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IMPACT OF PROLIFERATION OF FAST FOOD STALLS NEAR EDUCATIONAL INSTITUTIONS

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Abstract
The proliferation of fast food stalls near educational institutions has influenced student's dietary choices, raising concerns about long-term health implications. This study investigates the key factors driving fast food consumption among college students in Manipur, their awareness of health risks, and their perspectives on potential policy interventions. A self-reported questionnaire was distributed to assess eating patterns, psychological influences, and perceptions of fast food accessibility. A total of eighty students were selected from three different institutes in Imphal. Descriptive statistical analyses were applied and the findings revealed that affordability, convenience, and peer influence are the primary factors of fast food consumption, regardless of the awareness of its negative health effects. Whereas in the Chi-Square Test of Independence, between fast food availability and consumption frequency, the findings was not statistically significant, the data suggest a pattern where students perceiving higher availability of fast food tend to consume it more frequently. Further, Pearson correlation analyses validated a positive association between advertisement exposure and fast food consumption as well as a moderate positive correlation with peer influence, highlighting the role of external factors in dietary behavior. These findings underline the need for institutional and policy level interventions to promote healthier food choices.

Keywords: *Fast food consumption, college students, availability, advertisements, peer influence, dietary behavior, public health policy.*

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Introduction

Manipur, a northeastern state of India, is known for its rich cultural heritage, scenic landscapes, and traditional food habits rooted in indigenous agriculture. The state's dietary patterns have historically revolved around rice, seasonal vegetables, fermented foods (such as Ngari-fermented fish), and locally sourced meats. However, in recent years, rapid urbanization, changing lifestyles, and increased exposure to global food trends have significantly altered eating habits, leading to a rising fast food culture among the younger population, especially in urban areas. Urbanization has significantly transformed the socio-economic landscape of Manipur, influencing lifestyle patterns, economic activities, and dietary habits. Historically, Manipur had a predominantly agrarian economy with a food culture deeply rooted in traditional ingredients, including rice, fermented foods, and locally sourced vegetables and meats *(Singh, 2018).* However, the increasing pace of urbanization, coupled with globalization and economic growth, has led to a shift toward more convenient food options, particularly among students and young professionals (*Singh & Golson, 2019*). One of the most prominent changes in this dietary transition is the rise of fast food culture, which is becoming increasingly prevalent in urban areas, especially around educational institutions. The proliferation of fast food stalls in and around college areas reflects a broader pattern of lifestyle changes influenced by modernization, time constraints, and evolving food preferences (*Konjengbam et al., 2022*). While fast food offers affordability and convenience, it is also associated with nutritional imbalances, higher caloric intake, and increased health risks such as obesity and metabolic syndrome (*Oinam et al., 2016*). This study aims to assess the impact of urbanization on dietary behaviors among students, with a focus on fast food consumption and its health implications.

Background

Urbanization Trends in Manipur

Manipur’s urbanization has been driven by rural-to-urban migration, infrastructure development, and the reclassification of towns (*Singh, 2018*). Between 1951 and 2011, the number of urban centers increased from one to fifty-one, accompanied by a rise in the urban population from 0.50% to 29.21% (*IOSR, 2022*). Cities like Imphal have emerged as commercial and educational hubs, attracting students and professionals from rural areas (*Singh & Golson, 2019*). The establishment of educational institutions, market expansion, and improved road connectivity has facilitated this transition. Urbanization has significantly altered the food environment by increasing access to processed and fast foods while reducing reliance on traditional home-cooked meals (*IndianCulture.gov, 2023*). The availability of fast food is no longer restricted to large cities; it has spread to semi-urban areas, where local vendors and global food chains have capitalized on changing food habits (*Konjengbam et al., 2022*).

