



Original Research Article

A Study to Assess the Level of Knowledge Regarding the Impact of Junk Food Among Middle Adolescents in Selected School

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Abstract: Adolescence, particularly the middle stage (15–17 years), is a critical period for establishing long-term dietary habits. Junk food consumption among adolescents has increased worldwide due to factors such as media influence, peer pressure, and urbanization. This study aimed to assess the level of knowledge regarding the impact of junk food among middle adolescents in a selected school and to identify the association between knowledge levels and selected demographic variables. A descriptive cross-sectional research design was adopted, with a purposive sample of 80 adolescents aged 15–17 years. Data were collected using a structured questionnaire comprising demographic details and knowledge-based questions. Results revealed that 8.75% of participants had excellent knowledge, 90% had moderate knowledge, and 1.25% had poor knowledge. A statistically significant association was found between knowledge levels and age ($p = 0.000025$), while no significant association was observed with other demographic variables such as gender, income, family type, or source of information. The findings highlight the need for targeted school-based health education programs to bridge knowledge gaps and encourage healthy dietary behaviors among adolescents.

Keywords: Adolescents, junk food, knowledge, nutrition, obesity, school health.

INTRODUCTION

Human life-finding growth stages start at puberty. This is the time of transition from childhood to full adult status and normally ranges from 10-up to 19 years. With heavy physiological, psychological, emotional, and social changes occurring all simultaneously, middle adolescence becomes a critical time since adolescents start to take enhanced responsibility for most of their decisions, including those related to food choices, usually from 15 to 17 years of age. The development of eating habits at this age is very crucial from a health perspective, as the consumption patterns during adolescence are maintained till one reaches adulthood. Hence, this is the stage in which one should start focusing on healthy eating habits (Marlow & Redding, 2009;

Srilatha & Rani, 2016).

The modern food environment is characterized by the increased availability, affordability, and marketing of processed food. Junk foods are essentially foods compromising energy from fats, sugars, and salts with low content of essential nutrients such as vitamins, proteins, and minerals (Sharma & Kaushik, 2021; Harvard T.H. Chan, 2021). Even though these foods are good tasting, easy to prepare, and are marketed aggressively, especially to children and adolescents, the overeating of such foods is associated with several negative health outcomes like obesity, diabetes, hypertension, cardiovascular ailments, and even impaired academic performance due to fatigue and reduced concentration (Sahoo et al., 2015; WHO, 2020).

Repeated ingestion of these foods lays the foundation for an unhealthy pattern of food preference, which is concerning as this predisposes an individual to a lifetime risk of developing non-communicable diseases.

Increased consumption of junk food among adolescents has become a public health concern worldwide. A report by UNICEF (2021) stated that around 124 million adolescents worldwide were overweight or obese in 2022, indicating the alarming degree of the uprising dietary shift. Similarly, the Global School-Based Health Survey (2019) reported that 60% of adolescents in low- and middle-income countries consume fast food and sugar-sweetened beverages at least once a week. Other causes include pressure from peers, media influence, urbanization, and lack of knowledge about nutrition (Story & French, 2004).

According to NFHS-5, in India more than half of adolescents eat junk food at least once a week, with urban areas seeing higher consumption than rural ones. A rising trend in obesity among middle adolescents has been recorded by the Indian Council of Medical Research, with about 8% of these children being overweight or obese in 2020. Increased pocket money to children, easy access to fast food outlets near schools, and TV and mobile advertisements have all been cited as contributing factors to the changing food habits (Ministry of Health & Family Welfare, 2020). Moreover, state-level studies in Tamil Nadu show that over 50 per cent of middle adolescents take junk food regularly, unfortunately contributing further to adolescent obesity and other lifestyle-related disorders (Adalya, 2023).

The issue being so immense, quite a few adolescents do not have adequate knowledge about the ill effects of junk food. Earlier research (Goyal *et al.*, 2013; Sharma & Kaushik, 2021) suggested that adolescents may well acknowledge junk food to be unhealthy but such acknowledgment does not really convert into healthier choices. Hence, it becomes essential to ascertain the actual level of knowledge on the harm due to junk food among the middle adolescents and further areas where educational interventions could be imparted.

This study was conducted to assess the knowledge about the impact of junk food among late adolescents in a selected school. It also tries to find if variations in knowledge would be associated with demographic variables such as age, gender, type of family, and socio-economic status. In this direction, the existence of levels of knowledge and factors linked thereto is to be considered so as to help in the formulation of school-based nutrition education programs and awareness campaigns. These initiatives will eventually be undertaken to instigate healthier eating attitudes during adolescence, which will reduce non-communicable diseases and help in the long-term well-being of the youth population.

METHODOLOGY

“A descriptive cross-sectional research design was applied in this study to assess the level of knowledge of middle adolescence regarding the impact of junk foods.

