

ORIGINAL ARTICLE

Fast Food Frequency and its Correlation with Sleep and Energy Levels

Sagar Bayaskar

HOW TO CITE THIS ARTICLE:

Sagar Bayaskar. Fast Food Frequency and Its Correlation with Sleep and Energy Levels. Int J Food Nutr Diet. 2025;13(2): 55–61.

ABSTRACT

Background: Fast food consumption has become increasingly common, especially among young adults, raising concerns about its potential effects on sleep and energy regulation. While existing literature links fast food to various health issues, limited qualitative data exists exploring its behavioral and psychological consequences, particularly in relation to sleep quality and fatigue.

Objectives: To explore the relationship between fast food consumption frequency and self-reported sleep patterns and energy levels among adults aged 18 to 45 years.

Methodology: A qualitative, cross-sectional study was conducted using in-depth, semi-structured interviews with 35 participants from diverse educational and occupational backgrounds. Participants were categorized based on fast food intake frequency (daily, weekly, monthly, often, rare/occasional). Thematic analysis was applied to the transcribed interviews to identify recurring patterns in reported sleep and energy experiences.

Results: The majority of participants (24) reported rare or occasional intake, with smaller numbers consuming fast food monthly (5), daily (3), often (2), or weekly (1). Frequent consumers often experienced disrupted sleep, daytime fatigue, poor digestion, and heaviness. In contrast, those who reduced or rarely consumed fast food reported improved sleep quality, better mood, sustained energy, and enhanced mental clarity. Conclusion: Frequent fast food consumption appears to be associated with poorer sleep quality and lower energy levels. Conversely, reduced intake may support better psychological and physical well-being, suggesting the need for dietary awareness and behavioral interventions focused on sleep and nutrition.

KEYWORDS

- Fast Food Consumption • Sleep Quality • Energy Levels • Dietary Habits
- Qualitative Study • Lifestyle • Adult Health • Cross-Sectional Research

AUTHOR'S AFFILIATION:

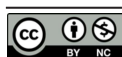
Independent Public Health Researcher, Maharashtra 444902, India

CORRESPONDING AUTHOR:

Sagar Bayaskar, Independent Public Health Researcher, Maharashtra 444902, India.

E-mail: sabayaskar@gmail.com

➤ Received: 07-08-2025 ➤ Accepted: 28-08-2025



Creative commons non-commercial CC BY-NC: This article is distributed under the terms of the creative commons attribution non-commercial 4.0 License (<http://www.creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the Red Flower Publication and Open Access pages (<https://rfppl.co.in>)

INTRODUCTION

The increasing prevalence of fast food consumption has become a defining feature of modern lifestyles, particularly among adults balancing work, education, and social commitments. Fast food is often chosen for its convenience, affordability, and taste; however, its frequent consumption is associated with a range of health concerns, including obesity, metabolic disorders, and poor cardiovascular outcomes. Beyond these well-documented physical health effects, there is growing interest in understanding how fast food intake may impact other aspects of well-being, such as sleep patterns and energy levels, which are critical determinants of daily functioning and mental health.

Sleep plays a vital role in maintaining cognitive performance, emotional regulation, and physical recovery. Poor sleep quality or insufficient sleep is known to contribute to fatigue, reduced productivity, and increased risk of chronic diseases. Similarly, energy levels influence an individual's ability to meet daily demands and maintain a positive mood. Dietary choices, particularly the consumption of high-calorie, low-nutrient foods like fast food, may contribute to disturbances in both sleep and energy, either through direct physiological effects (such as digestion-related discomfort) or indirect effects mediated by mood and stress levels.

Although several quantitative studies have investigated links between diet and sleep, few have explored the lived experiences and perceptions of adults regarding how fast food consumption affects their sleep quality and energy levels. Understanding these subjective experiences is important for designing effective health promotion strategies that address not only physical health but also holistic well-being.

This study aimed to explore the frequency of fast food consumption among adults aged 18 to 45 years and examine its correlation with self-reported sleep patterns and energy levels using a qualitative approach. By capturing in-depth narratives, the research seeks to provide insights into how dietary habits intersect with lifestyle factors and perceived health outcomes.

