# Relationship between Junk Food Consuption and Lifestyle Factors among Young Females (18-25 Years) in Meerut: A Case Study

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**Abstract**

This cross-sectional study investigated the association between junk food cons--umption and lifestyle parameters amo--ng 90 undergraduate and postgraduate female students (18–25 years ) of R.G.(P.G.)college,Meerut,Utter Pradesh. The increasing consumption of calorie-dense,nutritionally inadequate foods has emerged as a major public health conc--ern in younger populations. Data were collected through a structured, self-administered questionnaire distributed electronically via Google forms. Junk food consumption was highly prevalent, with most participants reporting intake 1–2 times per week, along with late-night eating and substitution of regular meals.Lifestyleevaluations demonstrated low physical activity, prolonged screen exposure, and irregular sleep patterns, indicative of a predominantly sedentary lifestyle.Participants commonly experie--nced health complaints such as fatigue, diminishedenergy,gastrointestinaldisturb ances, and menstrual irregularities. Self-observational data further corroborated trends of unhealthy dietary patterns and related concerns, anemia-related indica--tors, including reduced hemoglobin level . the findings indicated a notable association between junk food consum--ption, unhealthy lifestyle behaviors, and adverse health outcomes.
the coexistence of unhealthy eating habits with various self-reported health issues shows the possible long-term effects of lifestyle choices in young adulthood.Chi– square analysis revealed significant associations between junk food consumption and fatigue/ low energy levels ( p = 0.0033) and menstrual irregularities ( p = 0.0167 ) , while no significant association was observed with digestive issues ( p = 0.350 ) These findings partially support the alternative hypothesis . this indicates a link between junk food consumption and negative lifestyle and health outcomes among young females. . Overall, the study underscores the detrimental effects of excessive junk food intake combined with sedentary habits and emphasizes the requirement for targeted health awareness campaigns and intervention strategies.

## Introduction

Introduction Nutritional status is a fundamental determinant of systemic health and long-term physiological well-being. In recent years, there has been a concerningescalation in the consumption of processed and ultra-processed foods, particularly among young women aged 18–25 years. These dietary products—which include fast foods, sugar-sweetened beverages, fried snacks, and variousconvenienceitems—arecharacteri--isticallyenergy-denseyetnutrient-deficient,often containing excessive levels of lipids, refined sugars, and sodium,while providing limited essential micronutrients.
Their widespread accessibility, afforda--bility,and high hedonic value have significantlydrivenincreased


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consumption within this demographic. The frequent ingestion of such dietary products is strongly correlated with adverse health sequelae, including elevated Body Mass Index, obesity, and metabolic dysregulation.

Suboptimal dietary practices are frequ--ently synergistic with sedentary behaviors, characterized by prolonged screentime,physicalinactivity,dysregulated eating patterns, and impaired sleep hygiene, collectively exacerbating the risk of chronic health complications and non-communicable diseases. Established literaturedemonstratesarobustassociation between the regular intake of processed foods and detrimental physical and psychological outcomes, such as obesity, chronic stress, anxiety, and maladaptivelifestylebehaviors.

Furthermore, emerging evidence suggests that these dietary patterns exert a significant influence on sleep quality and metabolic homeostasis. the current study was undertaken to evaluate the increasing prevalence of unhealthy dietary habits among young females and their potential influence on lifestyle and health outcomes.

preliminary self-observations, including indicators suggestive of nutritional deficiency, prolonged screen exposure, limited physical activity, and irregular sleep patterns, further highlighted the need to investigate the relationship between junk food consumption and lifestyle factors among young females.

Therefore, the present study was conducted to examine the association between junk food consumption and lifestyle parameters and to evaluate its potential impact on overall health status.

## Materials and Methods

**Study Design:** A cross-sectional observational survey conducted to evaluate the association between junk food consumption and lifestyle determinants among young adult females.

**Study Area**: R.G.(P.G )College, Meerut, Uttar Pradesh.

**Target Population:** Female undergraduate and postgraduate students (aged 18–25 years) residing in Meerut.

**Sample Size:** N = 90 participants.

**SamplingStrategy**:Non-probability convenience sampling, administered via digital questionnaire.

**Data Collection Instrument**: A structured, self-administered questionnaire comprising multiple-choice and Likert-scale items.

**Parameters Assessed**:

- Junk food consumption patterns
- Physical activity levels
- Sleep hygiene
- Screen time and Sedentary behaviour
- Health-related outcomes

**Health Indicators Evaluated:**

- Fatigue and low energy levels
- Gastrointestinal disturbances
- Menstrual irregularities
- Sedentary behavioural patterns
- Other adverse health outcomes

**Study Variables**:

- Independent Variable: Junk food consumption frequency
- Dependent Variables: Physical activity, sleep patterns, screen time, and health outcomes

**Statistical Analysis:** Data were processed and analysed using Microsoft Excel Descriptive statistics , graphical representations , and Chi – square ($\chi^2$) analysis were used to examine associations between junk food consumption and selected health outcomes . Statistical significance was considered at $p < 0.05$.

