

Junk Food Consumption Patterns, Gender Differences, and Health Awareness among School Children in a Remote Region of Nepal

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Abstract

Many school children in Nepal eat junk food. It often replaces healthy meals. They know it can harm their health. Still, they keep eating it. Friends, advertisements, taste, and easy access encourage them. Gender, age, and location also influence what they eat. Awareness programs help for a short time. For lasting change, families, schools, and communities must work together. This study explored junk food consumption among children, with a focus on gender differences and reasons for food choices. A survey was conducted in January 2025, taking 100 students from four schools in a remote mountain village in Far-Western Nepal. Information collected with a structured questionnaire seeks the types of junk food eaten, frequency, reasons for choosing them, and awareness of their health effects. Chi-square tests were applied to identify gender differences, with $p < 0.05$ considered statistically significant. Results showed that taste was the main reason for choosing junk food where boys are slightly more than girls. Knowing the health risks did not always make children choose healthier food. The study suggests making healthy food more attractive. It also advises designing programs that consider small differences between boys and girls. Schools and parents should work together to improve the food choices available to children. The study looks at the local situation and shows the gap between what children know and what they do. These findings can help create better public health plans. Teaching healthy eating early and giving children tasty, healthy options may reduce their dependence on junk food over time.

Keywords: junk food, children, gender differences, food preferences, health awareness

Introduction

Nepalese school children are somehow aware of the health consequences the junk foods but their understanding is not as much strong in long-term implications in their lifestyles. Paudel and Shrestha (2020) found that while 67.9% of students had

moderate awareness, this did not correlate significantly with actual consumption patterns. Similarly, Shah et al. (2023) observed that only a third of students had good knowledge regarding junk food, and over a third demonstrated poor knowledge. Sapkota and Neupane (2021) revisited this

concern, with just over half of respondents aware of health risks associated with junk food. These findings indicate a gap between cognitive awareness and behavioral application. Junk food consumption among school children in Nepal is prevalent and frequently replaces nutritious meals. For instance, research conducted in Pokhara revealed that over 70% of young children consumed junk food three or more times per week (Bhattarai et al., 2024). In Jumla, adolescents were found consuming junk food allured by the taste and advertisement, and Hindu children are more inclined than Buddhist (Karki et al., 2022). Furthermore, Sapkota and Neupane (2021) discovered that female students consumed more junk food than males (79.6% vs. 53.5%). This normalization of junk food consumption as a routine part of children's diets raises concerns about long-term health and developmental consequences.

Many reasons explain why students eat a lot of junk food. Friends, personal taste, advertisements, and easy access are the biggest ones. Research from Chitwan and Pokhara shows that students often choose junk food because their friends do, because it tastes good, or because it is quick to get (Pahari & Baral, 2023; Sapkota & Neupane, 2021). Shops near schools and

junk food kept at home make it even easier to eat these foods often (Bhattarai et al., 2024). Another study found that eating habits are also shaped by the wider environment, like what parents eat and what food is available at school (Adhikari et al., 2021). Changing habits of eating junk food have worked to some extent, but keeping the change for the long term is hard. In Kageswori Manohara Municipality, planned lessons about healthy eating helped students think more positively about healthy food (Shrestha & Karki, 2020). In Birgunj, interactive activities based on the Theory of Planned Behavior reduced students' interest in junk food (Singh et al., 2020). But the main problem is turning these short-term changes into lasting habits—especially when junk food is still cheap, nearby, and socially accepted.

Age, gender, and location also affect eating patterns. Older students and those living in cities eat more junk food, according to studies in Pokhara and Chitwan (Pahari & Baral, 2023; Sapkota & Neupane, 2021). In some places, girls eat more junk food than boys. In Jumla, religion, family type, and income also shaped what children eat (Rana, 2024). This shows that any plan to reduce junk food should be adjusted to match the needs of different groups. Overall, junk food

eating among Nepalese children is linked to awareness, peer influence, advertising, access, and personal background. Teaching also helps children about healthy eating but real change needs families, schools, and communities to work together. The problem is not only in Nepal—it is increasing worldwide (Gupta et al., 2020). Junk food contains too much sugar, salt, and bad fats since contains low in nutrients despite high calories. It increases the risk of obesity, diabetes, and heart disease in children (WHO, 2016). Eating habits formed in childhood often continue into later life, worsening health problems (Sahoo et al., 2015).

