

KNOWLEDGE AND PRACTICE ON JUNK FOOD CONSUMPTION AMONG HIGHER LEVEL STUDENTS AT SELECTED EDUCATIONAL INSTITUTIONS OF KATHMANDU, NEPAL



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ABSTRACT

Background: Junk food is a term for food that is of little nutritional value and often high in fat, sugar, salt, and calories. Junk food can have a detrimental effect on levels of energy and mental well-being. Consumption of large quantities of junk food is associated with a drastic reduction in the consumption of nutritious foods such as milk, fruits and vegetables. High revenues, rapid urbanization, free home delivery, mouthwatering commercials and foreign cuisines have led to growing trend in the consumption of junk food.

Purpose: The aim of this study was to assess the level of knowledge, prevalence, practice and influencing factors of junk food consumption among students of educational institutions of Kathmandu, Nepal.

Methods: A Descriptive cross-sectional study was conducted. Total 367 participants were selected from educational institutions of Kathmandu using simple random sampling technique. Data were collected using Semi-structured Questionnaire by self-administered method.

Findings: Around half (45.2%) of the respondent had poor level of knowledge, and only 19.1% of respondents had adequate knowledge regarding harmful effects of junk food consumption. All of the respondents had practice of junk food consumption.

Research implications: The outcome of this study provides detailed understanding of not only knowledge, prevalence and practice of junk food consumption among students but also the reasons and influencing factors for students to consume junk food regardless of their knowledge on harmful effect and complications of junk food consumption.

Practical Implications: The findings of this paper seeks to urge the concerned authorities to admit the fact that, the course with small topic regarding effects of junk food consumption alone cannot minimize the practice of junk food consumption among students, banning the advertisement which encourage the students to consume junk food is very crucial and to conduct the awareness programme regarding harmful effect of junk food consumption among all level of students through media and course work is necessary to prevent malnourishment and complications of junk food among students.

Originality: This is the first survey regarding knowledge and practice on junk food consumption among students of educational institutions, and the area (educational institutions) were selected to collect the data from the students of various background (age, education level, ethnicity etc.) at same time, so that the results can be generalized among students.

1. INTRODUCTION

"Junk food" generally refers to foods that contribute lots of calories but are of limited nutritional value. Junk foods are usually commercially prepared and packaged, like candy bars, chips, snack cakes, cheese puffs, and cookies. With worldwide marketing and advertisement in 21st century "junk food" has gone global. It can be seen almost everywhere in grocery and convenience stores, fast-food restaurants, on television usually looking very appealing. (Magee, 2007).

Junk food contain substantial amounts of trans fat, added sugars, salt and are high in energy but contribute only few micronutrients to the diet (Rangan et al., 2008; "This Is Your Body on Fast Food - The Washington Post," 2018). Consumption of poor-quality diet including junk food is associated to a higher risk of obesity, heart disease and stroke, digestive issues, diabetes, cancer, and early death ("This Is Your Body on Fast Food - The Washington Post," 2018).

Adolescents are nutritionally vulnerable considering their soaring nutritional requirements for growth, eating habits and their susceptibility to environmental influences (World Health Organization, 2005). As working parents do not have much time for preparing the meals to their children, very few school and university students carry with them homemade food, and most of the students remain with no alternative option except taking junk food (Das, n.d.; "Junk Food Affects Students' Health-374929," 2019). It is more likely that students who eat extra junk food may suffer from health issues. Junk food can have a detrimental effect on levels of energy and mental well-being and also keeps adolescents at higher risk of chronic diseases ("Junk Food Affects Students' Health-374929," 2019; World Health Organization, 2005).

Adolescent Nutrition Survey in Nepal, 2014 reveals that 71 percent of male adolescents and 59 percent of female adolescents were undernourished, and majority of adolescents (94 %) reported that they usually eat junk or processed food (Aryal et al., 2016).

Consumption of large quantities of junk food is associated with a drastic reduction in the consumption of nutritious foods such as milk, fruits and vegetables (Laxer & Janssen, 2014). High revenues, rapid urbanization, free home delivery, mouthwatering commercials and foreign cuisines have led to growing trend in the consumption of junk food (Mandoura et al., 2017). Some evidence even marks junk foods as being as addictive as alcohol and drugs ("This Is Your Body on Fast Food - The Washington Post," 2018).