The design was deemed appropriate as it collects data at just one point in time, allowing the researcher to determine knowledge level and investigate possible associations with demographic variables without manipulating the study environment”.

Setting of the Study

“The research was carried out in a selected school located in Kalpakkam, Chengalpattu district, Tamil Nadu, India. This setting was chosen based on accessibility, cooperation of the school authorities, and the presence of adolescents within the defined age group”.

Population and Sample

“The target population comprised middle adolescents between the ages of 15 and 17 years”. Adolescents in this stage are particularly vulnerable to adopting unhealthy dietary habits due to peer influence, media exposure, and the easy availability of junk food. A total of 80 students were selected as the study sample. The sample size was calculated using a finite population correction formula to ensure adequacy and reliability of the results.

Sampling Technique

Purposive sampling was adopted to select participants who met the study’s inclusion criteria. The inclusion criteria consisted of adolescents aged 15 to 17 years, studying in the selected school, able to read and understand either English or Tamil, and willing to participate with informed consent. Exclusion criteria included students who were absent during data collection, those unwilling to participate, or those with conditions that could hinder participation.

Research Instruments

“Data were collected using a self-structured questionnaire prepared by the investigator after an extensive review of literature. The tool was divided into two sections”:

- “**Section A** included demographic details such as age, gender, type of family, monthly family income, residence, pocket money, and source of information”.
- “**Section B** consisted of 10 multiple-choice and true/false questions designed to assess knowledge regarding the health impacts of junk food”.

The scoring system classified knowledge levels as:

- 8–10 points = Excellent knowledge
- 5–7 points = Moderate knowledge
- 0–4 points = Poor knowledge

Ethical Considerations

“Ethical approval was obtained from the Institutional Human Ethics Committee (IHEC) of Chettinad Academy of Research and Education. Written informed consent from parents and assent from adolescents were secured before data collection. Participants were informed about the study objectives, assured of confidentiality, anonymity, and their right to withdraw at any stage

without consequences".

Data Collection and Analysis

Data collection was carried out over one week within the school premises. After explaining the study purpose, the questionnaire was administered to participants in a classroom setting. "The collected data were coded and entered statistical software. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize knowledge scores and demographic details. Inferential statistics, specifically the Chi-square test, were applied to examine associations between knowledge levels and demographic variables".

RESULTS

The purpose of this study was to assess the level of knowledge regarding the impact of junk food among middle adolescents and to examine associations between knowledge levels and selected demographic variables. Data were collected from 80 participants using a structured questionnaire. The findings are presented below in relation to demographic details, overall knowledge scores, and statistical associations.

Demographic Characteristics

The sample consisted of 80 adolescents aged between 15 and 17 years. The majority of respondents (73.8%) were 16 years old, followed by 22.5% who were 17 years old, and only 3.8% aged 15 years. Gender distribution showed a slight predominance of females (55%) compared to males (45%). With respect to family type, 55% of the participants belonged to joint families, while 45% lived in nuclear families.

Family income data revealed that nearly half of the adolescents (47.5%) came from households with a monthly income of ₹21,000–₹35,000. About 36.3% reported family income between ₹36,000–₹49,000, 13.8% had income above ₹50,000, and only 2.5% reported less than ₹20,000. Regarding parental employment, 42.5% of families were employed in the private sector, 27.5% in government service, and 30% in other forms of employment.

In terms of residence, 32.5% of adolescents lived in semi-urban areas, 32.5% in rural areas, 25% in semi-rural regions, and only 10% in urban areas. Pocket money distribution showed that the majority (68.8%) received less than ₹100 per week, while 31.3% reported receiving more than ₹100 weekly. Accessibility to junk food outlets was high: 42.5% reported far accessibility, 27.5% near accessibility, and 30% indicated no direct accessibility. Mobile phones (42.5%) were the most common source of information on food and health, followed by newspapers (30%) and television (27.5%).

Knowledge Levels

The analysis of knowledge scores revealed that most middle adolescents had only a moderate understanding of the impact of junk food. Out of 80 participants, 72 (90%) scored within the moderate knowledge range (5–7 points). Seven participants (8.75%) achieved excellent

knowledge (8–10 points), while only one participant (1.25%) scored in the poor knowledge category (0–4 points). The mean knowledge score was 1.93 with a standard deviation of 0.309, suggesting a relatively narrow variation in responses.

This distribution clearly indicates that while most students are aware of the harmful effects of junk food, their knowledge is not comprehensive. Few adolescents demonstrated in-depth understanding, and a small proportion remained poorly informed.