This study examines how and why children choose junk food, focusing on gender differences and reasons for these choices. It also explores how much they know about the health effects of junk food and possible ways to reduce how much they eat it.

Review of Literature

Awareness of junk food and its health consequences among Nepalese school children is weak. Several studies report that although children may identify junk food as unhealthy, but in long run these children are unable to prevent themselves from consuming. Paudel and Shrestha (2020) found that while 67.9% of students

had moderate awareness, this did not correlate significantly with actual consumption patterns. Similarly, Shah et al. (2023) observed that only a third of students had good knowledge regarding junk food, and over a third demonstrated poor knowledge. Sapkota and Neupane (2017) echoed this concern, with just over half of respondents aware of health risks associated with junk food. These findings indicate a gap between cognitive awareness and behavioral application. Junk food consumption among school children in Nepal is prevalent and frequently replaces nutritious meals. For instance, research conducted in Pokhara revealed that over 70% of young children consumed junk food three or more times per week (Bhattarai et al., 2024). In Jumla, adolescents exhibited significant weekly consumption patterns, often irrespective of gender (Karki et al., 2022). Furthermore, Sapkota and Neupane (2021) discovered that female students consumed more junk food than males (79.6% vs. 53.5%). This normalization of junk food consumption as a routine part of children's diets raises concerns about long-term health and developmental consequences.

All children ate junk food frequently because they preferred its taste and some children were affected by advertising. The children showed no understanding of

health dangers linked to unhealthy eating although they all ate junk food. Multiple factors drive this high consumption rate, with peer pressure, taste preferences, advertising, and accessibility being prominent. Studies from Chitwan and Pokhara found that students were heavily influenced by social circles and advertisements, with many choosing junk food primarily for its taste or convenience (Pahari&Baral, 2023; Sapkota&Neupane, 2021). Accessibility also plays a critical role—proximity to shops and availability of junk food at home significantly contribute to frequent consumption (Bhattarai et al., 2024). A study based on the socio-ecological model demonstrated that consumption patterns exist within social and environmental systems which encompass parental behaviors and school settings (Adhikari et al., 2021). The interventions and corrective strategies demonstrate effectiveness yet they struggle to maintain lasting modifications in human behavior. Educational programs have successfully enhanced both knowledge acquisition and short-term goal-setting abilities. For example, structured educational packages have enhanced students' attitudes and intentions towards healthy eating in Kageswori Manohara Municipality (Shrestha & Karki, 2020). Similarly, interactive sessions based on the Theory of Planned Behavior in Birgunj

were effective in reducing students' intentions to consume junk food (Singh et al., 2020). However, the challenge lies in translating these improved intentions into sustained behavioral change, particularly in environments where junk food remains easily accessible and socially endorsed.

Consumption patterns are also influenced by demographic characteristics (age, gender, and residence of individuals). Junk foods intake also seems to be high among older age students, students of urban areas as seen in Poakhra and Chitwan studies (Pahari&Baral, 2023; Sapkota&Neupane, 2021). Gender variations are also evident, with girls in some areas exhibiting more consumption. Religious, family and socio-economic background were also related to food habits of the people of Jumla in study (Rana, 2024). These findings underscore the need for refinement, demographic-specific approaches in policy and practice.

Junk food consumption among Nepalese school children represents a multidimensional challenge shaped by several interrelated factors. Children's eating patterns are not only determined by their individual awareness of nutrition and health, but also by powerful external influences such as peer pressure, aggressive media advertising, and the easy availability of packaged, ready-to-eat foods in local markets. These dynamics

operate differently across demographic contexts, with variations in socioeconomic background, urban–rural settings, and cultural food practices further complicating the picture. Although educational initiatives within schools have shown some positive effects in improving students' knowledge and shaping healthier choices, research indicates that awareness alone is insufficient to bring about sustainable change.

