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WELLBEING OF STUDENTS LINKED TO LIFESTYLE SLEEP AND EATING HABITS

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Abstract : Student wellbeing is increasingly recognized as a critical component of academic success and personal development. This study explores the interconnections between lifestyle patterns, sleep routines, and dietary habits among university students and their collective impact on overall mental and physical wellbeing. Using a qualitative approach, data were gathered through in-depth interviews with 35 students aged 18–45 from various academic backgrounds. Thematic analysis revealed that irregular sleep cycles, high fast-food intake, and prolonged screen time were commonly associated with fatigue, reduced concentration, and emotional instability. Conversely, students who maintained consistent sleep and healthy eating habits reported greater mental clarity, improved mood, and higher energy levels. The findings emphasize the need for comprehensive wellness programs that integrate sleep hygiene, nutritional awareness, and lifestyle education within academic institutions. Promoting holistic wellbeing through behavior modification could significantly enhance students' academic performance and long-term health.

Keywords: Student wellbeing, Lifestyle habits, Sleep patterns, Dietary habits, Mental health, University students, Qualitative research, Holistic health

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INTRODUCTION

University students often experience significant lifestyle transitions that can impact their overall wellbeing. The demands of academic performance, social adjustments, and independence frequently lead to irregular sleep schedules, poor dietary choices, and sedentary behavior, all of which contribute to physical and psychological distress (Beiter et al., 2015). As students navigate these challenges, their lifestyle behaviors—particularly sleep quality and eating patterns—play a pivotal role in shaping mental clarity, emotional regulation, and physical vitality (Mikolajczyk et al., 2009).

Sleep deprivation is increasingly prevalent among young adults, especially students, due to academic stress and excessive screen time. Poor sleep hygiene is associated with impaired cognitive performance, increased irritability, and heightened risk for depression and anxiety (Hirshkowitz et al., 2015). Similarly, fast food consumption and nutritional neglect are common among university populations, leading to gastrointestinal issues, fatigue, and increased risk for obesity and non-communicable diseases (Francis & Stevenson, 2013).

Recent studies underscore the importance of adopting a holistic approach to student wellbeing that considers interrelated lifestyle factors rather than isolating individual behaviors (Moore et al., 2020). This study aims to explore how the combined effects of lifestyle routines, sleep

patterns, and dietary habits influence the overall wellbeing of university students through qualitative inquiry.

REVIEW OF LITERATURE

Student wellbeing is a multidimensional construct influenced by physical, emotional, social, and academic factors (Dodge et al., 2012). Among university populations, lifestyle behaviors such as sleep, diet, and physical activity have shown strong associations with overall health and academic success.

1. Sleep Patterns and Student Wellbeing

Sleep is a foundational element of wellbeing, yet it is often disrupted among university students. Lund et al. (2010) reported that irregular sleep schedules are linked to lower academic performance, increased stress, and depressive symptoms. A study by Galambos et al. (2009) found that students with poor sleep quality exhibited higher levels of psychological distress and diminished life satisfaction. Sleep disturbances have also been associated with internet overuse and late-night screen exposure, exacerbating mental fatigue (Hirshkowitz et al., 2015).

2. Dietary Habits and Mental Health

Dietary behaviors play a significant role in psychological and physical health. A high intake of fast food, sugary beverages, and processed

foods has been linked to anxiety, poor mood regulation, and obesity (Francis & Stevenson, 2013). In contrast, balanced diets rich in fruits, vegetables, and omega-3 fatty acids have been shown to improve emotional resilience and cognitive function (O'Neil et al., 2014). Mikolajczyk et al. (2009) also observed a correlation between frequent junk food consumption and elevated stress levels in European students.

3. Integrated Lifestyle Behaviors and Holistic Health

Emerging literature emphasizes that wellbeing should not be evaluated through isolated behaviors but rather through the interaction of sleep, diet, and lifestyle habits (Moore et al., 2020). Physical inactivity, excessive screen time, and poor time management have been identified as co-occurring patterns that impair mental health among youth (Keles et al., 2020). Integrative wellness models suggest that modifying one lifestyle component—like improving sleep—can positively influence other areas such as diet and mood regulation (Coulthard et al., 2017).