The important contributing factors to junk food consumption are nuclear family, working mother, socioeconomic status, and easy access to the fast-food shop, food taste and quick service in the shop (Das, n.d.). In the last three decades, junk food intake among teenagers has increased by fivefold. This is because of its good taste, easy access, affordable cost, variety of choices, taste (Stuckler et al., 2012).

A rise in the intake of junk food is a global phenomenon with the prevalence rate of around 70% (Rouhani et al., 2012; WHO, 2003). Among all age groups and particularly in young adults, it is considered an emerging major public health problem (Bauer et al., 2009; Rouhani et al., 2012).

Food Institute's analysis of data from the Bureau of Labor Statistics depicted that millennials alone spend 45 percent of their budget's food dollars on eating out. The average American family now spends half their food budget on restaurant food, in contrast to past 40 years. In 1977, only 38 percent of family food budgets were spent eating outside the home. An occasional consumption of fast food won't hurt, whilst a habit of eating out could have detrimental health effects (Pietrangelo, 2018).

In context of Nepal, junk food and its health impacts is an burning issue and poor nutritional value of junk food is in lime light which supports that poor nutritional value in children's diet can undermine the strength that children need for studying, interacting with family, participating in sports and games, making friends, or simply feeling good about themselves (Kaushik et al., 2011; Resource Centre for Primary Health Care, 2013).

In the absence of sound policies, strategies and strict labelling criteria, nutritionally void products claim to be enriched with vitamins, calcium, minerals, and iron, whilst ignoring the fact they are laden with artificial colors, preservatives, emulsifiers and flavors, excess amount of salt, sugar and unhealthy fats. On the other hand, for decades most industrialized and developed countries have been raising the debate and confining the junk food manufacturers and fast-food companies. Similarly, growing public health concern and awareness in the public has also forced them to use more wholesome raw materials. However, self-regulation by the advertising industry is not working (Sherpa, 2018).

School-going kids who consume junk food were found to have half of their calories from high-sugar, high-salt and high-fat snacks in contrast to those who consumed them in less quantities (Nepali Sansar, 2019). Junk

food contains sweetening agents, preservatives, added color and in top of that alluring advertisements makes children addicted to such foods and they deny eating homemade foods and skip their meal. However, these foods do not have sufficient nutritive value to fulfill their dietary needs and at time when good nutrition is of utmost priority in children for their proper growth between the ages of 6-12 years, junk foods do not have sufficient nutritive value to fulfill their dietary needs. (Ashakiran & Deepthi, 2012; Neupane, 2014).

2. METHODS

2.1. DATA SOURCE

This study entitled “Knowledge and practice on junk food consumption among higher level students at selected educational institutions of Kathmandu, Nepal” was basically based on quantitative method for primary data collection and analysis of those collected data was done using different descriptive statistics methods obtained from educational institutions using semi-structured questionnaire as the tool for data collection.

2.2. STUDY DESIGN AND SETTING

A descriptive cross-sectional study was conducted among 367 randomly selected students at educational institutions (Collins and Glossa Prep) of Kathmandu, Nepal. Data was collected using semi-structured questionnaire by self-administered method. The filled questionnaires were checked for correctness and completeness and coded serially. The collected data was entered into Epi-data 3.0 and data analysis was carried out in SPSS version 22.

2.3. DATA ANALYSIS

Descriptive statistics (frequency and percentage) was used to describe demographic data, knowledge, prevalence, practice and influencing factors for junk food consumption. A correlation analysis was performed to quantify the strength of association between the level of knowledge and selected socio – demographic variables of respondents.

2.4. INCLUSION CRITERIA

Students taking preparation classes in Collins and Glossa Prep Institutions (Institutions located at Putalisadak, Kathmandu where students take preparation classes for GRE, IELTS, SAT etc.) were under inclusion criteria.