REVIEW OF LITERATURE

Fast food consumption has become an integral part of dietary patterns worldwide, particularly among young adults and working populations. The accessibility, affordability, and appeal of fast food have contributed to its growing presence in daily diets (Bowman & Vinyard, 2004). Studies have consistently linked frequent fast food intake with adverse health outcomes, including obesity, cardiovascular disease, and metabolic syndrome (Pereira *et al.*, 2005; Rosenheck, 2008).

Emerging evidence also suggests a relationship between fast food consumption and sleep disturbances. Frequent intake of high-fat, high-sugar foods has been associated with shorter sleep duration, poor sleep quality, and insomnia symptoms (St-Onge *et al.*, 2016; Grandner *et al.*, 2010). For instance, Tanaka *et al.* (2018) reported that individuals consuming fast food more than three times per week were more likely to experience poor sleep quality compared to those with lower intake.

The relationship between diet and energy levels is well documented, with nutrient-dense foods supporting sustained energy and cognitive performance (Lassale *et al.*, 2019). In contrast, diets high in refined carbohydrates and unhealthy fats, characteristic of many fast food items, may lead to energy fluctuations, fatigue, and reduced mental clarity (Jacka *et al.*, 2010).

Research by Chaput (2014) emphasizes that poor sleep itself may drive unhealthy eating patterns, creating a bidirectional relationship where fast food consumption and sleep disruption reinforce each other. Similarly, Patel and Hu (2008) argue that sleep deprivation alters appetite-regulating hormones, leading to increased preference for energy-dense foods like fast food.

Qualitative studies exploring perceptions around fast food, sleep, and energy levels remain limited. However, some work has highlighted that individuals often recognize the negative effects of fast food on their energy and mood but continue consumption due to convenience and social influences (Neumark-Sztainer *et al.*, 1999; Larson *et al.*, 2009).

Furthermore, studies among university students and working adults have shown that frequent fast food intake is often linked with

irregular sleep schedules, daytime sleepiness, and reduced work performance (Hagger-Johnson *et al.*, 2013; Nurul-Fadhilah *et al.*, 2016).

Understanding these interconnections through qualitative exploration provides valuable context that can inform interventions aimed at promoting healthier dietary and lifestyle choices. This study seeks to contribute to this emerging body of knowledge by examining how adults perceive the relationship between their fast food consumption, sleep, and energy levels.

METHODOLOGY

Study Design

This study employed a qualitative, cross-sectional design aimed at exploring the correlation between fast food consumption frequency and its perceived impact on sleep quality and energy levels among adults. An in-depth interview approach was chosen to capture rich, contextual insights into participants' dietary habits, sleep routines, and self-reported physical and mental well-being.

Study Setting and Participants

The study was conducted across both urban and semi-urban settings, targeting individuals from diverse educational and occupational backgrounds. A total of 35 participants aged between 18 and 45 years were purposively selected. The sample included students, engineers, healthcare professionals, and other working adults to ensure a variety of perspectives on lifestyle habits and their effects.

Data Collection

Data were collected through semi-structured, in-depth interviews. Interviews were conducted either face-to-face or via telecommunication depending on participant convenience. An interview guide was used to explore key areas such as frequency of fast food intake, sleep patterns, energy levels, and any perceived changes after altering dietary habits. Each interview lasted between 25 to 45 minutes, and responses were recorded in both note and transcript form with participant consent.

Data Analysis

The qualitative data were coded and thematically analyzed. Fast food consumption was categorized into daily, weekly, monthly, often, and rare/occasional groups. Sleep patterns, after-effects on energy, and mood changes upon reducing fast food were examined across these categories. Descriptive summaries and pattern comparisons were generated to explore potential correlations.

RESULTS

Sample Characteristics

The study included a total of 35 participants aged between 18 and 45 years, drawn from diverse educational and occupational backgrounds. The sample consisted of both males and females, representing various professions including students, engineers, healthcare workers, and others.