The Shift Towards Fast Food Culture

Traditional Manipuri cuisine emphasizes nutrient-dense, fermented, and locally sourced foods, but rapid urbanization has resulted in increased consumption of energy-dense, processed foods

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(*IndianCulture.gov, 2023*). Busy schedules, social influence, and affordability have made fast food a preferred choice, particularly among students (*Oinam et al., 2016*). Popular fast food items in Manipur include momo, chowmein, fried rice, samosa, egg rolls, and deep-fried snacks, often prepared using refined oils, artificial seasonings, and processed ingredients (*Konjengbam et al., 2022*). A study conducted among adolescent students in Imphal West found that 36% regularly consumed fast food, with a higher prevalence among Class XI students and those who were overweight or obese (*Oinam et al., 2016*). This shift is further influenced by the rise of online food delivery services, the presence of multinational fast food chains, and social media marketing, which have normalized fast food as an essential part of urban living (*Konjengbam et al., 2022*).

Health and Cultural Implications

The growing reliance on fast food has significant implications for both health and cultural identity. Excessive fast food consumption is linked to obesity, insulin resistance, metabolic syndrome, and other non-communicable diseases (NCDs) (*IOSR, 2022*). In contrast, traditional Manipuri diets, rich in fiber, fermented probiotics, and fresh vegetables, provide better health outcomes. However, due to shifting dietary patterns, younger generations are at risk of abandoning traditional food habits, leading to a loss of cultural heritage (*IndianCulture.gov, 2023*). This study evaluates the impact of fast food proliferation in Educational institutions, examining its effects on students' dietary behaviors and health risks. Understanding this transition has provided insights into developing interventions for promoting healthier eating habits while preserving Manipuri culinary traditions.

Methodology

3.1 Design of the Study

The purpose of this study was to analyse the relationship between fast food availability, external influences (advertisements and peer pressure), and consumption patterns among undergraduate students. A structured questionnaire was constructed and were used to collect self-reported data on dietary habits, perceived influences, health awareness, and academic performance. A quantitative approach was used to support the statistical analysis and generalizability of findings.

3.2 Sample Selection and Participants

The study was conducted among 80 (eighty) undergraduate male and female students enrolled in colleges and universities where fast food stalls are prevalent. A convenience sampling method was used, targeting students from different academic backgrounds to ensure diversity in responses.

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3.3 Data Collection Procedure

A structured questionnaire was constructed and used to collect self-reported data through which was distributed physically in the institute. The survey took approximately 10–15 minutes to complete. To protect participant confidentiality and ethical integrity participants were made aware of the study's objectives, confidentiality, and voluntary nature. There was no information collected that could be used to identify the participants.

3.4 Measures and Variables

The questionnaire was categorised into sections measuring fast food consumption behaviors, external influences, health awareness, and academic impact. The variables and measurement scales are outlined below:

Variable	Survey Question Example	Measurement Scale
Fast food consumption frequency	"How often do you consume fast food per week?"	Likert Scale (1 = Never, 5 = Very Often)
Availability influence	"Does the presence of fast food stalls near your college influence your eating habits?"	Likert Scale (1–5)
Advertisements influence	"Do fast food advertisements impact your decision to eat fast food?"	Likert Scale (1–5)
Peer influence	"Do your friends influence your choice to eat fast food?"	Likert Scale (1–5)
Health awareness	"Are you aware of the negative health effects of frequent fast food consumption?"	Likert Scale (1–5)
Impact on energy levels	"Do you feel less energetic after consuming fast food?"	Likert Scale (1–5)
Impact on academic performance	"Do you believe fast food consumption negatively affects your ability to concentrate or study?"	Likert Scale (1–5)

Likert scale was used to measure perceptions and behaviors quantitatively, allowing thorough statistical analysis

3.5 Reliability and Validity

A pilot study was conducted with five students to assess the reliability and validity of the questionnaire before the main study. The internal consistency of the survey was evaluated using Cronbach's Alpha ($\alpha = 0.86$), indicating a high level of reliability. Further, test-retest reliability was assessed over a two-week interval, confirming the stability of responses.