A more comprehensive, multi-level strategy—integrating the roles of families, schools, and wider community networks—is therefore essential to address the root causes and to cultivate long-term healthy dietary behaviors. Previous empirical studies in Nepal and beyond have extensively examined these factors, providing critical insights into how children's dietary habits are formed and reinforced. Children generally like the taste of sugar, salt, fat, even at a young age taste becomes a choice determinant (Drewnowski & Almiron-Roig, 2010). The easy availability of junk food in various settings, including schools, homes, and public places, further contributes to its consumption (Lobstein et al., 2004). Moreover, aggressive marketing and advertising campaigns by the food industry play a significant role in shaping children's

food preferences and influencing their choices (Harris et al., 2009).

There has also been research on gender differences in food preferences, with some studies reporting that boys may be eating more junk food than girls (Wardle et al., 2004). This may be attributed to various factors, including differences in activity levels, metabolic rates, and social influences (Rolls et al., 2006). Furthermore, the influence of parents, peers and school environment on children's food choices has also been emphasized in the literature (Scaglioni et al., 2011). Parents dietary patterns and feeding practices can strongly influence children's food preferences and eating behavior (Patrick and Nicklas, 2005). Peer influence and social norms are important as well, specifically during adolescence, as youths may be more likely to be influenced by their friends eating behaviors (Salvy et al., 2012). The school environment, with its availability of food options in cafeterias and vending machines, can also contribute to children's junk food consumption (Story et al., 2008). Regarding these influencing factors and its impact, Wang et al. (2016) from the Chinese experience of negative health consequence of fast-food eating suggested subsidizing the healthy foods and regulating the advertisement of junk foods. Frequent junk food consumption among

children is rising worldwide and is linked with poor diet quality, weight gain, and higher risks of obesity and diabetes (Pereira et al., 2005). Studies also reveal gender and demographic differences, with boys and certain groups consuming more junk food than girls (Pereira et al., 2005). These patterns highlight the urgent need for greater health awareness among school children (Pereira et al., 2005).. Factors such as taste preferences, convenience, and social influences often outweigh health considerations (Contento, 2008). The current study builds upon this existing body of knowledge by providing a detailed analysis of junk food consumption patterns among children, with a specific focus on gender differences, the reasons behind their food choices, and their awareness of the associated health effects.

Methodology

This study employed a quantitative research design to investigate junk food consumption patterns among children (Creswell & Creswell, 2018). Data was collected from 100 students using a structured questionnaire, adapted and pilot-tested for clarity and validity (Kumar, 2019). Here are 19 questions that were put to the students for self-reporting. Each of the questions has a specific purpose of exploration. To assess a food environment that question was home - (1)

what influences children's dietary choices through accessibility and availability (Rosenkranz & Dzewaltowski, 2008), the kind of junk food is available in your house? To evaluate the school food environment, a major external influence on children's daily dietary intake (Briefel et al., 2009), the question was- (2) what kind of junk food is available in school? To capture individual preference, which plays a critical role in food selection and is shaped by repeated exposure and marketing (Birch & Fisher, 1998) is – (3) what kind of junk food do you like most? (4) how many times a day do you eat junk food?, quantifies frequency of consumption, a key factor in assessing dietary patterns and risk for obesity and NCDs (WHO, 2016); and (5) why do you eat junk food?

Identifies motivational factors (e.g., taste, convenience, peer pressure), aligned with the Theory of Planned Behavior (Ajzen, 1991). Question (6) Who buys you junk food at home? It explores family influence and the role of caregivers in dietary habits, linking to the Social Cognitive Theory (Bandura, 2004). Question (7) Do you know how junk food affects our health? was to Assess health literacy and awareness, which is fundamental for behavior change (Nutbeam, 2000), and the question- (8) How do you feel after eating