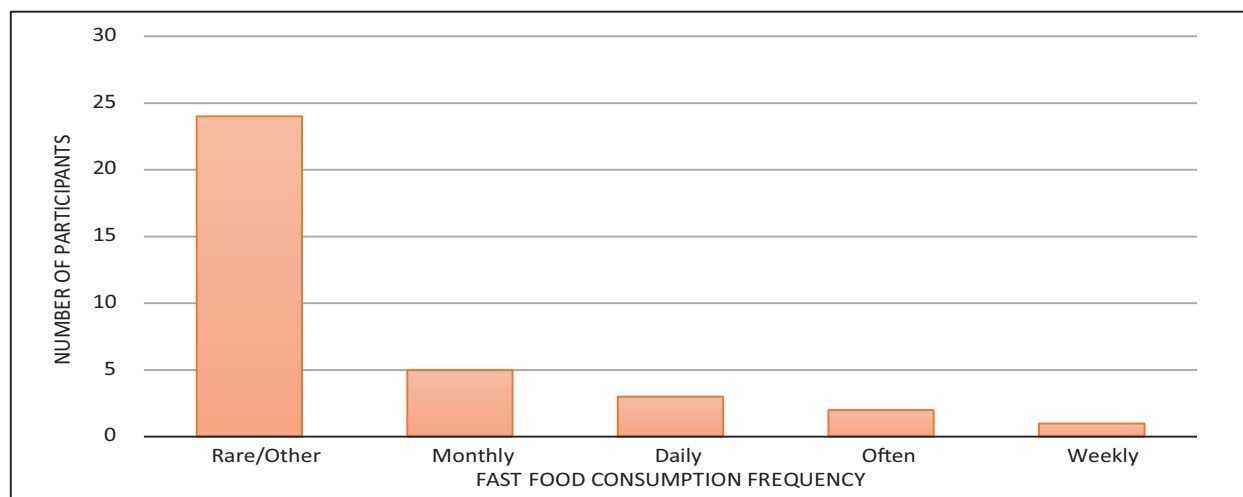


Figure 1: Distribution of fast-food consumption frequency among participants

Fast Food Consumption Frequency

Participants exhibited varied fast food consumption patterns. The majority (24 participants) reported rare or occasional intake, while 5 participants consumed fast food on a monthly basis. A smaller group (3 participants) consumed fast food daily, and 2 participants reported often relying on fast food for convenience. Only 1 participant consumed fast food on a weekly basis.

Sleep Patterns and Fast Food Intake

Sleep quality and patterns varied notably across different fast food consumption categories. Among daily fast food consumers, reports included daytime sleep leading to nighttime insomnia, early sleep but with

reports of unrest, and variable sleep duration with accompanying restlessness or daytime sleepiness. Participants consuming fast food monthly generally reported better sleep, with some sleeping 7–8 hours and feeling refreshed, while others felt tired despite adequate sleep duration. Those who consumed fast food often noted irregular sleep and frequent tiredness. Participants with rare or occasional intake described mixed patterns: some reported good quality sleep with adequate duration (7–8 hours, feeling fresh), while others experienced disturbed or insufficient sleep, often linked to work demands or digital media use. The single weekly consumer, working in rotational shifts, reported poor daytime rest and sleep disruption.

