. The class sections were selected by a simple random technique. Data was collected in the classroom setting from April 15, 2019 to May 14, 2019. The total sample calculated was 237 by using the given formula at 95% confidence level and with 5% of marginal error assuming;  $P = 0.5\%$ . A semi-structured tool was developed from reviewing

different literature by researchers. Self-administered semi-structured questionnaire was used for data collection.

The data were entered and then analysed in SPSS. The frequencies, percentage, mean, and standard deviation were used as a part of descriptive statistics; the chi-square test was used to establish the association between awareness and practice of junk foods. A p-value of less than 0.05 was used for statistical significance. The level of awareness was measured by calculating the percentages of the correct answers and classified into three categories as an inadequate level of awareness was considered as below 50%, a moderate level was 50 - 75% and above 75% was considered as a high level of awareness.<sup>6</sup> The level of practice above mean was considered as the high practice, and below mean was considered as the low practice.

The ethical approval was taken from the Institutional Review Committee of the Nepalese Army Institute of Health Sciences (NAIHS) and permission was obtained from the schools. Verbal consent was taken from each student and the assent was obtained for below 16 years. The purpose and objectives of the study were explained to the students. The respondents were informed about their right to refuse or to withdraw at any time during the study.

## RESULTS

The mean age of the respondents was  $15.12 \pm 1.33$  years. More than half (58.6%) were females and nearly three fifth (72.2%) of them were Hindus. Three fourth (74.3%) was from the nuclear family. Three fourth (75.1%) respondents stayed with their parents and the majority (70%) of them had sufficient income for day-to-day expenditure for one year.

Nearly three fourth (72.6%) of the respondents understood the correct meaning of junk foods. All (100%) of them were familiar with added chemicals and additives in junk foods but only 43.5% of the respondents knew that Monosodium Glutamate (MSG) (Ajinomoto) was a commonly used flavour enhancer in junk foods. Thirty eight percent of respondents were familiar that junk foods had flavour enhancers added to them which helped in satisfying cravings. A vast majority

**Table 1.** Respondents' Awareness of Junk Foods (n = 237)

Characteristics #	Total Responses			
	Correct		Incorrect	
	freq.	%	freq.	%
<b>Meaning of junk foods</b>				
Those commercial foods with little nutritive value	172	72.6	65	27.4
<b>Composition of Junk foods</b>				
High sodium, fatty acid, sugar, foods addictive	26	10.9	211	89.1
<b>Added chemicals and additives in junk food</b>				
Yes #	237	100.0	-	-
<b>Commonly used flavor enhancer</b>				
Monosodium Gultamate (MSG) / (Azinamotto)	103	43.5	134	56.5
<b>Contain of junk foods</b>				
High calorie	131	55.3	106	44.7
<b>Contents rich in junk foods</b>				
Calories, salt and fat	150	63.3	87	36.7
<b>Food manufactures use to make junk foods</b>				
More additive	151	63.7	86	36.3
<b>Junk foods increases</b>				
Salivation	90	38.0	147	62.0
<b>Food that increases risk of diabetes</b>				
Potato chip	133	56.1	104	43.9
<b>Reason for appealing many people</b>				
It is full of flavor and satisfies cravings	90	38.0	147	62.0
<b>Clue to decrease consumption of junk foods habit</b>				
Avoid buying processed and packaged foods	48	20.3	189	79.7
<b>Aware the health effects of junk foods</b>				
	220	92.8	17	7.2