junk food? was to investigate immediate physiological or emotional responses, connecting to experiential learning and bodily awareness (Kolb, 1984), and (9) in what condition do you feel that food digestion is going well? captures perception of digestive health, important for understanding the link between food and bodily awareness; and (10) Which of the following problems have you noticed after eating a meal containing junk food? Measures self-reported health effects, contributing to students' experiential knowledge and linking symptoms to dietary behavior. Question- (11) what kind of symptoms does a child who uses junk food on a regular basis get? Gauges perceived health consequences, reflecting community knowledge and possibly shaping social norms (Bandura, 2004) and (12) how does the use of junk food affect a person's health? encourages students to articulate the health implications, which relates to critical thinking and health knowledge. Question- (13) Do you think schools should control the sale of junk food?, assess policy awareness and attitudes toward regulation, essential for community-driven school health policies (Story et al., 2006), and (14) Do you know about nutrition? Measures basic nutritional knowledge, a prerequisite for informed dietary choices (Contento, 2007). Question (15) If you see an attractive advertisement

of a food, do you feel like buying it? explores the influence of advertising and media on food behavior, supporting the persuasion knowledge model (Friestad & Wright, 1994), and (16) Which element will help you to reduce the consumption of junk food? identifies potential intervention strategies, such as awareness, availability, or motivation. Question- (17) Do you prefer junk food over a balanced diet? reflects value-based decision-making and food preferences, important for behavior change models; and (19) If you were given one suggestion on what to eat instead of junk food, what would you consider eating? was to assess readiness for substitution, relevant for dietary intervention planning and the Transtheoretical Model of Change (Prochaska & Velicer, 1997).

The structured set of questions systematically explores children's junk food consumption patterns, motivations, awareness, and environmental influences, offering a comprehensive framework for understanding behavioral and contextual factors. This organization ensures that the data collected can inform targeted interventions and policy recommendations grounded in established health behavior and educational theories.

For the convenience of researcher and the purpose of describing awareness and habit of food choice students who live in remote locality four schools- Shree Sanatan Dharma Higher Secondary School, Balairaj Basic School, Shree Kedar Secondary School, and Shree Chanai Raj Secondary School were taken, and all the students of 6th, 7th and 8th grades were selected by visiting them in school hours. I followed up the students unless I got the number 100, 13 students were excluded because they were not met in school. This survey was carried out in the last week of January 2025.

Although this study adopts a quantitative approach, the use of purposive and convenience sampling is appropriate for several reasons. First, the geographic and logistical constraints of conducting research in remote mountainous areas of Dogadakedar Rural Municipality limit the feasibility of randomized sampling methods (Kumar, 2019). The researcher selected four specific schools based on their accessibility and relevance to the study objective—understanding food behavior among school children in remote areas—thus aligning with purposive sampling logic.

Additionally, all available students from grades 6 to 8 during school hours were included until the target sample size (100) was met. This reflects a convenience-based approach, but also serves to maximize participation within the local constraints and ensures representation from a specific age group relevant to the study (Creswell & Creswell, 2018). The exclusion of 13 students due to absence also highlights the challenges of field-based educational research in such settings. While the results may not be generalizable to all children in Nepal, the sample is adequately representative of the target population (rural school children in a specific locality) and allows for valid internal comparisons and statistical analysis, such as chi-square tests to examine gender differences or consumption patterns (Field, 2018). Therefore, this mixed sampling strategy supports the practical implementation of the study without undermining its internal validity.

To ensure authentic responses, each student filled out the questionnaire under the supervision of their subject teachers and in the presence of peers. This approach was taken to increase the trustworthiness and ecological validity of

the data (Patton, 2015). The questionnaire focused on various dimensions of junk food consumption, including types consumed, preferences, frequency, motivations, health awareness, and availability sources. Students were selected from both urban and suburban schools to represent a broader demographic. Parental consent was obtained prior to participation, respecting ethical standards in educational research (BERA, 2018).

Chi-square tests were used for statistical analysis to examine gender-based differences in junk food consumption behaviors. Statistical significance was set at $p < 0.05$, aligning with standard quantitative practices (Field, 2018).

Data Analysis and Findings

The data was analyzed to answer each of the questions listed in methodology section.