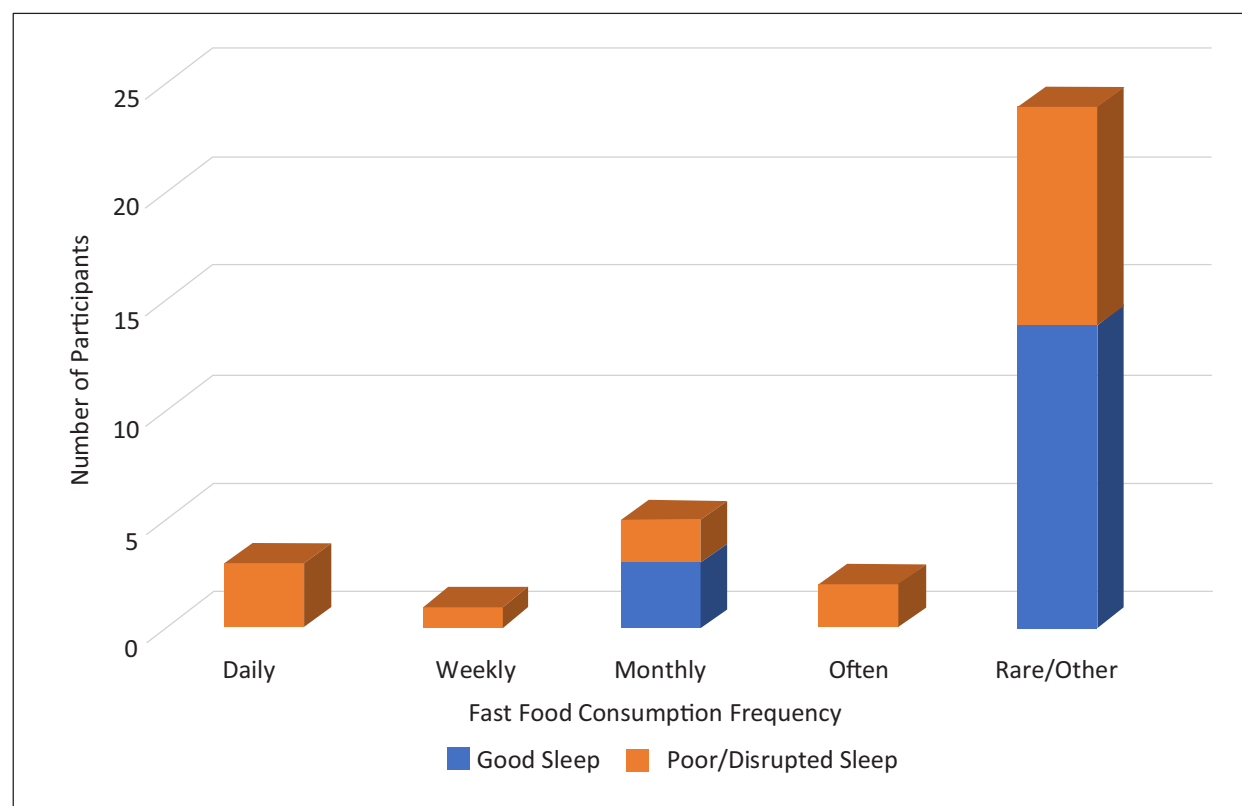


Figure 2: Sleep Patterns by Fast Food Consumption Frequency

Reported After-Effects of Fast Food on Energy Levels

Participants highlighted various physical and mental effects after consuming fast food. Daily consumers reported feeling heavy, experiencing poor digestion, and an increase in body fat. Monthly consumers described after-effects such as acidity, headaches, sluggishness, and temporary feelings of

satisfaction followed by discomfort. Those who consumed fast food often reported stress and concerns about disease, although one participant noted no significant immediate effect. Among rare or occasional consumers, common effects included bloating, fatigue, mood swings, lethargy, and a sense of guilt following consumption. The weekly consumer reported no noticeable after-effects.

Table 1: Self-Reported After-Effects of Fast Food Consumption

After-Effect Category	Number of Participants
Fatigue / Sluggishness	12
Bloating / Digestion Issues	8
Mood Swings / Guilt	6
No Effect	3
Positive (Relaxed / Felt Good)	2

Impact of Reducing Fast Food on Energy and Mood

A positive impact was observed among participants who reduced their fast food intake. Daily consumers who decreased consumption noted feeling lighter, experiencing improved digestion, and better gut health. Monthly consumers reported enhanced alertness, improved focus, and a positive shift in mood when opting for healthier food alternatives. Participants in the rare or occasional group described greater mental clarity, better focus, a more stable mood, and increased energy when they avoided fast food. Among those who consumed fast food often, the reported benefits were minimal, as some had only recently begun efforts to reduce intake. The single weekly consumer did not notice any improvement after reducing consumption.

Summary of Correlation Trends

Overall, the data suggest a correlation between frequent fast food consumption and poorer sleep quality, reduced energy levels, and negative mood outcomes. Participants who rarely consumed fast food or who made conscious efforts to reduce intake reported better sleep, steadier energy, and improved mood and cognitive focus.