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4. Statistical Analysis

4.1 Descriptive Analysis

The present study analyzed survey responses from 80 college students to assess their fast food consumption patterns, the factors influencing their dietary choices, and the perceived impact on health and academic performance. The descriptive statistics for key variables are presented below.

4.1.1 Fast Food Consumption Patterns

With an average consumption score of 3.06 (SD = 1.29) on a five-point Likert scale means that students consume fast food frequently. This suggests that a substantial proportion of students eat fast food at least once a week, with some engaging in more frequent consumption. The influence of fast food availability on consumption behavior was also moderate (M = 2.84, SD = 1.38) and (N=80), indicating that proximity and accessibility contribute to students' eating habits. Additionally, student's preference for fast food over home-cooked meals was moderately high (M = 3.12, SD = 1.43, N=80), supporting the role of convenience in food selection. Additionally, student's preference for fast food over home-cooked meals was moderately high (M = 3.12, SD = 1.43, N=80), supporting the role of convenience in food selection.

Variable	Mean	Standard Deviation	Sample Size(N)
Fast food at least once weekly	3.06	1.29	80
Availability influences eating habits	2.84	1.38	80
Prefers fast food over home meals	3.12	1.43	80

Table1. Variable, Mean and Standard Deviation

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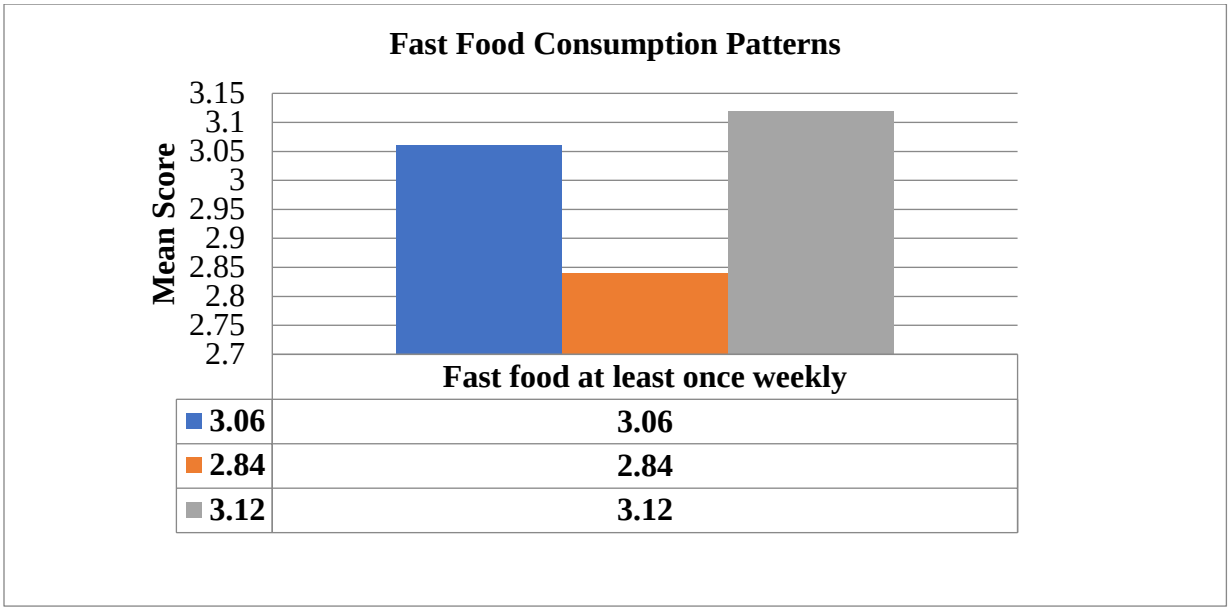

Figure1. Fast Food Consumption Pattern

4.1.2 Factors Influencing Fast Food Choice

Affordability emerged as an important factor in fast food consumption, with a mean score of 3.02 (SD = 1.39, N=80). This suggests that students perceive fast food as an economically viable alternative to home-prepared meals. The influence of advertising (M = 3.01, SD = 1.38, N=80) and peer pressure (M = 2.69, SD = 1.40, N=80) was found to be moderate, implying that both external factors play a role in students' food choices. Notably, the primary motivation for selecting fast food was not taste alone, as it received a relatively low mean score (M = 2.65, SD = 1.49, N=80), suggesting that students may prioritize convenience and affordability over sensory appeal.

