

# Junk Food Consumption and Knowledge about its Ill Effects among Teenagers: A Descriptive Study

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**Abstract:** *Background:* Adolescents comprise approximately one-fifth of the world's population and most of them (84%) live in the developing countries. Adolescents are at risk for nutritional problem both from a physiological and a psychological standpoint. Junk food consumption and obesity in childhood is emerging as a global epidemic. There are numerous psychological, physical and economic consequences of childhood obesity. The aim of the study was to assess the prevalence of junk food consumption and knowledge of adolescents regarding its ill effects and also factors contributing towards this public health concern. *Methods:* 208 students from four English medium schools in Pune District of Maharashtra (India) were selected by purposive random sampling and students from class VII to XI were selected by disproportionate random sampling for the study. Data was collected using structured questionnaire. *Result:* Out of 66.8% who consumed junk food, 50% of teenagers consumed junk food 3-5 times and 1-3 bottles of aerated drinks per week. 46.15% teenagers had average knowledge about ill effects of junk food. *Conclusion:* The general awareness of teenagers regarding ill effects of junk food is relatively average or good, but the problem lies in the fact that they do not translate this knowledge in to good food behavior. There are various factors which lure the young adult to consume junk food which invites attention from parents, school authorities and legislative bodies.

**Keywords:** Junk food, teenagers, Ill effects, knowledge and prevalence

## 1. Introduction

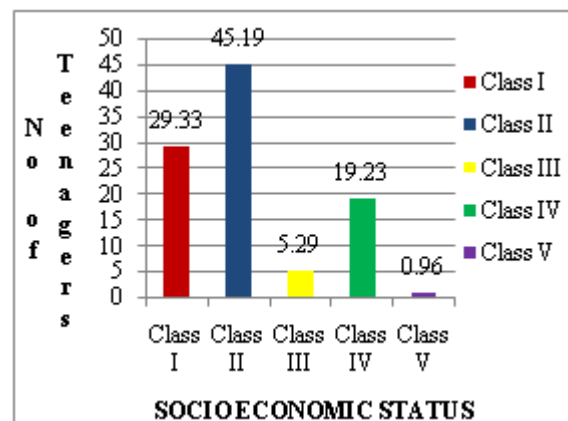
Adolescents comprise approximately one-fifth of the world's population and most of them (84%) live in the developing countries<sup>1</sup>. Psychosocial changes, such as the adolescent's search for independence and identity, concern for appearance and active lifestyle can have a strong impact on nutrients intake and food choices. Junk food consumption and obesity in childhood has been described as a global epidemic not only in developed but also developing countries. There are numerous psychological, physical and economic consequences of childhood obesity. Conditions such as Type II DM, hypertension and hypercholesterolemia, which were noted primarily in adults, are becoming more common among children with an increase in prevalence in obesity<sup>2</sup>. As today's children are the citizens of tomorrow, there is a need to address the issues affecting their health. The present study was conducted to assess the prevalence of junk food consumption and knowledge about ill effects among adolescent school children.

## 2. Materials & Methods

The study was a cross sectional descriptive study using survey method with a sample size of 208. Data was collected using structured questionnaire from four urban English medium schools in Pune Dist of Maharashtra State ( India) selected by convenient sampling. The target populations identified were teenagers between the age group 13 years to 17 years studying in VII to XI classes. Disproportionate stratified random sampling was used and 52 students from four strata selected by computer generated random table. Socio demographic variables were analyzed using descriptive statistics and association between variables were elucidated using chi square, ANOVA and Mann Whitney U test.

## 3. Result

In the study 87% belonged to the age group of 14 – 15, males were 49.04% and female teenagers were 50.06%. Around 60% teenagers' mothers were housewives. 61.06% of teenagers belonged to high income group and 1.92% teenagers were from low income group. 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.