3. RESULTS

3.1. SOCIO-DEMOGRAPHIC CHARACTERISTICS

Nearly half (42.5%) of the respondents were of the age group 15 to 20 years. Around half (52.0 %) of the respondents were female, majority of the respondents were from nuclear family. Two third of the respondents (69.2%) were Hindu, around half of the respondents were Brahman. Majority of the respondent’s father (39.5%) had higher secondary level of education whereas least (4.4%) were uneducated. Likewise, majority of the respondent’s mother (28.9%) also had higher secondary level of education and minority (12.0%) were illiterate. Highest number of respondent’s father (49.6%) were engaged in service and the highest number of respondent’s mother were house manager (40.1%).

Majority of the respondents (45.5%) got information regarding junk food from internet whereas minority (4.10%) from friends. Likewise, majority of the respondents (36.8%) lived with their parents whereas minority of the respondents (6.5%) lived with their friends.

Table 1: Level of knowledge of the respondents (n=367)

Variable	Frequency	Percentage (%)
Level of knowledge		
Poor knowledge	166	45.2
Average Knowledge	131	35.7
Adequate Knowledge	70	19.1
Total	367	100

Around half (45.2%) of respondents had poor level of knowledge, and only 19.1% of respondents had adequate knowledge regarding harmful effects of junk food consumption. (Table 1)

3.2. PREVALENCE OF JUNK FOOD CONSUMPTION

All of the respondents (367) consume junk food. This data clearly shows that all of the students consumed junk food regardless of their knowledge regarding harmful effect of junk food consumption.

Table 2: Practice of junk food consumptions of the respondents (n=367)

Variable	Category	Frequency	Percentage (%)
Family member consumes junk food	Yes	193	52.6
	No	12	3.3
	Sometime	162	44.1
Consume junk food as an alternative to breakfast	Yes	116	31.6
	No	28	7.6
	Sometime	223	60.8
Going outside from home for dinner	Yes	78	21.3
	No	46	12.5
	Sometime	243	66.2
Nutritional information influence decision to buy junk food	Yes	175	47.7
	No	192	52.3
Checking expiry date while purchasing junk food	Yes	190	51.8
	No	177	48.2
Checking proper packing while purchasing junk food	Yes	104	28.3
	No	263	71.7
Checking the nutrient levels in the junk food	Yes	24	6.5
	No	343	93.5

Half of the respondent's family member consumed junk food on daily basis, more than half of the respondent (60.8%) consumed junk food as an alternative to breakfast sometime, likewise more than half of the respondents (66.2%) goes outside from home for dinner sometimes.

Nutritional information displayed on package influenced to buy junk food for around half of the respondents (47.7%), moreover, around half of the respondents (48.2%) did not check expiry date while purchasing junk food. Majority (71.1%) of respondents did not check proper packing while consuming junk food and almost all of the respondents did not check nutrient levels in the junk food. (Table 2)

Table 3: Factors associated for junk food consumption (n=367)

Variables	Category	Frequency	Percentage (%)
Reason for consuming junk food	Save time	52	14.2
	Changing lifestyle	32	8.7
	New taste	83	22.6
	Influence of advertisement	89	24.3
	Easy availability	111	30.2
Favorite junk food	Momo, Pizza, Berger, Fries	100	27.2

	Chatpate, Panipuri, chips	101	27.5
	Icecream, chocolates, candies	52	14.2
	Soft drinks, coke, pepsi, soda	114	31.1
Place for consuming junk food frequently	At home	29	7.9
	At college	141	38.4
	At friend's house	40	10.9
	At restaurant	10	2.7
	Street food stall	147	40.1
Instantly prepared junk food available at home	Always	4	1.1
	Mostly	73	19.9
	Sometimes	266	72.5
	Never	24	6.5

Majority (30.2%) of the respondent's reason for consuming junk food was easily availability of junk food, likewise majority of respondents (27.5%) favorite junk foods were Chatpate, Panipuri, chips etc. Almost half of the respondent's (40.1%) place for consuming junk food frequently was street food stall. Also instantly prepared junk food was available sometimes for more than half of the respondents (72.5%). (Table 3)

3.3. TIME OF JUNK FOOD CONSUMPTION AMONG RESPONDENTS

While travelling majority of the respondents(44.4%) always consumed junk food, while studying majority of the respondents(36.2%) mostly consumed junk food, while staying alone majority of the respondents (43.1%) often consumed junk food, while staying with friends majority of the respondents (55.0%) sometimes consumed junk food, while staying with family majority of the respondents (73.8%) sometimes consumed junk food, and on special occasion majority of the respondents(58.0%) sometimes consumed junk food.