**Ethical Considerations:** Participation was voluntary, with adherence to established protocols regarding participant anonymity and confidentiality.

**Objectives of the Survey**

1. junk food consumption patterns
   - ➢ frequency, timing, and preference for junk food intake.
2. dietary habits
   - ➢ skipping meals, eating at night, and using meal replacements.
3. lifestyle factors
   - ➢ physical activity, time spent sitting, and daily screen time.
4. sleep patterns
   - ➢ sleep duration, quality, and regularity of schedules.
5. health and well-being


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- fatigue, low energy levels, digestive health, and menstrual regularity.

6. association analysis

- connection between junk food, lifestyle, and health outcomes.

**Observations**

**Self Case Study :** self – observation indicatedfrequentjunkfood consumption, irregular eating habits , low physical activity , and fatigue , which motivated further investigation of the study topic **.**

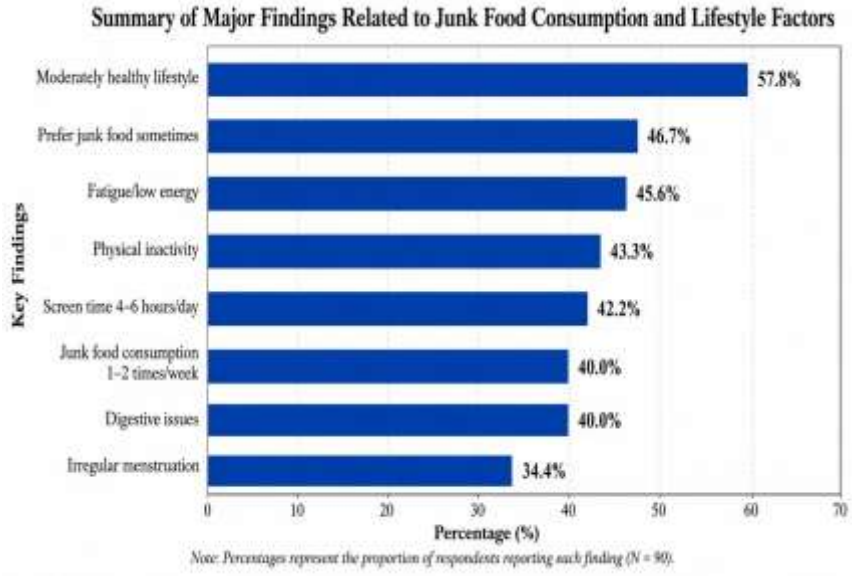
**Survey Observations :** A survey of 90 young females showed a high prevalence of junk food consumption, with many participant preferring junk food over home-cooked meals. Common lifestyle factors included low physical activity, prolonged screen time, and irregular eating. Reported health issues included fatigue, digestive problems, and menstrual irregularities. Many participants acknowledged the negative impact of poor dietary choices. Overall, the findings suggest an association between junk food consumption, sedentary lifestyles, and adverse health outcomes among young females.

**Result**

**Figure 1.** Summary of major findings related to junk food consumption, lifestyle behaviors, and health outcomes among young females (N = 90).

Results Regarding self-perceived health, 57.8% of respondents characterized their lifestyle as moderately healthy. Notwithstanding this self-assessment, several suboptimal lifestyle behaviors were identified. With respect to dietary patterns, 46.7% of participants reported a preference for junk food, while 40.0% consumed such products 1–2 times per week. Furthermore, a substantial proportion of the cohort reported persistent fatigue or low energy, physical inactivity, and daily screen time ranging from 4 to 6 hours. Regarding health outcomes, 40.0% of respondents reported digestive issues, and 34.4% indicated experiencing menstrual irregularities. the findings collectively indicate the presence of frequent junk food consumption, sedentary lifestyle behaviors, and multiple self-reported health concerns among young females

**Statistical Analysis**





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| Variables compared | $\chi^2$value | df | P - value | Interpretation |
|---|---|---|---|---|
| **Junk food consumption vs fatigue low energy** | 35.55 | 16 | 0.0033 | Significant |
| **Junk food consumption vs digestive issues** | 17.56 | 16 | 0.3501 | Not significant |
| **Junk food consumption vs menstrual Irregularities** | 18.67 | 8 | 0.0167 | Significant |

**Table 1 :** chi–squire analysis showing associationbetweenjunkfoodconsumption and selected health outcomes among young females ( N=90 )

Chi – squire analysis was performed to examine the association between junk food consumption frequency and selected health outcomes . A statically significant association was observed between junk food consumption and fatigue / low energy levels ($\chi^2$= 35.55, df = 16 , p=0.0033). Similarly , a significant association was found between junk food consumption and menstrual irregularities ($\chi^2$= 18.67,df = 8, p=0.0167 ).However , the association between junk food consumption and digestive issues was not statistically significant ($\chi^2$= 17.56 , df = 16 ,p=0.3501) .these findings indicate that frequent junk food consumption may be associated with fatigue and menstrual health outcomes among young females.