4. University Environment and Preventive Strategies

Environmental and institutional factors also shape student behaviors. Beiter et al. (2015) stressed the role of university policies in addressing stressors related to academic workload and social pressures. Wellness programs promoting sleep hygiene, nutrition education, and mental health services have shown promising outcomes in enhancing student engagement and wellbeing (Buboltz et al., 2001).

METHODOLOGY

Study Design

A qualitative research design was employed to explore the perceptions and experiences of university students regarding their lifestyle habits, sleep routines, dietary patterns, and overall wellbeing. Thematic analysis was chosen as the primary method of data interpretation to identify recurring themes and contextual insights.

Study Setting and Participants

The study was conducted among students enrolled in various undergraduate and postgraduate programs at a multidisciplinary university in Maharashtra, India. A total of 35 participants aged between 18 and 45 years were recruited using purposive sampling. The sample included both

male and female students from diverse educational backgrounds such as Engineering, Medicine, Nursing, Management, and Allied Health Sciences.

Inclusion Criteria

- Current university students (UG/PG)
- Aged between 18–45 years
- Willing to provide informed consent
- Able to communicate in English, Hindi, or Marathi

Data Collection Tool and Procedure

Data were collected using a semi-structured in-depth interview guide developed based on literature and expert input. The guide included open-ended questions focusing on digital habits, sleep quality, eating patterns, emotional wellbeing, and coping strategies. Interviews were conducted either in-person or via video call, and responses were audio-recorded with participant consent.

Ethical Considerations

The study received approval from the Institutional Ethics Committee. Informed consent was obtained from all participants. Confidentiality and anonymity were ensured by using participant codes in transcripts and avoiding the collection of personally identifiable information.

Data Analysis

Audio recordings were transcribed verbatim and translated where necessary. The data were analyzed thematically using Braun and Clarke's six-phase framework (2006). Codes were generated manually, and themes were developed based on patterns and meaningful clusters. NVivo software (optional) was considered to organize and cross-reference coded data.

Trustworthiness

Credibility was ensured through peer debriefing and member checking. Transferability was addressed by providing rich descriptions of the setting and participant context. Dependability and confirmability were maintained through audit trails and researcher reflexivity.

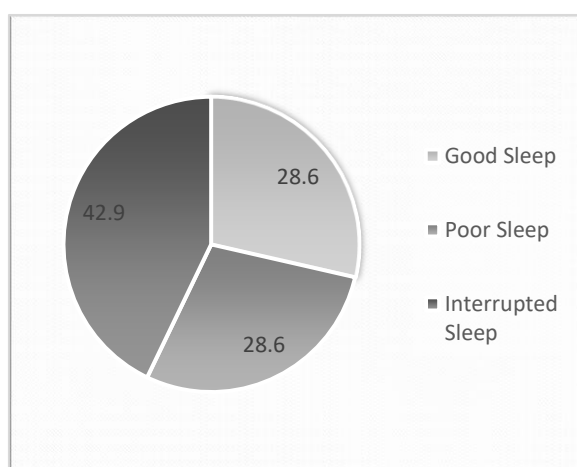
RESULTS

1. Lifestyle and Daily Routine Patterns

Participants reported varied lifestyle habits influenced by academic schedules, social media use, and personal motivation. Many described irregular routines, often staying up late due to academic pressure or entertainment. Students noted minimal physical activity during weekdays, contributing to fatigue and low energy. A few participants who practiced time management and mindfulness reported feeling more productive and emotionally balanced.