3.4. PERSONAL VIEW ON INFLUENCING FACTORS FOR JUNK FOOD CONSUMPTION AMONG RESPONDENTS

Main influencing factors for junk food on personal view were junk foods being more delicious than home-cooked foods (54.5%), quick to prepare and buy (58.9%), energetic (66.5%). Because of the good taste of junk food many students were influenced to consume junk food.

3.5. SOCIAL FACTORS RELATED TO INFLUENCING FACTORS FOR JUNK FOOD CONSUMPTION AMONG RESPONDENTS

Main influencing factors for junk food consumption on social factors were to spend time with friends and to socialize and entertain (44.7%), extensive advertisements on fast foods (42.2%). Advertisement and modernization have increased the junk food consumer in recent years.

3.6. FAMILY FACTORS RELATED TO INFLUENCING FACTORS FOR JUNK FOOD CONSUMPTION AMONG RESPONDENTS

Main influencing factors on family factors were junk foods being cheap and convenient (40.9%), parents' interest in fast food (57.8%), reluctance to carry home-cooked food to school or other places (100%), preparing food at home on a regular basis (51.8%), high cost of eating traditional food out of home (51.8%).

3.7. ASSOCIATION OF LEVEL OF KNOWLEDGE WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES OF RESPONDENTS

There was significant association of respondent's gender, ethnicity, type of family, father's education, mother's education, father's occupation, mother's occupation with level of knowledge on junk food consumption.

4. DISCUSSION

This study showed that around half (45.2%) of respondents had poor level of knowledge, and only minority of respondents (19.1%) had adequate level of knowledge which is in contrast with the study done by Prabhu Priya, Sumit Kumar et. al on "A study to assess the knowledge and practice of junk food consumption among pre university students in Udupi, Taluk, Karnataka India" (2018), which revealed that more than one quarter (31.87%) of the participants had insufficient knowledge, less than half (41.88 %) of the participants had moderate knowledge, and 26.25 % of the participants had ample knowledge of the impact of consumption of fast food (Khongrangiem et al., 2018).

In the study done by Lt Col Mercy Antony, Lt Col R K Bhatti et.al on "Junk Food Consumption and Knowledge about its Ill Effects among Teenagers: A Descriptive Study" (2013), showed that 7.21% adolescents had really good knowledge and 46.15% adolescents had an average understanding of the adverse effects of junk food which is in contrast to the finding of present study where nearly half of the adolescents (45.2%) had poor knowledge and few - respondents (19.1%) had adequate knowledge regarding the effects of junk food consumption. (Col et al., 2013).

This study provided that all of the respondents consumed junk food which is almost similar with the study done by Habib Arif et.al on Prevalence, Determinants and Consequences of Fast-Food Consumption among college students in Abha-Aseirthe, which depicted that point prevalence of fast food consumption of the undergraduate applied medical student was 89% (Habib et al., 2016).

In a study done by Najila Mandoura (2017) on "Factors Associated with Consuming Junk Food among Saudi Adults in Jeddah City", showed that the deliciousness of the local foods make one to consume the junk foods which was similar to this study where more than half of the participants (54.5%) consumed junk foods as it was more delicious than the home-made foods. Moreover, the reason for preferring the junk food was to save time which was close to our study where 14.2% of the participants preferred junk foods as it saves time. Also, soft drinks were the most commonly used beverages in that study which is similar to this study in which 31.1 % of the participants consumed soft drinks as their favorite junk food (Mandoura et al., 2017).

In the study done by Banik R on "Fast food consumption and obesity among urban college going adolescents in Bangladesh (2019) it was reported that, majority of the participants (35.9%) consumed fast foods with friends which was slightly similar to this study where more than half of the participants (55%) consumed junk food while staying with friends. More than one quarter of the participants (26.8%) consumed fast food for breakfast whereas this study depicted that more than half of the participants (60.8%) consumed junk food as an alternative to breakfast (Banik et al., 2020).