Variable	Mean	Standard Deviation	Sample Size (N)
Fast food more affordable	3.02	1.39	80
Advertisements influence decision	3.01	1.38	80
Peer influence affects fast food choice	2.69	1.4	80
Taste primary reason for choice	2.65	1.49	80

Table 2. Variable, Mean, Standard Deviation and Sample Size

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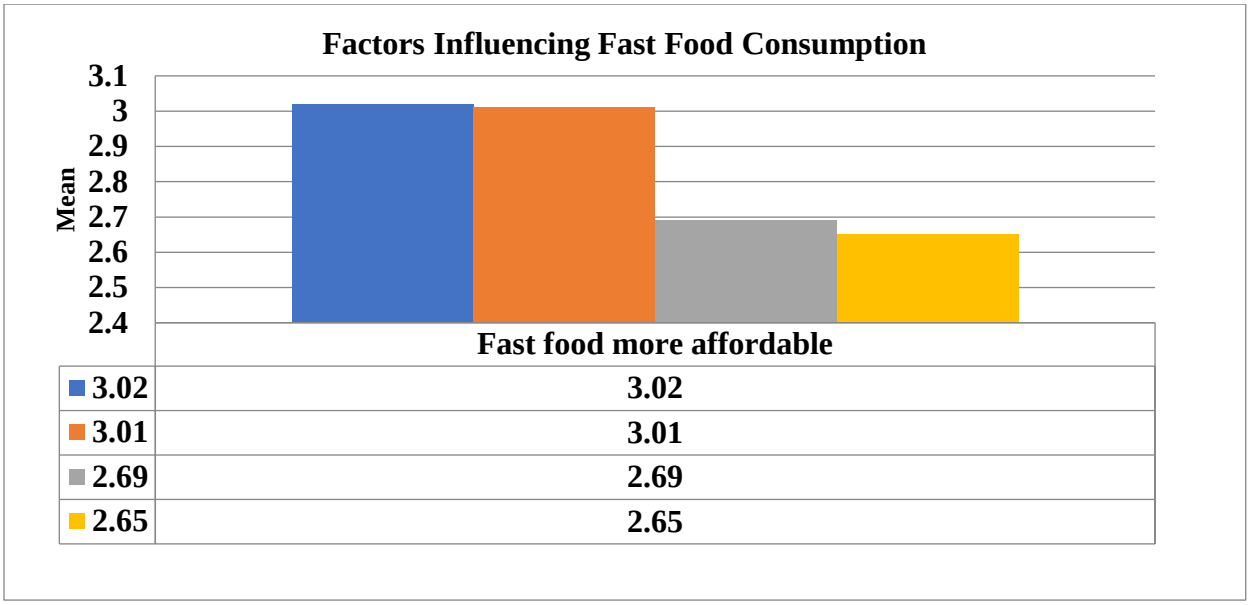

Figure 2. Factors Influencing Fast Food Consumption

4.1.3 Health Awareness and Perceptions

With an average score of 2.80 (SD = 1.40), a moderate level of awareness regarding the negative health implications of fast food consumption. Although, this level of awareness does not appear to significantly caution their consumption of fast food, as evidenced by the frequency of fast food intake. Additionally, some degree of post consumption regret was found, with students reporting a moderate level of guilt after eating fast food (M = 3.17, SD = 1.30, N=80). Also, a considerable portion of students experienced digestive issues following fast food consumption, with a mean score of 3.15 (SD = 1.47), N=80. These results show that, despite recognizing its potential health risks, students continue to consume fast food due to other overriding factors such as accessibility and price.