2. Sleep Quality and Its Psychological Impact

Figure 1: Reported Sleep Quality



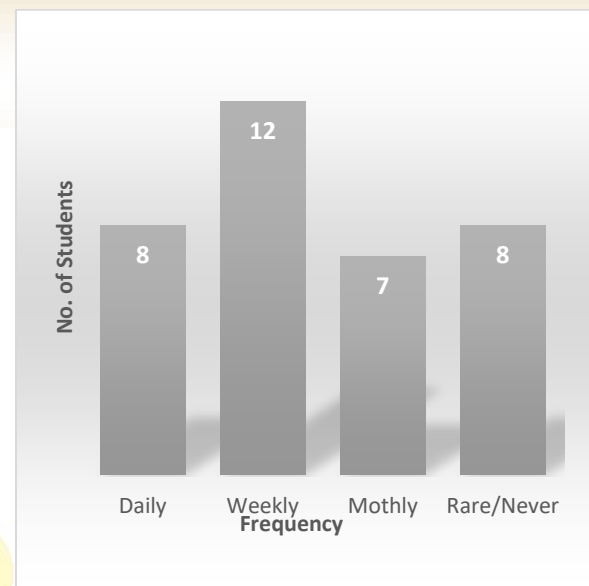
Irregular sleep patterns emerged as a common theme. Several students experienced delayed sleep onset, especially due to prolonged mobile phone use. Reports included waking up tired, experiencing daytime drowsiness, and difficulty focusing in classes. Participants who followed consistent sleep routines described better emotional control, reduced anxiety, and improved academic focus. Some students on night shifts (e.g., healthcare interns) expressed challenges in maintaining restful sleep, leading to irritability and cognitive fog.

3. Fast Food Consumption and Eating Habits

Most participants admitted frequent consumption of fast food, especially during study hours or social outings. Cravings, convenience, and peer influence were major drivers. Although some perceived no major health impact, others reported symptoms like acidity, sluggishness, and weight gain. A few participants who intentionally reduced fast food intake noticed positive changes,

such as improved digestion and enhanced alertness.

Figure 2. Fast Food Consumption Frequency Among Students



4. Screen Time and Emotional Wellbeing

Heavy digital engagement—often exceeding 6 hours daily—was associated with eye strain, mood swings, and social withdrawal. Students noted that excessive screen time, especially before bed, interfered with sleep and made them feel mentally exhausted. Some participants adopted digital detox practices and shared that these efforts led to improved focus and mental calmness.

5. Perception of Overall Wellbeing

Students who maintained a balance between academic responsibilities, sleep, and diet reported feeling more in control of their mental and physical health. On the contrary, those with irregular sleep schedules, unhealthy food habits, and prolonged screen exposure often experienced emotional instability, lack of motivation, and health complaints. Peer support, structured routines, and personal discipline were seen as key contributors to maintaining wellbeing.

DISCUSSION

The present study explored the lifestyle behaviors, sleep patterns, and dietary habits of university students and their relationship with overall wellbeing. The findings revealed a strong connection between irregular routines and negative psychological and physical outcomes, supporting existing literature on student health.

Consistent with previous studies (Lund et al., 2010; Hirshkowitz et al., 2015), irregular and insufficient sleep among participants was linked to reduced concentration, daytime fatigue, and emotional disturbances. Students who followed stable sleep routines reported better focus and emotional regulation. This aligns with Galambos et al. (2009), who emphasized the cognitive and psychological advantages of adequate sleep among college students.

Dietary patterns also emerged as significant contributors to wellbeing. Most students reported regular consumption of fast food, citing convenience and peer influence. While some did not perceive immediate health effects, others experienced digestion issues, fatigue, and weight gain. These results support the findings of Francis and Stevenson (2013), who demonstrated the negative impact of poor nutrition on mood and cognitive performance.

Screen time was another notable factor. Excessive digital engagement—especially before bedtime—was commonly associated with sleep disturbances and mental exhaustion. Similar to the findings of Keles et al. (2020), this study observed that high screen exposure correlates with stress, anxiety, and withdrawal behaviors. Students who attempted digital detox practices noted improved mental clarity and sleep quality, reinforcing the benefits of mindful digital use.

Importantly, students who maintained a balance between academic work, sleep, and healthy eating habits showed better psychological resilience and perceived wellness. This supports the holistic view of wellbeing advocated by Moore et al. (2020), suggesting that interconnected lifestyle factors should be addressed together rather than in isolation.