In the study done by Pahari S et.al (2020) on "Perception and factors influencing junk food consumption among school children of Pokhara", it was highlighted that 6.8% of the respondents showed various reasons for junk food consumption such as easy availability, cheaper products in the market whereas in this study 16.3% of the participants showed easily availability of the junk food as a reason for junk food consumption. Moreover, the study indicated that there was a statistical association between the gender of the students and the preferred choice of junk food while the findings of this study showed significant association of level of knowledge with gender and type of family of the respondents. Furthermore, advertisement was found to be one of the major influencing factors (13.6%) for junk food consumption among children while nearly half of the participants (42.2%) also found advertisement as the influencing factor in this study (Pahari & Baral, 2020).

In the study done by H. Ansari et.al on "Fast food consumption and overweight/obesity prevalence in students and its association with general and abdominal obesity" (Sep, 2018) pinpointed that overall, 72.4 percent consumed fast food. These students have consumed at least one kind of fast food. The most popular form of fast-food consumption was burger (44.4 %), pizza (39.7%), and fried chicken (13.8%), respectively. However, in the present study it was depicted that 100% of the higher level students consumed junk food and chatpate, panipuri, chips were the favorite junk food consumed by students. (Mohammadbeigi et al., 2018).

A study done by Vinay Gopal (January,2012) on "Student's perspective on junk foods " showed that 44% of the participants do not take junk food as an alternative to breakfast which was in contrast to this study where 60.8% of the participants consume junk food as an alternative to breakfast. Also, the reason for consuming junk food was changing lifestyle by 14.2% of the participants while 8.7% of the participants chose changing lifestyle as the reason for consuming junk food in this study. Moreover, 16.2% of the participants check the label of the junk food whereas in this study very few participants (6.5%) check the label of the junk food (Gopal et al., 2012).

A study done by Sapkota SD (May-August, 2017) on Junk Food Consumption among Secondary Level Students, Chitwan highlighted that 90.1% of the participants consumed junk food as it tastes better while in this study 22.6% participants consumed junk food as it gives the new taste. In addition, less than half (15.5%) of the participants consumed junk food due to the influence of TV advertisement similarly this study showed that, 24.3% of the participants consumed junk food because of TV advertisements. Also, more than one quarter (35.9%) of the participants frequently consumed chat pate than other junk foods uniformly, this study showed that more than one quarter of the participants (27.5%) consumed chatpate, panipuri, chips . (Sapkota & Neupane, 2017).

5. CONCLUSION AND POLICY IMPLICATIONS

Nepal has no strict policies or advertising standards to regulate outlandish health claims made by manufacturers of packaged foods, fizzy drinks and franchised fast-food outlets. Public awareness of the health impact of sugar consumption is growing in the West with books like Case Against Sugar, but there are no such campaign in Nepal. Regardless of knowledge on harmful effects of junk food consumption, students are consuming it, because of time constraint, easy availability of junk food, advertisement etc. So along with awareness program more effective program and policies should be implemented to stop the practice of junk food consumption, and visual program regarding harmful effect of junk food consumption should also be encouraged through television or internet.

6. DIRECTIONS FOR FUTURE RESEARCH

Various cross-sectional studies have been conducted regarding knowledge and practice of junk food consumption as shown in this study, but comparative studies can be done on this topic to assess the health and nutritional status among students who consume and do not consume junk food. Also, longitudinal studies can be done to assess the growth and development of children and adults who has the history of regular junk food consumption.

7. EXPECTED OUTCOMES

This study examined the knowledge, prevalence and contributing factors for junk food consumption among secondary level students. The findings of this study will be useful for the future researchers to fulfil the existing gap and will act as a ladder for those working in the field of health and nutrition. Ultimately, it will aid in the development of interventions and programs accordingly as per need at the policy level.

7.1. ETHICAL CONSIDERATION

The study was conducted after the ethical permission from department of Sociology and Anthropology, Ratna Rajyalaxmi Campus, Tribhuvan University. Similarly, written permission was taken from the concerned Educational Institutions of Kathmandu (Collins Institution and Glossa Prep Institution), before the survey, purpose of the study was clarified to each participants and beforehand consent was taken from them. Those who refused to provide consent were not influenced by any means to participate in the study. Confidentiality and anonymity were emphasized and maintained and collected data was used only for this research purpose without any modification.

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CONFLICT OF INTEREST

The authors have declared that no competing interests exist.

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