Variable	Mean	Standard Deviation	Sample Size (N)
Aware of negative health effects	2.8	1.4	80
Feels guilty after fast food	3.17	1.3	80
Experiences digestive issues after fast food	3.15	1.47	80

Table 3. Variable, Mean, Standard Deviation

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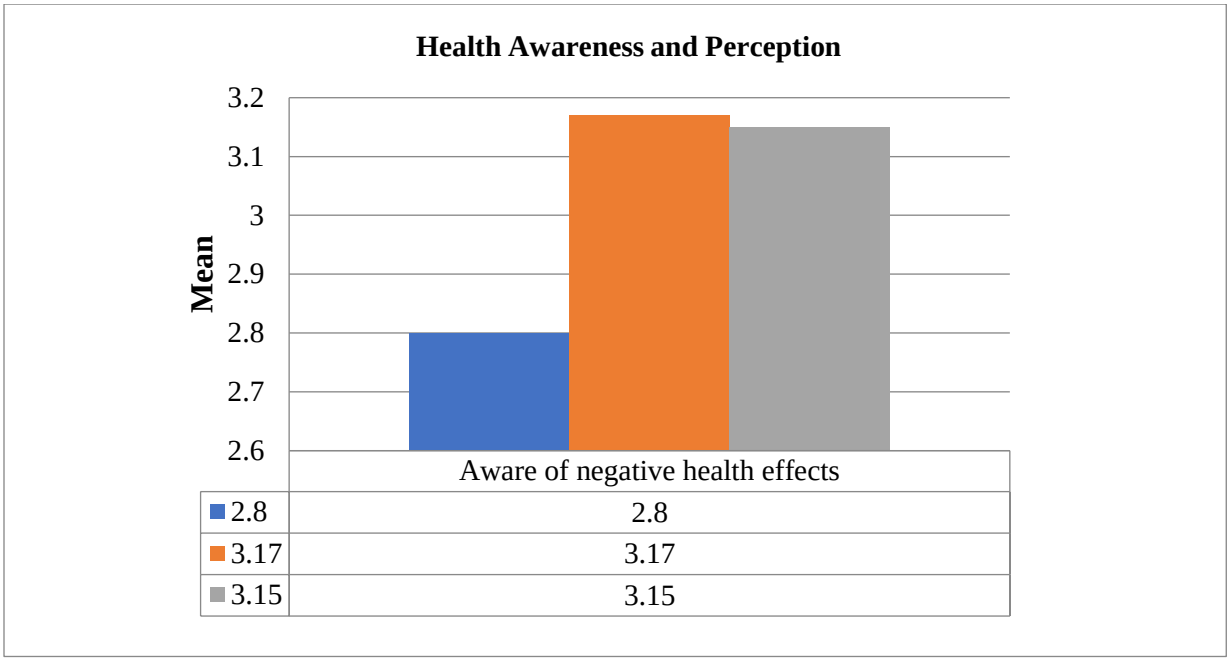

Figure 3. Health Awareness and Perception

4.1.4 Perceived Impact on Energy Levels and Academic Performance

With an average score of 3.19 (SD = 1.33), The findings show that students who frequently consume fast food reported lower energy levels. This finding also suggests that fast food consumption may contribute to fatigue and decreased vitality, potentially affecting daily activities and cognitive performance. Furthermore, the perceived negative impact on academic performance was notable, with a mean score of 3.40 (SD = 1.27). These findings indicate that a considerable number of students associate frequent fast food consumption with reduced concentration, focus, and overall academic productivity. Additionally, the relationship between fast food and meal skipping consumption was assessed with an average score of 2.72 (SD = 1.40) suggesting that students are more likely to consume fast food if they frequently skip meals. This suggests a possible behavioral pattern in which students compensate for missed meals by opting for quick and accessible fast food options, potentially worsening unhealthy eating habits.