## Discussion

The findings of this study indicate that frequent junk food consumption among young females is intrinsically linked to maladaptivelifestylepatterns,specifically characterized by meal skipping, late-night eating, high screen time, and low physical activity. These behavioral trends align with observations by Sequeira et al., who noted that students frequently prioritize convenience and availability,substitutingregular,nutritious meals with processed alternatives. The study further highlights substantial health implications, including persistent fatigue, low energy levels, digestive discomfort, and menstrual irregularities. These results are highly consistent with recentliteratureexaminingtheintersection of diet and reproductive health. Qureshi et al. and Pibriyanti et al. established significant associations between fast-food intake, poor sleep quality, and menstrualcycledisturbances.

Furthermore, Dhar et al. and Güzeldere et al. emphasize that suboptimal dietary quality and sedentary behavior are critical determinants of menstrual health and reduced overall well-being. This research adds to existing literature done by Kustin et al., Latif et al., and Shinde et al., all of whom have found associations between unhealthy diets and reproductive problems among young women.

The previous studies have largely focused either on the association betweenunhealthydiets and reproductive problems or between junk food consumption and sedentary behavior. In contrast, the present study takes a broader approach and considers all these factors, along with fatigue and digestive problems,simultaneously.These findings support and expand upon previous research, suggesting that unhealthy dietary patterns are associated not only with adverse physical health outcomes but also with broader lifestyle-related concerns.

In conclusion, the findings indicate a significant association between frequent junk food consumption, sedentary behaviors, and self-reported health complaints among young females,


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highlighting the importance of targeted interventions and health education strategies to promote healthier lifestyle choices.

## Conclusion

The findings of the present study demonstrate a significant association between frequent junk food consumption and adverse lifestyle and health out--comes among young females. Regular intake of junk food was accompanied by several unhealthy behavioral patterns, including meal skipping, late-night eating, prolonged screen exposure, and insufficient physical activity. These lifestyle factors collectively contribute to a sedentary pattern of living that may negatively influence overall well-being. The study further revealed that a considerable proportion of participants experienced fatigue, low energy levels, digestive discomfort, and menstrual irregularities. These findings suggest that the consequences of poor dietary habits extend beyond nutrition alone and may affect broader aspects of physical and reproductive health. the presence of unhealthy eating habits alongside several self-reported health issues shows the possible long-term effects of lifestyle choices in young adulthood. A notable observation was the discrepancy between perceived and actual health status.

Although most participants considered their lifestyle to be moderately healthy, the prevalence of unhealthy eating habits,physicalinactivity, and associated health complaints suggests a tendency to underestimate lifestyle-related health risks. This finding underscores the need for greater awareness regarding the cumulative effects of daily behavioral choices on long-term health outcomes. The present study also contributes to the growingbodyofliteraturbysimultaneously examining junk food consumption, screen time, physical inactivity, fatigue, digestive complaints, and menstrual irregularities within a single cohort of young females. The observed patterns provide partial support for the alternative hypothesis ($H_1$),indicating significant association between junk food consumption, fatigue/low energy levels, and menstrual irregularities among young females . Overall, the findings emphasize that junk food consumption should be viewed not merely as a dietary concern but as a broader lifestyle and public health issue. Early, evidence-based interventions aimed at improving dietary practices, increasing physical activity, and reducing sedentary behaviors may play an important role in preventing future metabolic, gastrointestinal, and reproductive health complications. Promoting healthier lifestyle choices during early adulthood is essential for safeguarding the long-term health and well-being of young women. with the increasing number of ultra-processed foods consumed by the youth population, the results of this study would have significant implications when it comes to the development of prevention measures for better nutrition in the future.

## Recommendations

•Implementingcomprehensive nutrition education programs within collegiate settings serves as a critical strategy to raise awareness regarding the health risks associated with frequent consumption of ultra-processed foods.

•Promoting balanced dietary behaviors among young adults—characterized by increased intake of nutrient-dense whole foods and a reduction in processed and fast food consumption—is essential for fostering optimal health outcomes.

•Health initiatives should emphasize the dual necessity of consistent physical activity and the curtailment of sedentary screen time as foundational pillars of a healthy lifestyle.

•Targeted awareness campaigns, particularly those elucidating the nexus between dietary patterns, digestive function, metabolic energy, and menstrual well-being, may prove instrumental in improving behavioral health among female populations.

•To expand upon these findings, future research would benefit from longitudinal designs incorporating larger, more heterogeneous cohorts and


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objective biometric indicators to clarify the long-term impact of dietary habits on holistic health.

### Limitations of the Survey

- The study was conducted on a relatively small sample size (N = 90).
- Most respondents were females aged 18–25 years; therefore, the findings cannot be generalized to all age groups.
- Data were collected through self-reported questionnaires, which may include response bias.
- The study was limited to a specific study area and time period.
- The research identifies associations between junk food consumption and health outcomes but cannot establish direct causation.

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