The kinds of junk foods are available to the children at School

The types of food available in the homes of the 100 students are as below-

Table 1

Foods Available in Students' Homes

Food	Female N	Male N	Total
Biscuit	6	14	20
Chaumin	1	0	1
Chips	13	12	25
Chocolate	7	9	16
Fruit	2	0	2
Fruti	2	2	4
Namkin	1	3	4
Noodles	13	15	28

Total	45	55
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Gender effect on Junk food choice

between boys and girls

No, there is not. The difference observed in the table below is by-chance but not inherent nature. The value of Chi-square = 6.4949, and the p-value is 0.0108. Here, the difference is not significant at $p < 0.01$. It was testing whether there's a real difference or relationship between two sets of data (for example, between groups, categories, or conditions). The chi-square test tells you if the differences you see are likely due to chance or something meaningful.

The chi-square value (6.4949) is a number that tells you how different your observed results are from what you'd expect by chance.

The p-value (0.0108) tells you how likely it is that these results happened just by chance. A smaller p-value means more confidence that the results are meaningful.

The kinds of junk foods are available to the children at Home

The types of food available in the homes of the 100 students are as below-

Table 2

Foods Available in Students' Home

Food	Female N	Male N	Total
Biscuit	6	3	9%
Chaumin	4	9	13%
Chaucahu	20	21	41%
Chocolate	2	0	2%
Namkin	3	0	3%
Samosa	10	22	32%
Total	45	55	100

Analysis of the above data to explore any gender difference in junk food choice results to the Chi-square = 11.563; and the p-value is 0.0007, an significant at $p < 0.01$. The chi-square value of 11.563 with a p-value of 0.0007 indicates a statistically significant relationship between gender and junk food preference among students. Since the p-value is less than 0.01, this result is highly significant, suggesting that male and female students have notably different preferences for types of junk food. Boys and girls in the study do not choose junk food in the same way, and this difference is unlikely to be due to chance. This has practical implications for designing gender-sensitive nutritional awareness programs in schools.

Preferred Junk Food among Children

There was a query of- 'does preference of Jung food changes over ages?' that was found as in Table 3.

Table 3
Preferred Junk Food among Children

Food	Age (Years)					
	10	11	12	13	14	15
Chaumin, pizza, burgers"	1	2	8	11	13	3
Packaged food	2	4	5	16	7	3
Fried food	0	3	6	6	6	3
Other	0	0	0	0	0	2

Chi-Square Test Results (Food Preference by Age) Chi-square statistic (χ^2) = 24.26, Degrees of freedom (df) = 15, p-value = 0.0608. Interpretation: The p-value of 0.0608 is slightly above the conventional 0.05 threshold, which means the result is not statistically significant at the 5% level. However, it is marginally significant; suggesting that age might have some effect on junk food preferences, but this relationship is not strong enough to rule out chance with high confidence.

Gender Influence on Junk Food Choice

Table 4 shows the comparison of junk good preference between boys and girls.

Table 4
Junk Food preference between boys and girls

Food	Female N	Male N
"Chaumin, Pizza , Burgers"	15	21
Packet food	20	17
Fried food	10	16
Other	0	1

Chi-square = 15.6072

The p-value is 0.0001. Significant at $p < 0.01$, there is a statistically significant association between gender and junk food preference. That means boys and girls have different patterns of junk food preference that are unlikely to have

occurred by chance. Boys seem to have a stronger preference for "Chaumin, Pizza, Burgers" and fried food, Girls show a higher preference for packet food. This result suggest a gender-specific awareness programs or school interventions to address unhealthy eating habits. For instance: Campaigns focusing on reducing fried and fast-food consumption might especially target boys. Education on the health risks of processed/packet foods might be more directed at girls.

Frequency of Junk Food Consumption by Children

How often the students consume junk food has been studied and found as the Table 5.