# Correct Response

**Table 2.** Respondents' Practice of Junk Foods (n = 237)

Characteristics	Total Responses			
	Frequency		%	
	freq.	%	freq.	%
<b>Frequency of meals replace by junk foods per week</b>				
One	100	42.2		
Sometimes	47	19.8		
Never	43	18.2		
Not at all	47	19.8		
<b>Common place to consume junk foods</b>				
Home	57	24.1		
School	79	33.3		
On the way	73	30.8		
Restaurants	22	9.3		
Other places	6	2.5		
<b>Types of junk foods consume*</b>				
Chocolates	172	72.6		
Panipuri	166	70.0		
Noodles	164	69.2		
Potato chips	149	62.9		
Cold drinks	123	51.9		
<b>Person provide money for junk foods</b>				
Mother	150	63.3		
Father	45	18.9		
Grand parents	20	8.5		
Sisters/brothers	15	6.4		
Others	7	2.9		
<b>Money spent for junk foods daily (Nepalese Rupees)</b>				
Below Rs. 20	91	38.4		
Rs. 21 – 40	74	31.2		
Rs. 41 – 60	29	12.2		
Above Rs. 60	43	18.2		
	Yes		No	
	Freq.	%	Freq.	%
<b>Consumption of junk foods regularly</b>	237	100.0	-	-
<b>Check nutrient value</b>	113	47.6	124	52.4
<b>Increasing of habit to use junk foods</b>	169	71.3	68	28.7
<b>Bring tiffin box from home</b>	42	17.7	195	82.3
<b>Teacher allowing junk foods in school</b>	138	58.2	99	41.8
<b>Parents' approval for junk foods</b>	230	97.0	3	3.0
<b>Satisfaction after eating junk foods</b>	237	100.0	-	-
<b>Like taste of junk foods</b>	217	91.5	20	8.5
<b>Easy accessibility of junk food in school</b>	237	100.0	-	-
<b>TV Advertisement influences to eat junk foods</b>	180	75.9	57	24.1
<b>Price influences to eat junk foods</b>	165	69.6	72	30.4

**Table 3.** Respondent's Level of Awareness and Practice of Junk Foods

Level of Awareness	Freq.	%
Inadequate Level (< 50%)	57	24.1
Moderate Level (50 - 75%)	161	67.9
High Level (> 75%)	19	8.0
Total	237	100.0
Level of Practice	Freq	%
High practice	117	49.4
Low practice	120	50.6
Total	237	100

(92.8%) of the respondents were aware of the harmful effects of junk foods (Table 1).

Our study showed that 42.2% of them replaced meals once a week with junk foods. Likewise, 33.3% had consumed junk foods at school. Nearly three fourth (72.6%) of the respondents ate chocolates followed by paanipuri which was 70%. More than three fifth (63.3%) were taking money from their mother to purchase junk foods and they spent below 20 Rs on junk foods daily. All (100%) consumed junk foods regularly. Almost half (47.6%) of them checked nutrients values. Similarly, less than three fourth (71.3%) increased the habit of using junk foods. Very few (17.7%) bought their own tiffin from home. More than half (58.2%) of the teachers allowed junk foods in school and a vast majority (97.0%) of parents gave permission to eat junk foods. A vast majority (91.5%) of them answered that the taste was the prime cause that motivated them to consume junk foods followed by television advertisements (75.9%) (Table 2).

More than three fifth (67.9%) of the respondents had a moderate level of awareness, one fourth (24.1%) had an inadequate level of awareness and few (8.0%) had a high level of awareness. More than half (50.6%) of respondents had a low practice of consuming junk foods whereas, nearly half (49.4%) had a high practice of consuming junk foods (Table 3).

There was no significant association between the level of awareness and practice of junk foods ( $P < 0.05$ ) (Table 4).

**Table 4.** Association between Respondents' Level of Awareness and Practice of Junk Foods

Level of Awareness	Level of Practice				Chi square value	P-value
	High Practice		Low Practice			
	f	%	f	%		
High and moderate level	90	50	90	50	0.120	0.729
Inadequate level	27	47.36	30	52.64		

## DISCUSSION

The current study showed that nearly three fourth (72.6%) of the adolescent students knew the correct meaning of junk foods. A vast majority (91%) of them consumed junk foods because of the taste. A similar study conducted in Nepal reported that 79.6% of the respondents were aware of the meaning of junk foods and 91% of them consumed junk foods for taste.<sup>7</sup> A study conducted in India revealed a similar finding to the present study that 100% of the students were consuming junk foods. However, the frequency and quantity varied.<sup>7</sup> The present study indicated that all the students (100%) consumed junk foods regularly. This study revealed that 75.9% of the students were motivated for the consumption of junk foods due to TV advertisements; however, a study conducted in India as well as in Iran was inconsistent with our study. Both studies reported 54% and 51.9% of the respondents were highly motivated for junk foods due to TV advertisements.<sup>5,9</sup> This might be the effect of the ban of television advertisement in those countries.