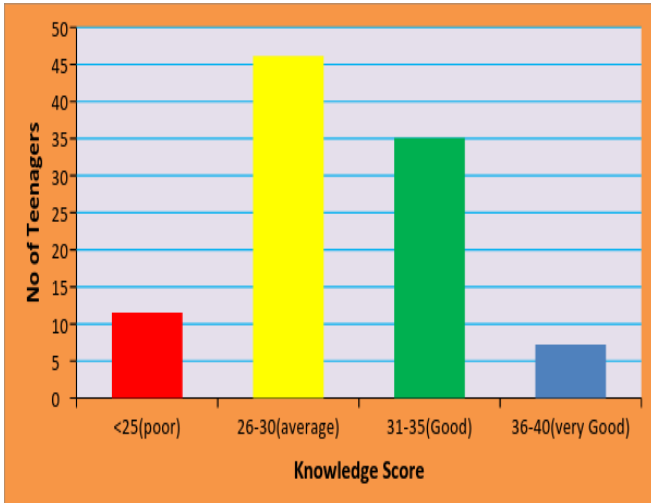


**Figure 1:** Distribution of teenagers as per Socio economic class (Kuppuswami classification)

Out of 66.83% teenagers who consumed junk food 50% teenagers consumed junk food sometimes (i.e. 1-5 times per week) and 0.5% were daily consumers. 57.69% consumed junk food at home compared to 29.33% who consumed junk food from school canteen. 50% of teenagers consumed 1-3 bottles/cans of aerated drinks per week, 2.88% teenagers consumed more than 7 cans/bottles per week and 23.56% denied consuming any aerated drinks. (Table 1)

**Table 1:** Freq of junk food and aerated drink consumption per week among subjects

Parameter	Freq	No of Teenagers	%
Freq. of junk food consumption per week	Never	69	33
	Some times (1-5)	105	50
	>5 times	33	16.50
	Daily	1	0.50
No: of aerated drinks/wk	0	49	23.56
	1 – 3	104	50
	4 – 7	49	23.56
	>7	6	2.88



**Figure 2:** knowledge of teenagers regarding ill effects of junk food

Figure 2 shows 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 mean knowledge score of teenagers aged 12 – 13 years was  $28.23 \pm 5.28$  SD, Mean knowledge score of teenagers aged 14-15 years was  $30.50 \pm 3.68$  SD and mean knowledge score of teenagers aged 16-17 years was  $30.50 \pm 4.075$  SD. 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. Mann Whitney ‘Z’ score was used to elicit relationship between knowledge and prevalence of junk food consumption and the results revealed no relationship ( $p > 0.05$ ). No association was seen between frequency of consumption of junk food with age, gender, pocket money and working status of mothers. Statistical analysis using Chi square shows there is a significant relationship between socio economic class and consumption of junk food. ( $p=0.001$ )

**Table 3:** Association between socio economic class and junk food consumption

Socio economic class	Junk food consumption		Total	%
	Yes	No		
I (upper Class)	48	13	61	29.3
II ( Upper middle Class)	73	21	94	45.1
III ( Middle middle Class)	3	8	11	5.28
IV ( Lower Middle Class)	15	25	40	19.2
V ( Lower Class)	0	2	2	0.96
Total	139	69	208	100

## 4. Discussion

The result of the present study shows that 46.15% teenagers had average knowledge about ill effects of junk food compared to 11.54% teenagers who had poor knowledge. It is also appreciable that 7.21% teenagers had very good knowledge regarding ill effects of junk food and 11.54 subjects had poor knowledge.

Various studies have shown that the general awareness of teenagers regarding healthy eating habits is relatively average or good, but the problem lies in the fact that they do not translate this knowledge into good food behavior. Mary Story and Michael D Resnick (2000) studied the eating habits of teenagers using small group discussion format and qualitative survey methods among 900 high school students in Minnesota. The results revealed that majority of the students agreed to the fact that they are not eating right but they felt that diet is not “too big a bother” and they are too busy and pressured to think much about food<sup>3</sup>.

Many teenagers have a general idea that junk food is unhealthy but lacked the specific knowledge about the ingredients, preservatives and various other aspects of the ill effects of junk foods. This concept is evident in the study conducted by Gopal et al (2012). In the study, about 85% of the respondents considered junk food as unhealthy compared to 15% who considered junk food as healthy. 39% were ignorant about the nutrients fact labels, about chemicals used in junk foods and their safety level information, 25% of the students were aware of it compared to 33% of students who were unaware, 42% of the students had specified that they had some idea about the chemicals and their safety levels. When asked about the harmful effects of chemicals in junk foods, 49% of the students said that they were not aware of the consequences<sup>4</sup>.

Some studies prove that teenagers have very poor knowledge regarding ill effects of junk food. Sharma V conducted a study in 3 selected schools at District Jalandhar (2013) among 60 students regarding knowledge of teenagers regarding harmful effects of junk food. The result revealed that 81.67% had below average knowledge regarding harmful effects of junk food followed by 18.33% adolescents who had average knowledge and no adolescent had good knowledge about the harmful effects of junk food<sup>5</sup>.