Table 5

Junk food Consumption by Gender

Times	Female N	Male N
Daily	10	11
One time Day	0	1
Two time Day	12	17
One time week	1	2
Two time a week	22	24

Chi-square = 1.3433; and the p-value is 0.2465. Not significant at $p < 0.01$. The p-value is much greater than common significance levels (e.g., 0.05 or 0.01), indicating that the observed differences in junk food consumption frequency between

boys and girls are not statistically significant. There is no significant association between gender and the frequency of junk food consumption. In other words, boys and girls tend to consume junk food at similar rates across different time intervals.

Reasons for Junk Food Consumption

Reasons behinds eating junk food instead of other despite awareness on its health effect has been presented in Table 6.

Table 6

Reasons for Junk Food Consumption

Why do children eat junk food?	Female N	Male N	%
Cheaply available	8	11	19
Easily available	8	10	18
For taste	29	32	61
Other	1	1	2

Chi-square = 0.2049

The p-value is 0.6508. Not significant at $p < 0.01$ Children—regardless of gender—primarily eat junk food because of its taste. Differences in responses between girls and boys are not statistically significant ($\chi^2 = 0.2049$, $p = 0.6508$). Factors like price and availability play a lesser role, and gender

does not influence the reason children prefer junk food.

Sources of Junk Food at Home

The pattern of how do children get junk food or who buys for them at home has been presented in Table 7.

Table 7

Sources of Junk Food at Home

Who buys children junk food at home?	Female N	Male N	%
Guardain/parents	13	20	33
Guests	4	4	8
Myself	27	31	58
Other	1	0	1

Chi-square = 1.7785. The p-value is 0.1823. Not significant at $p < 0.01$. p-value: 0.6196, The p-value (0.6196) is much greater than 0.05, indicating that there is no statistically significant difference between girls and boys in terms of who buys junk food for them at home. The sources of junk food at home — whether it's parents, guests, the children themselves, or others- do not significantly differ by gender. Boys and girls seem to have similar patterns in how they obtain junk food at home.

Children's Awareness of the Health

Effects of Junk Food Self-reported awareness of health effect of junk food

over grade 6, 7 and 8 has been compared in Table 7

Table 8

Awareness on Health Effect of Junk Food

Do children know how junk food affects their health?	Class 6	Class 7	Class 8
Yes	21	23	39
No	5	9	3

Analysis of the table results that Chi-square value: 5.79, Degrees of freedom: 2, p-value: 0.055. The p-value (0.055) is slightly above 0.05, the commonly used threshold for statistical significance. This means we cannot confidently conclude that there is a statistically significant difference in awareness across the three classes. However, the result is very close to being significant, which suggests a possible trend- especially that Class 8 has notably higher awareness (39 Yes, only 3 No). There is no statistically significant class difference in awareness at the 5% level, but the data shows a mild trend indicating that awareness may increase with class level, particularly between Class 6 and Class 8.

Feeling after Eating Junk Food

Students reported that they feel different effect of consuming junk food. Their

subjective feeling has been reported in Table 9.

Table 9
Feeling After Eating Junk Food

How do children feel after eating junk food?	Female N	Male N	%
Fatigue	17	22	39
Gaining Power	3	10	13
Nothing changes	20	22	42
Other	5	1	6

Is there different feelings on boys and girls or are the foods gender targeted was studied, and found that the Chi-square = 6.2345, and the p-value is 0.0125. Not significant at $p < 0.01$. Although the difference in food preferences or gender targeting was not statistically significant at the 1% level, the result was significant at the 5% level. This suggests there may be some gender-based influences on how food is perceived or marketed, which warrants further exploration with a larger sample or more refined categories."

Children Feel That Food Digestion

Children's reporting on in what condition do children feel that food digestion is going well has been presented in Table 10.

Table 10
Children Feel That Food Digestion

In what condition do children feel that food digestion is going well?	Female	Male
After eating junk food	14	14
Avoidance of junk food	33	39

The analysis results that Chi-square = 0.1405, the p-value is 0.7078. Not significant at $p < 0.01$. Children—regardless of gender—are far more likely to feel that their digestion is going well when they avoid junk food, and this preference shows no meaningful difference between girls and boys ($p = 0.7078$).