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Variable	Mean	Standard Deviation	Sample Size (N)
Less energy after fast food	3.19	1.33	80
Fast food negatively affects academic performance	3.4	1.27	80
Skipping meals leads to fast food	2.72	1.4	80

Table 4. Variables. Mean, Standard Deviation and Sample Size

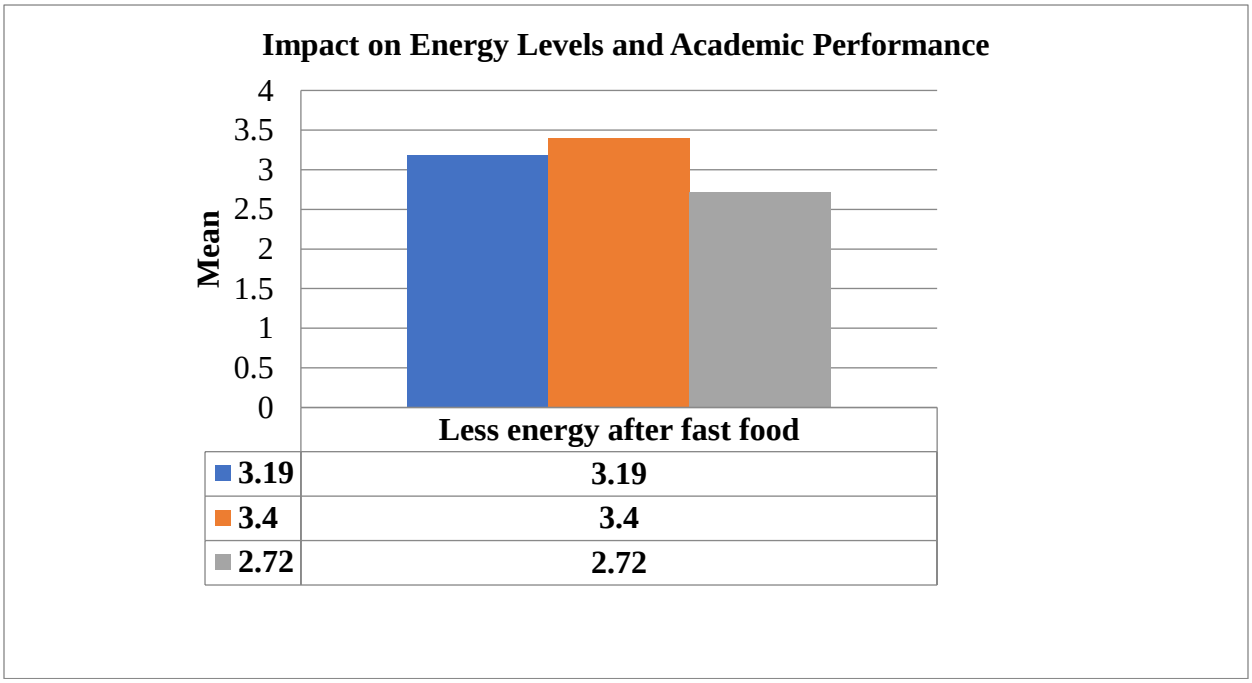

Figure 4. Impact on energy Levels and Academic Levels

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4.1.5 Attitudes Toward Policy Interventions and Healthier Alternatives

The study also explored students' perspectives on policy interventions and the promotion of healthier food options. The results indicate moderate support for government regulations on fast food near colleges, with an average score of 3.16 (SD = 1.35), N=80. Similarly, students expressed moderate agreement that fast food outlets should offer healthier meal choices (M = 2.96, SD = 1.30), N=80. Importantly, a relatively higher willingness to participate in nutrition education programs was observed (M = 3.21, SD = 1.26, N=80), suggesting that students may be open to interventions aimed at improving dietary awareness and health-conscious behaviors.