DISCUSSION

Key Findings

This qualitative study explored how fast food consumption patterns relate to self-reported sleep quality and energy levels among adults aged 18 to 45 years. The findings revealed that participants who consumed fast food frequently particularly those with daily or often intake reported disrupted sleep, daytime fatigue, and digestive discomfort. Conversely, those with rare intake or who actively reduced

their fast food consumption described better sleep quality, improved mood, and more stable energy levels. These results highlight a potential correlation between frequent fast food intake and negative outcomes related to sleep and energy.

Link Between Fast Food and Sleep Quality

The association between frequent fast food consumption and poor sleep observed in this study mirrors existing research. Prior studies have shown that diets high in saturated fat and sugar are linked with lighter, less restorative sleep (St-Onge *et al.*, 2016). Grandner *et al.* (2010) similarly reported that unhealthy dietary habits can contribute to subjective sleep complaints, including insomnia and fragmented sleep. In our study, daily consumers described insomnia, early waking, and difficulty maintaining restful sleep. These experiences may reflect the physiological impact of heavy, energy-dense foods on digestion and metabolic processes that disrupt normal sleep patterns.

Impact on Energy and Mood

Participants frequently described feeling sluggish, bloated, or mentally dull following fast food consumption. These accounts are consistent with previous research that links poor diet quality to reduced mental energy, mood disturbances, and decreased cognitive performance (Jacka *et al.*, 2010; Tanaka *et al.*, 2018). Furthermore, this study supports the concept of a bidirectional relationship between diet and sleep, where poor sleep may promote unhealthy eating patterns, leading to a cycle of fatigue and continued fast food consumption (Chaput, 2014; Patel & Hu, 2008).

Perceived Benefits of Reducing Fast Food Intake

A noteworthy finding was that participants who reduced their fast food consumption reported improvements in digestion, sleep depth, focus, and emotional stability. These perceptions align with findings from Lassale *et al.* (2019), who noted that healthier dietary patterns are associated with better mental health outcomes. Participants' narratives also suggest that reducing fast food intake may help break the cycle of poor sleep and fatigue, offering a practical target for interventions aimed at improving overall well-being.

Strengths and Limitations

A key strength of this study is its qualitative design, which enabled the exploration of lived experiences and personal perceptions often missed in quantitative studies. The in-depth interviews provided rich detail about how participants link their dietary choices to sleep and energy. However, the study is not without limitations. The reliance on self-reported data introduces the potential for recall bias or subjective misinterpretation. Additionally, the relatively small and purposive sample limits the generalizability of the findings. Future studies could strengthen this evidence base by incorporating objective measures such as sleep trackers or food diaries alongside qualitative inquiry.

Limitations

This study was based on a small, purposively selected sample, which limits the generalizability of the findings to broader populations. The reliance on self-reported data may have introduced recall bias or subjective interpretation of sleep and energy levels. Additionally, the qualitative design did not include objective measurements, such as sleep tracking or dietary logs, which could have strengthened the evidence.

Future Implications

Future research should consider larger, more diverse samples and integrate quantitative methods or mixed-method approaches. The use of wearable devices for sleep monitoring and detailed dietary records could provide more robust data. These findings highlight the need for health promotion interventions that address fast food consumption as part of strategies to improve sleep quality and energy levels.

CONCLUSION

In summary, this study reinforces the link between frequent fast food consumption and poorer sleep quality, lower energy levels, and negative mood outcomes. The findings highlight the importance of dietary counseling and health promotion strategies that encourage reduced fast food intake as a means of supporting better sleep and overall mental and physical health.

Ethical Considerations: Ethical approval

was obtained from the Institutional Ethics Committee before starting the study. Informed consent was secured from all participants, and confidentiality was strictly maintained. Participation was voluntary, and respondents could withdraw at any time without penalty.