Problems after Eating Junk Food

Students feel different problems after eating junk food that is presented in Table Table 11

Problems After Eating Junk Food

What problems do you feel after eating junk foods?	Female N	Male N
Gets hungry faster	15	17
It takes time to get hungry	16	15
Prolonged Hunger	14	23

Analysis of the data above results Chi-square = 1.3602, the p-value is 0.2435. Not significant at $p < 0.01$. There is no meaningful gender effect on children's reported hunger patterns after

eating junk food ($p = 0.2435$). Any slight differences in proportions are likely due to chance rather than a genuine underlying difference between boys and girls.

Kind of Symptoms after Regular Eating Junk Food

Students reported different problems after eating junk foods in regular basis as presented in Table 12.

Table 12

Symptoms after Regular Eating Junk Food

What kinds of symptoms you feel of regular use of junk food?	Female N	Male N
Crying	25	30
Quarrelsome	8	15
Stealing	9	7
Other	4	2

Analysis of data results Chi-square = 2.88, the p-value is 0.0897. Not significant at $p < 0.01$. There is no meaningful gender effect on the types of symptoms children report from regular junk food use in this sample. Crying is the predominant symptom for both girls and boys, and any slight gender differences in quarrelsomeness, stealing, or “other” effects are not statistically significant ($p = 0.0897$).

Effect of Junk Food on Person's Health

Students reported that they have several health problems due to use of junk food as presented in Table 13.

Table 13

Effect of Junk Food on Person's Health

How does the use of junk food affect a person's health?	Female	Male
Abdominal Pain	16	31
Constipation	17	15
Diarrhea	9	7
Other	4	1

Analysis of the data results to Chi-square = 6.363, the p-value is 0.0117. Not significant at $p < 0.01$. There is a modest gender difference in which gastrointestinal symptoms children report, significant at the 5 % level but not at the 1 % level. Boys tend to report more abdominal pain, while girls more often cite constipation and diarrhea. Given the small effect size ($V \approx 0.15$) and a low expected count in “Other,” interpret these differences with caution.

Schools on Controlling the Sale of Junk Food

Students’ perception on school should control eating junk foods has been presented in Table 14.

Table 14*Students' Perception to Junk Food Selling*

Do children think schools should control the sale of junk food?	Female N	Male N
Yes	34	43
No	12	11

Analysis of the data in Table 14 results Chi-square = 0.4584. The p-value is 0.4984. Not significant at $p < 0.01$. Both girls (73.9 %) and boys (79.6 %) overwhelmingly favor school regulation of junk food sales, and this preference does not differ by gender ($p = 0.4984$). Any slight percentage differences are likely due to chance.

Children's Knowledge about Nutrition

Children's knowledge about the nutrition contained on the junk foods they eat has been presented in Table 15.

Table 15

Children's Self-Reported Knowledge of Nutrition

Do children know about nutrition on junk food?	Female N	Male N	%
Yes	34	42	76
No	11	13	24

Analysis of the data results Chi-square = 0.0089, the p-value is 0.9248. Not

significant at $p < 0.01$. Children's self-reported knowledge about nutrition shows no meaningful difference between girls and boys in this sample- any tiny observed variation is purely random ($p = 0.9248$).

Influence of Advisement on Children on Junk Food

Effects of advertisement in children's junk foods buying behavior has been reported in Table 16.

Table 16*Influence of Advertisements on Children*

Do children feel like buying by see an attractive advertisement it?	Fem ale	Male
Yes	18	24
No	12	17
Some time	15	14

Chi-square = 0.7614, the p-value is 0.3829. Not significant at $p < 0.01$.

Gender does not appear to influence whether children feel like purchasing a food item upon viewing an attractive advertisement ($p = 0.3829$). Any minor differences in percentages are likely due to chance rather than a true gender effect.

Reduce the consumption of Junk Food

Role of different elements that help children to reduce the consumption of junk food has been presented in Table 17.