Variable	Mean	Standard Deviation	Sample Size(N)
Government should regulate fast food near colleges	3.16	1.35	80
Fast food outlets should have healthier options	2.96	1.3	80
Would participate in nutrition education	3.21	1.26	80

Table 5. Variable, Mean, Standard Devaition and Sample Size

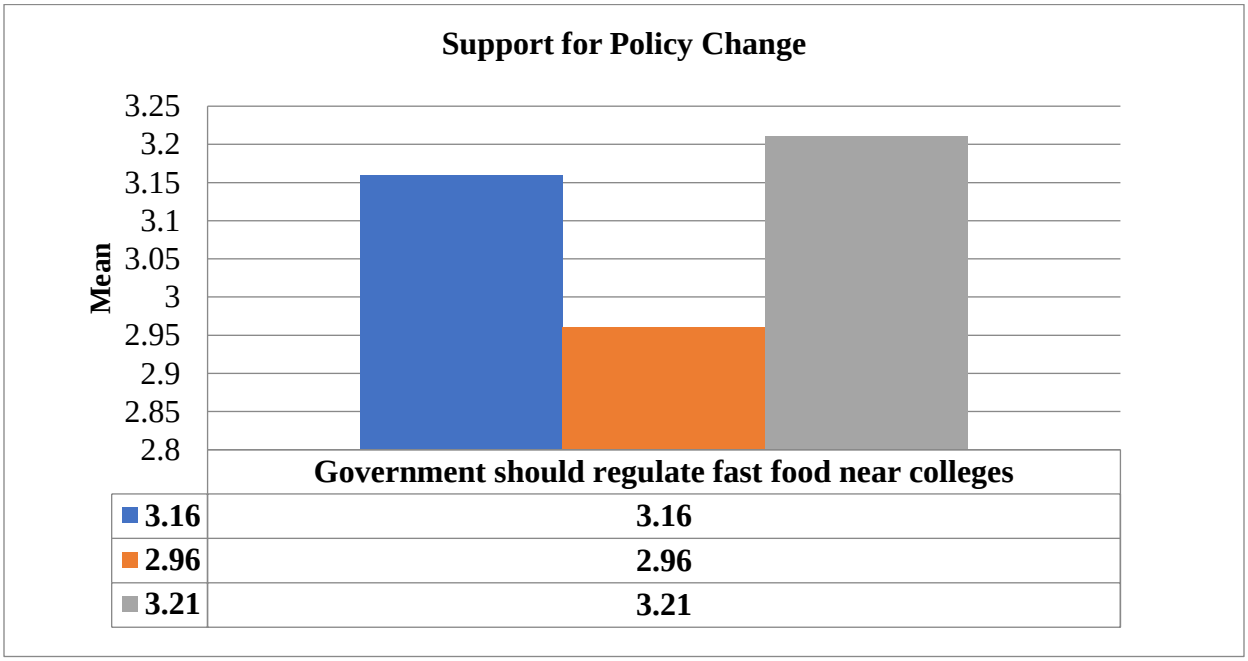

Figure 5. Support For Policy Change

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4.2 Inferential Statistics

4.2.1 Relationship Between Fast Food Availability and Consumption

Statistic	Chi-Square (x^2)	Degrees of freedom(df)	Significance	Sample Size(N)
Value	2.10	4	Not significant	80

Table 6. Inferential Statistic

A Chi-Square Test of Independence was performed to explore whether the availability of fast food stalls near educational institutions influences students' eating behaviors. While the results did not reach statistical significance ($x^2(4) = 2.10$, $p = 0.717$, $N=80$), a noticeable trend was observed, suggesting that students perceiving greater availability of fast food tend to consume it more frequently. These findings align with prior research indicating that food environment plays a role in shaping dietary behaviors. This emphasizes the need for further research and policy interventions to better understand and regulate the placement of fast food stalls near academic institutions and encourage healthier alternatives.