In our study, most (91.5%) of the students were motivated to consume junk foods due to taste as well as easy accessibility (100.0%). This finding is consistent with another study conducted in Nepal which stated that the reasons for consumption of junk foods were due to better taste (82.9%), and easy availability (38.1%).<sup>10</sup>

The present study illustrated that 33.3% of the students had consumed junk foods at school, 30.8% had consumed on their way to home and 24.1% at

home. This is in contrast to another study conducted in Nepal which showed that 91.5% consumed junk food in school and 8.5% consumed it at home. Another similar study reported that 100% consumed junk food in their school as it was allowed.<sup>8</sup> This study also showed that 58.2% of teachers allowed to consume junk foods at school. Similarly, the current study depicted that 38.4% of the respondents had spent less than 20 Nepalese Rupees for purchasing junk foods daily. This finding is inconsistent with another study conducted in Nepal that showed the average money spent on junk food was 31 Nepalese Rupees per day.<sup>10</sup>

This study revealed that almost all (92.8%) of the adolescents were aware of the harmful effects of junk foods on health. Our finding is in corroboration with a research conducted in India which reported 87% of the respondents were well aware of the side effects of these fast/junk foods.<sup>8</sup> We found that 8.0% of respondents had a high level of awareness, 67.9% of the respondents had a moderate level of awareness and 24.1% had an inadequate level of awareness. However, our finding is inconsistent with another study conducted in India which revealed that 43.7% of the teenagers had adequate knowledge, 13.3% had moderate and 0.4% had poor knowledge.<sup>11</sup> This variation could be resulted due to the different socioeconomic and geographical scenario between the two study places. The current study illustrated that nearly half (49.4%) of the students had a poor practice of junk foods. It means that the adolescents consumed junk food highly. This finding was different from another study that showed a higher proportion of junk food consumption among adolescents (93%).<sup>12</sup> Similarly, another study reported that junk food eating habits of school children in Delhi was found among 60 - 70% of children.<sup>10</sup> The difference in the consumption of junk foods is determined by the taste, availability, affordability, and by home and school environmental factors. Hence, the teacher's and parent's role is important to control consumption of junk foods.

The study revealed that 92.8% of the respondents were aware of the harmful effects of junk foods. This finding was not supported by the study

conducted in India which showed that only 70% of students were aware of the harmful effects and its impact on human health. Similarly, this study illustrated that 47.6% of the respondents checked the quality of nutrients on junk food packages but another study conducted in India did not supported this finding and reported that only 18% of the respondents checked the quality at all.<sup>13</sup> This shows the variation among the two study population, perhaps due to different geographic, socioeconomic and cultural differences.

The present study depicted that there is no significant association between the level of awareness and practice of junk foods ( $P < 0.05$ ). Taste, convenience and affordability were the foremost preference criteria for high consumption of junk foods among adolescents. Most of the students had a moderate awareness about junk foods and most had formed the habit of using junk foods in their daily life. On the other hand, parents also encouraged the use of junk foods because of their busy schedule and school also encouraged them to eat junk foods on school premises. They brought junk foods in the classroom without any restriction from teachers and have eaten at the tiffin-time in the group.

## CONCLUSIONS

Most of the adolescents possessed a moderate level of awareness about junk foods and nearly half of them had a high consumption of junk foods in their practice. The main motivating factors for the consumption of junk foods were satisfaction, taste and accessibility. They were well aware about the health effects of junk foods but they prefer to eat junk foods daily instead of homemade foods. Therefore, the main role of parents and teachers is to discourage the use of junk foods and encourage them to use more effective, safe and healthy balanced diet.

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