Out of the 208 teenagers who participated in the study 66.83% teenagers consumed junk food compared to the remaining 33.17 who denied consumption. The frequency of consumption as revealed in the study is as follows. 50% teenagers had junk food 1-5 times per week (sometimes), about 16.5% consumed junk foods more than 5 times a week and 0.5 % consumed junk food daily. It is also evident from the study that 50% of teenagers consumed 1-3 bottles of aerated drinks per week compared to 2.88 % teenagers who consumed more than 7 cans/bottles per week and 23.56% teenagers who denied consuming aerated drinks. The study revealed that maximum teenagers 57.69% consumed junk food at home compared to 29.33% who consumed junk food from school canteen, 40.87 at fast food corners and 10.58% sharing from their friends.

J Mohan et al (2012) conducted a cross sectional study among 410 mid adolescent school children in Nagpur(India). The results revealed that 96% were consuming junk foods. 52% consumed more than one junk food consumption per week of which maximum study subjects 83.2% consumed chocolates followed by candies, pizza and noodles, 43% subjects consumed multiple junk foods per week followed by 17.8 % who consumed junk foods 3 times a week<sup>6</sup>.

Hyun-Sun Seo (2011) et al conducted a study among 354 middle school children in Seoul. This study found that average monthly frequency of fast food consumption to be 4.05 times (4.25 among boys and 3.83 among girls). According to their survey 62.5% of middle school students consumed fast food more than once per week. Hamburgers were the fast food most often consumed at 1.05 times per month, closely followed by fried chicken at 1.02 times per month and pizza at 0.97 times per month<sup>7</sup>.

Wilson et al (2009) conducted a study to examine the influences on soft drink and fast food consumption among adolescents as part of a cross-sectional survey of 2,719 adolescents (aged 11-16) from 93 randomly selected schools in New South Wales, Australia. The findings of the study support the results of the present study. Daily soft drink consumption was seen in over half of the boys and girls in all Grades reporting that they drank at least 250 ml each day<sup>8</sup>. Same results were revealed in a study conducted by Gopal et al at VIT university, Vellore, Tamil Nadu(India-2012) among 344 students. It was found that 20 % students had five times junk food consumption per week, 11 % of students had junk food once a week.

The present study was aimed at assessing the knowledge regarding ill effects and prevalence of junk food among teenagers. The study also explored various socio demographic variables which contributes to or which have a positive association with junk food consumption among teenagers. Though no relationship was established in the present study between knowledge and prevalence with gender, pocket money, education of parents, grades in which they are studying etc, significant association was seen with age and socio-economic status of the teenagers.

Bargoita A et al (2013) pointed out that eating out with peers and eating from school canteen was related with higher consumption of 'junk type of foods'. Girls and younger adolescents and those whose mothers had a higher education level made healthier food choices. Wilson ED et al (2007) and colleagues found that daily soft drink consumption was more common in boys than girls. The prevalence of consumption of meals from fast food outlets at least once/week was higher among boys than girls, suggesting that junk food consumption was more among boys<sup>9</sup>.

Pocket money of adolescents affects junk food consumption in children, says Dr Vaidya (2013). Though a negative correlation was seen in the present study, Dr Vaidya claims that more than 60 percent of the respondents in the age group of 16 and 18 years in her study spend their entire pocket money on fast foods. Among these students 32.8 % consumed fast foods four times a week, 28% thrice, 25.2% had twice and 14% once in a week.

The present study results depicted that 57.69% teenagers consumed junk food at home compared with 29.33% who had junk food from school canteen, 40.87 % at fast food counters and 10.58 % sharing from friends<sup>10</sup>. It is consistent with the findings of Kaur M (2008) and her colleagues where 75% of the parents bought junk foods for their children at least once a week compared to 23.52% of the children who purchased junk food for themselves as these were readily available in the school premises. In the Indian scenario, improved marketing strategies and increased transport facilities have brought food materials like noodles and chocolates to even remotest villages. Television is one such medium for promoting many of these food items, says the researcher.<sup>11</sup>

High socioeconomic status was found to have a significant association (P=0.001) with junk food consumption among teenagers in the present study. This finding is supported by the findings of the Joshi et al (2012) where majority of their study subjects (96%) were consuming junk foods and the high prevalence was partly attributed to their socioeconomic status as evidenced by higher junk food consumption (89.2%) among either upper or upper-middle socio-economic class<sup>3</sup>.

## 5. Conclusion

Junk Food consumption and obesity in childhood has been described as a global epidemic not only in developed countries but also developing countries. Because childhood obesity often persists until adulthood, an increasing number of adults will be at an increased risk for DM, cardiovascular disease, osteoarthritis and certain types of cancer. Therefore prevention of childhood obesity has now been recognized as a public health priority. Identifying the magnitude of the junk food prevalence and factors promoting its consumption is a primary step towards planning multipronged strategies to address this growing health hazard thus protecting our teenagers from the long term ill effects of junk foods.

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