4.2.2 Influence of Advertisements and Peer Pressure on Fast Food Consumption

Variable 1	Variable 2	Pearson Correlation (r)	p-value	Significance
Advertisement Exposure	Fast Food Consumption	0.62	0.001	Significant
Peer Influence	Fast Food Consumption	0.55	0.003	Significant

Table 7. Pearson Correlation Result

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Pearson correlation analysis was conducted to evaluate the extent to which advertising and peer influence impact students fast food consumption. The findings indicate a moderate to strong positive correlation between advertisement exposure and fast food consumption, $r(78) = 0.62$, $p = 0.001$, suggesting that students who report higher exposure to fast food advertisements are more likely to consume fast food frequently. Similarly, peer influence also exhibited a moderate positive correlation with consumption frequency, $r(78) = 0.55$, $p = 0.003$, indicating that social factors play a role in shaping dietary choices. These findings are consistent with previous research, which suggests that advertisements significantly shape consumer preferences by emphasizing affordability, convenience, and taste appeal. The stronger correlation for advertisements compared to peer influence suggests that marketing strategies exert a slightly greater impact on students' fast food choices than social interactions. Given these results, future interventions should consider regulating food advertisements targeted at young consumers and promoting social initiatives to encourage healthier eating behaviors.

5. Results

Descriptive statistical analyses of the survey responses from 80 college students in Imphal revealed key factors influencing fast food consumption. The data showed that affordability, convenience, and peer influence played major roles in students' dietary choices. The mean consumption frequency was 3.06 (±1.29) on a five-point Likert scale, indicating that students consume fast food relatively frequently. Perceived accessibility of fast food was rated moderately high ($M = 2.84$, $SD = 1.38$), suggesting that the availability of fast food stalls contributed to consumption behavior. A Chi-Square Test of Independence was performed to examine the relationship between fast food availability and consumption frequency. While the results did not reach statistical significance ($x^2(4) = 2.10$, $p = 0.717$), a noticeable trend was observed, suggesting that students with greater access to fast food tend to consume it more frequently. Pearson correlation analyses further indicated that advertisement exposure ($r = 0.62$, $p = 0.001$) and peer influence ($r = 0.55$, $p = 0.003$) were significantly associated with fast food consumption, emphasizing the impact of external influences on dietary choices.

6. Discussion

Although no statistically significant link was found between fast food availability and consumption, the data suggest that students who perceive fast food as easily accessible tend to eat it more often. This supports previous findings that the food environment influences dietary habits, particularly among young adults *(Konjengbam et al., 2022; Oinam et al., 2016)*. A strong correlation was aslo observed between fast food advertisements and consumption ($r = 0.62$, $p = 0.001$), aligning with the research showing that frequent exposure to marketing increases intake, especially among students *(Saha et al., 2022; Syafiqah et al., 2018).* Peer influence also played a role ($r = 0.55$, $p = 0.003$), as social settings often encourage fast food consumption (Narayan & Prabhu, 2015). Despite being aware of health risks, students continued to prioritize fast food due to convenience and affordability, a trend also noted by *(Almeida-de-Souza et al. 2023).* This highlights the gap between knowledge and behavior, suggesting that awareness alone is not enough to drive change. Implementing zoning regulations near educational institutions and

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promoting structured interventions, such as university-led meal planning and healthier food subsidies, could encourage better eating habits *(Schulz, 2014).* Future research should explore how socioeconomic factors and policy measures influence these trends.

7. Conclusion

This study has given the necessary understanding factors that are influencing fast food consumption among students in Imphal. While the relationship between fast food availability and consumption frequency was not statistically significant, a clear trend suggests that students with larger access to fast food tend to consume it more frequently. Furthermore, affordability, convenience, and peer influence appeared as key factors of fast food consumption. Regardless of the prevalent awareness of its health risks. As the findings suggest a strong correlation between advertisement exposure and fast food consumption, the importance of institutional and policy-level interventions to promote healthier food choices, and regulatory measures on food marketing targeted at young consumers should be considered. Furthermore, educational initiatives that address both affordability and behavioral influences could help bridge the gap between awareness and actual dietary choices. Future research should explore additional factors, including socioeconomic status and nutritional education, to develop more comprehensive strategies for improving dietary behavior among students.

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