Association between Demographic Variables and Knowledge

Statistical analysis using the Chi-square test was performed to examine associations between demographic variables and knowledge levels. Among all variables, only **age** showed a statistically significant relationship with knowledge scores ($p = 0.000025$). Sixteen-year-old adolescents exhibited relatively better knowledge compared to their younger and older counterparts. Specifically, six students aged 16 demonstrated excellent knowledge, while 53 displayed moderate knowledge. Among 17-year-olds, only one achieved excellent knowledge and the rest fell within the moderate category. The three participants aged 15 displayed limited knowledge, with two in the moderate category and one in the poor category.

Other demographic factors such as gender, family type, family income, parental employment, residence, pocket money, accessibility to junk food outlets, and source of information did not show any significant association with knowledge levels ($p > 0.05$). For instance, both males and females primarily scored within the moderate category, with only a few achieving excellent knowledge. Similarly, higher family income did not necessarily correspond to better knowledge, nor did greater accessibility to junk food outlets.

Summary of Results

The results reveal that the majority of adolescents disclosed only a moderate understanding of the effect of junk food, with very few deemed to have excellent knowledge. Age was, however, the sole demographic factor directly associated with the level of knowledge; this shows that the knowledge could increase marginally with age during adolescence. Hence, other factors such as gender, family type, income, or source of information might have had no significant bearing.

Generally, the findings shed light on the knowledge deficit among adolescents on the adverse effects of junk food. This, therefore, calls for the institution of health education programs at school to create awareness and instill better food habits within this vulnerable age group.

ANALYSIS AND DISCUSSION

The current study was undertaken to assess the knowledge regarding the impact of junk foods among middle adolescents at a selected school, Kalpakkam. In all, 80 adolescents ranging in age from 15 to 17

participated. The data analysis revealed that most of the adolescents (90%) had a moderate level of knowledge about the impact of junk food, while only 8.75% of adolescents had excellent knowledge, and a mere 1.25% had poor knowledge. When considering demographic variables, age was significantly associated with knowledge scores, unlike gender, family income, type of family, and residence. These results provide valuable insight into the level of awareness prevailing among adolescents and the areas that need intervention.

Knowledge Levels among Adolescents

The higher incidence of moderate knowledge amongst participants potentially indicates that adolescents are marginally aware of the probable effects of junk food, but their knowledge is neither complete nor detailed enough to bring about some meaningful alteration in behaviors. This agrees with Sharma and Kaushik (2021), who found that most adolescents in their sample possessed only average knowledge about junk food consumption. Likewise, Goyal, Singh, and Singh (2013) found that Punjabi schoolchildren were aware of the bad impact of junk food on health, but consumption was still high due to peer pressure and easy availability.

The presently high lowest percentile of adolescents with excellent knowledge appears to be attributed to health education being lacking in this respect. Adolescents could be receiving information from various sources either on their mobile phones, through television, or peers. Yet, this information is often fragmented and relieved from structured scientific learning. This is in congruence with what Story and French (2004) found: advertisements are constantly bombarding the children with contradictory messages promoting junk food glamorization while health authorities are telling them to avert it. The mixed messaging thus leads to shallowness of knowledge rather than depth.

Association with Demographic Variables

Interestingly, age was the singular demographic variable to be found significantly associated with knowledge levels. The 16-year-olds in this study seemed to carry higher knowledge when compared to their younger and older counterparts. One of the reasons for this might be that those students tend to be more exposed to health education content as a curricular feature or that they may have attained such cognitive maturity to understand and appreciate health-related messages. This finding is consistent with Singh et al. (2022), who have indicated that knowledge in nutrition tends to increase with age, but only up to a certain stage of adolescence.

The finding that there was no significant association between gender and knowledge is contrary to some earlier studies like those of Haokip and Sonika (2016), which opined that female adolescents were mostly concerned about health and body image, thus becoming well aware of dietary issues. The lack of gender differentiation in the present study might imply that in the present context, male and female adolescents are equally subjected to junk food and health-related messages.

In the same way, income and type of family showed no association with knowledge levels. This means junk food consumption and awareness know no socioeconomic distinctions, pointing toward the thorough penetration of the fast-food culture in India. Sahoo et al. (2015) also went on to say that obesity and junk food consumption are not restricted to affluent groups anymore but are fast becoming common in other sectors due to the affordability and availability of processed foods.

Knowledge vs. Behavior Gap

The study was basically investigating knowledge. However, that knowledge does not always imply practice. Researchers have continued to argue (Lalnunthara & Kumar, 2020; Shanthini & Hubballi, 2021) that even when adolescents recognize the risks of junk food, they are still unable to choose healthy eating because of reasons of convenience, taste, and peer influence. This gap between knowledge and behavior is more worrying because adolescents within this age group are just developing habits that will probably continue with them into adulthood. The finding that 90% of participants had only moderate knowledge means that, if left unattended by intervention, they will remain vulnerable to unhealthy eating habits.