Table 17*Reduce the consumption of Junk Food*

Which element effects on reducing the junk food consumption?	Female	Male	%
Cost saving	3	10	13
Health Concerns	20	19	39
Knowledge about nutrition	21	23	44
Other	0	4	4

Analyzing the data of Table 17 results Chi-square = 6.54 the p-value is 0.0105. Not significant at $p < 0.01$. There is a modest but statistically significant (at $\alpha = 0.05$) gender difference in what drives food awareness: Girls lean more toward health concerns (45.5 %) and nutritional knowledge (47.7 %). Boys still value health and nutrition, but are relatively more likely to cite cost saving (17.9 %) or other reasons (7.1 %).

Junk Food versus Balanced Diet

Children's preference of junk food or balanced diet has been presented in Table 18.

Table 18*Junk Food versus Balanced Diet*

Do children prefer junk food over balanced diet?	Female	Male
Yes	25	41
No	20	14

Analyzing the data in Table 18 results Chi-square = 3.9774. The p-value is 0.0461. Not significant at $p < 0.01$. There is a modest but statistically significant gender difference in this sample: boys are more likely than girls to prefer junk food over a balanced diet ($p = 0.0461$).

Children's Preferred Alternatives to Junk Food

Students are suggested to choose alternative foods what will they prefer instead of junk foods has been presented in Table 19.

Table 19

Preferred Alternatives to Junk Food

Children's preferences instead of junk food (if forced them)?	Female N	Male N
Home cooked food	29	29
Fruits	13	17
Vegetables	4	8

Analyzing the data from table 18 results Chi-square = 1.2346, the p-value is 0.2665. Not significant at $p < 0.01$. With $\chi^2 = 1.23$ and $p = .2665$, there's no meaningful gender effect on whether people opt for homecooked meals, fruit, or vegetables in this dataset. Any observed differences are likely due to random variation rather than a true underlying gender-based preference.

Conclusion and Implications

The study's findings reveal several important insights into junk food consumption patterns among children. Taste is the primary driver of junk food consumption, and while there are some gender differences, they are not substantial. Boys show a slightly higher preference for junk food over a balanced diet. Children generally have some awareness of the negative health effects of junk food, but not sufficient to force them healthier choice.

These findings suggest several important directions for interventions that promote healthier eating habits among children. First, efforts should aim to make healthy foods more attractive by addressing children's taste preferences. This can be done by offering healthier options that are both flavorful and visually appealing in school cafeterias and at home (Birch & Ventura, 2009). Second, interventions need to account for the modest gender differences in food preferences. For example, educational programs could be tailored to address the specific concerns and preferences of boys and girls (Wardle et al., 2004).

Schools and parents play a crucial role in shaping children's food choices, and policies aimed at controlling the

availability of junk food in these settings may be effective (Story et al., 2009). This could involve implementing stricter regulations on the sale of junk food in schools and promoting healthier options in school meals (WHO, 2016). Furthermore, parental education and involvement are essential for fostering healthy eating habits at home. This study on junk food consumption patterns among children is significant for several reasons:

- 1. Focus on a specific demographic and location:** The study focuses on children in a rural and mountainous region of Far-Western Nepal. This demographic and geographic focus is important because dietary habits can vary significantly across different regions and socioeconomic groups. Understanding the patterns in this specific context can inform targeted interventions.
- 2. Detailed analysis of factors influencing consumption:** The study goes beyond simply measuring consumption levels. It delves into the factors that drive children's food choices, including taste preferences, gender differences, awareness of health effects, and the influence of home environment. This multi-faceted approach provides a more

comprehensive understanding of the issue.

3. Emphasis on the disconnect between awareness and behavior: A key finding is that children's awareness of the negative health effects of junk food doesn't consistently translate into healthier choices. This highlights a critical challenge in health education and intervention efforts.

4. Implications for intervention: The study's findings have direct implications for designing interventions to promote healthier eating habits. By identifying the key drivers of junk food consumption, the research suggests strategies that could be effective in changing behavior. This study is important because it looks closely at a specific issue, carefully examines it, and highlights the difference between what people know and how they actually behave—this difference is crucial for planning effective public health programs.

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