REFERENCES

1. Bowman, S. A., & Vinyard, B. T. (2004). Fast food consumption of U.S. adults: Impact on energy and nutrient intakes and overweight status. *Journal of the American College of Nutrition*, 23(2), 163-168.
2. Pereira, M. A., Kartashov, A. I., Ebbeling, C. B., Van Horn, L., Slattery, M. L., Jacobs, D. R., & Ludwig, D. S. (2005). Fast-food habits, weight gain, and insulin resistance (the CARDIA study): 15-year prospective analysis. *The Lancet*, 365(9453), 36-42.
3. Rosenheck, R. (2008). Fast food consumption and increased caloric intake: A systematic review of a trajectory towards weight gain and obesity risk. *Obesity Reviews*, 9(6), 535-547.
4. St-Onge, M. P., Mikic, A., & Pietrolungo, C. E. (2016). Effects of diet on sleep quality. *Advances in Nutrition*, 7(5), 938-949.
5. Grandner, M. A., Kripke, D. F., Naidoo, N., & Langer, R. D. (2010). Relationships among dietary nutrients and subjective sleep, objective sleep, and napping in women. *Sleep Medicine*, 11(2), 180-184.
6. Tanaka, E., Yatsuya, H., Uemura, M., Murata, C., Otsuka, R., Toyoshima, H., & Tamakoshi, K. (2018). Associations of frequency of fast food consumption with sleep quality in Japanese adults. *Journal of Nutritional Science and Vitaminology*, 64(1), 43-50.
7. Lassale, C., Batty, G. D., Baghdadli, A., Jacka, F., Sánchez-Villegas, A., Kivimäki, M., & Akbaraly, T. (2019). Healthy dietary indices and risk of depressive outcomes: A systematic review and meta-analysis of observational studies. *Molecular Psychiatry*, 24(7), 965-986.
8. Jacka, F. N., Kremer, P. J., Berk, M., de Silva-Sanigorski, A. M., Moodie, M., & Swinburn, B. A. (2010). A prospective study of diet quality and mental health in adolescents. *PLoS ONE*, 5(9), e2481.
9. Chaput, J. P. (2014). Sleep patterns, diet quality and energy balance. *Physiology & Behavior*, 134, 86-91.

10. Patel, S. R., & Hu, F. B. (2008). Short sleep duration and weight gain: A systematic review. *Obesity*, 16(3), 643-653.
11. Neumark-Sztainer, D., Story, M., Perry, C., & Casey, M. A. (1999). Factors influencing food choices of adolescents: Findings from focus-group discussions with adolescents. *Journal of the American Dietetic Association*, 99(8), 929-937.
12. Larson, N. I., Neumark-Sztainer, D., Hannan, P. J., & Story, M. (2009). Trends in adolescent fruit and vegetable consumption, 1999-2004. *American Journal of Preventive Medicine*, 36(5), 411-417.
13. Hagger-Johnson, G., Sabia, S., Brunner, E. J., Shipley, M., Bobak, M., Marmot, M. G., & Kivimaki, M. (2013). Combined impact of smoking and heavy alcohol use on cognitive decline in early old age: Whitehall II prospective cohort study. *British Journal of Psychiatry*, 203(2), 120-125.
14. Nurul-Fadhilah, A., Teo, P. S., & Poh, B. K. (2016). Fast food consumption among Malaysian adolescents: Associations with dietary intake and body mass index. *Asia Pacific Journal of Clinical Nutrition*, 25(4), 776-783.
15. Buxton, O. M., & Marcelli, E. (2010). Short and long sleep are positively associated with obesity, diabetes, hypertension, and cardiovascular disease among adults in the United States. *Social Science & Medicine*, 71(5), 1027-1036.
16. Spiegel, K., Tasali, E., Penev, P., & Van Cauter, E. (2004). Brief communication: Sleep curtailment in healthy young men is associated with decreased leptin levels, elevated ghrelin levels, and increased hunger and appetite. *Annals of Internal Medicine*, 141(11), 846-850.
17. Taheri, S., Lin, L., Austin, D., Young, T., & Mignot, E. (2004). Short sleep duration is associated with reduced leptin, elevated ghrelin, and increased body mass index. *PLoS Medicine*, 1(3), e62.
18. Kant, A. K., & Graubard, B. I. (2004). Eating out in America, 1987-2000: Trends and nutritional correlates. *Preventive Medicine*, 38(2), 243-249.
19. Wansink, B., & Sobal, J. (2007). Mindless eating: The 200 daily food decisions we overlook. *Environment and Behavior*, 39(1), 106-123.
20. Leedo, E., Beck, A. M., Astrup, A., & Lassen, A. D. (2017). The effectiveness of healthy meals at work on employees' dietary habits: A systematic review. *Food & Nutrition Research*, 61(1), 1325301.