Implications for Health Promotion

The results of the study stress the importance of initiating health education programs in schools. Educational intervention programs may be initiated to create awareness, enable people to think critically about food choice, and promote practical skills towards healthier living. Awards see initiatives like school health programs under Ayushman Bharat (Ministry of Health and Family Welfare, 2020), wherein nutrition education is taught as a preventive method against obesity and lifestyle diseases. Furthermore, the sale of junk food near school premises should be banned, and failure that will fight misleading advertisements needs to be supported to nurture healthier behavior.

Parental roles are crucial in developing eating habits. Even if this study shows no significant association between family type and knowledge, when parents get involved in nutrition education, they have a positive effect on adolescent dietary practices (UNICEF, 2021). Hence, interventions should support adolescents, their parents, and their teachers in serving as role models.

Comparison with Global Evidence

At a global level, the trend observed in this study aligns with the trends found in various other countries. For example, in the United States, the research showed that, despite the understanding among adolescents that junk food is unhealthy, nearly 80% of them continued to consume fast food once a week (CDC, 2021). Similarly, the Food and Agriculture Organization (FAO, 2020)

In a nutshell, the discussion of the findings reveals that middle adolescents presently studied chiefly exhibit a moderate level of knowledge regarding the health impacts of junk food. Age is the only variable found to be significantly associated with knowledge levels. Other demographic variables appear unassociated with junk

food awareness; hence, such awareness remains moderate in all other subgroups. Yet, the existence of moderate knowledge alone sets warning signals for future dietary behaviors. These results only emphasize the pressing need for health education efforts that would be comprehensive and aided by schools and communities to cover all such areas with serious knowledge gaps and bridging awareness-actual behavior division.

CONCLUSION

Therefore, this study was attempted to assess the knowledge of middle adolescents regarding the impact of junk food in a selected school in Kalpakkam, Tamil Nadu. Findings revealed that most adolescents (90%) possessed moderate knowledge, a few (8.75%) exhibited good knowledge, and a single adolescent (1.25%) had poor knowledge. Age was the only demographic variable that had a significant association with knowledge levels, while gender, type of family, family income, residence, pocket money, and source of information had no significant association.

The results further emphasize a worrisome reality: although adolescents do have some awareness about the adverse effects of junk food, it is a limited and fragmented understanding-three-quarter knowledge, which can sometimes protect but which may often not be quite enough to impel them toward positive dietary behaviors because the influence of peer pressure, preferences for taste, and Campbell's personal aggressive marketing strategy is simply far too strong. The age affecting knowledge finding adds some credence to potential receptiveness to health education in adolescents with advancing age, making a strong case for structured implementation of interventions targeting this crucial stage of development.

These findings carry important public health, education, and policy implications. Schools are a premier setting for nutrition education because they are accessible to adolescents in an atmosphere conducive to learning and changing behaviors. Interactive health education activities, the teaching of nutrition in regular classes, and peer-led activities may increase nutritional awareness and reinforce appropriate food consumption. Parental involvement and cooperation between teachers, health workers, and policymakers should also take place to promote positive food behaviors outside the school.

In conclusion, the study highlighted the urgency of establishing appropriate health education strategies to aid adolescents in overcoming their shortfall between moderate knowledge and concrete dietary behavior. By imparting adolescents with much knowledge and creating an environment supporting them, there will come a time when the consumption of junk food will be reduced; thereby lowering the incidences of obesity and lifestyle diseases, which may keep future generations on the path of good health.

FUTURE WORK

Future research should extend this inquiry by incorporating longitudinal and comparative analyses of

managerial discourse across industries, regions, and organizational hierarchies to examine how language-based authority evolves over time and under changing global conditions. Empirical studies involving multilingual interview data, ethnographic observation, and interactional analysis would deepen understanding of how employees actively negotiate, resist, or reinterpret managerial authority in everyday workplace communication. Integrating corpus-linguistic techniques with Critical Discourse Analysis may further enhance methodological robustness by enabling large-scale pattern identification while retaining critical interpretive depth.

Additionally, future work should explore the implications of digital and hybrid work environments, where managerial authority is increasingly mediated through asynchronous platforms such as emails, project management systems, and virtual meetings. The rise of artificial intelligence-assisted corporate communication tools presents another critical area for investigation, particularly regarding how algorithmically generated language may further standardize discourse and intensify symbolic control. From an English Studies perspective, examining alternative linguistic practices such as multilingual leadership strategies, translanguaging, and localized discourse norms could offer pathways toward more inclusive and equitable managerial communication. By continuing to foreground language as a central mechanism of power, future research can contribute to reimagining global organizational communication practices that balance efficiency with ethical responsibility and linguistic justice.

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