The qualitative nature of this study enabled an in-depth understanding of students' lived experiences, offering valuable insights into how modern academic life interacts with personal health choices. However, findings may not be generalizable due to the limited sample size and context-specific variables.

CONCLUSION

This study highlights the dual role of technology in mental health care among underserved populations. While digital tools offer valuable opportunities for education, support, and access to care, excessive or unregulated use contributes to stress, poor sleep, and emotional fatigue. Limited awareness and usage of advanced tools like AI and VR suggest that significant barriers—such as digital literacy and cultural acceptability—still

exist in rural and semi-urban areas. Participants expressed a desire for more balanced, human-centered approaches that integrate technology with physical activity, nutrition awareness, and emotional support. Bridging the mental health care gap in underserved regions will require not only improved digital infrastructure but also community engagement, health education, and ethical integration of emerging technologies. A hybrid model that values both innovation and local relevance can make mental health care more accessible, effective, and inclusive.

LIMITATIONS AND FUTURE RESEARCH

This study was limited by its small sample size and single-institution focus, which may affect the generalizability of findings. As responses were self-reported, there is a possibility of bias due to social desirability or recall errors. Additionally, the qualitative and cross-sectional nature of the study does not allow for measurement of long-term behavioral changes or causality.

Future studies should consider larger, multi-center samples to enhance applicability across student populations. A mixed-methods approach combining interviews with quantitative data could offer more robust insights. Longitudinal research would help track lifestyle changes over time, while intervention-based studies could assess the impact of wellness programs on student health and wellbeing.

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USING TECHNOLOGY TO BRIDGE GAPS IN RURAL AND UNDERSERVED MENTAL HEALTH CARE

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Abstract : Digital technology is increasingly intertwined with everyday life and offers promising avenues to support mental health, particularly in rural and underserved communities. This qualitative study explores user experiences and perceptions of technology's role in mental well-being among 35 participants aged 20 to 44 from varied educational and occupational backgrounds, including engineers, students, and healthcare workers. Participants reported daily screen use ranging from 2 to 17 hours, with many linking extended digital engagement to anxiety, poor sleep, and reduced attention span. Breaks from digital platforms were associated with better focus and sleep quality. While virtual reality (VR) was underutilized, a few users described its calming effects and potential in education. Artificial intelligence (AI) raised concerns about emotional misinterpretation and over-dependence, although some acknowledged its informational benefits. Fast food consumption and lifestyle factors further contributed to mental health stressors. Despite limited awareness and access to advanced digital tools like VR or AI-based support systems, participants expressed interest in integrative approaches combining technology with physical wellness practices. Findings suggest that to bridge mental health gaps in underserved areas, interventions must go beyond access alone and prioritize culturally relevant, emotionally supportive, and balanced digital solutions.

Keywords: *Mental health, digital technology, virtual reality, artificial intelligence, screen time, rural health, underserved populations, lifestyle factors, qualitative research, digital wellness*

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INTRODUCTION

Mental health remains a critical component of overall well-being, yet access to mental health services is disproportionately limited in rural and underserved regions. In many low- and middle-income countries, including India, geographic isolation, lack of trained professionals, stigma, and poor infrastructure contribute to an expanding mental health care gap. With the rapid advancement of digital technology, new avenues have emerged to deliver mental health support remotely and more affordably. Tools such as mobile health apps, teleconsultation platforms, artificial intelligence (AI)-based chat systems, and virtual reality (VR) interventions offer scalable solutions that can potentially overcome traditional access barriers.

However, the success of such technologies depends not only on availability but also on awareness, acceptability, and relevance to local populations. In rural and semi-urban areas, digital literacy, trust in technology, and infrastructural limitations pose challenges to widespread adoption. Moreover, excessive or unregulated use of digital tools—especially among youth and working professionals—may paradoxically

contribute to mental health issues such as anxiety, sleep disturbances, and emotional dependency.

This study aims to explore the lived experiences, perceptions, and behavioral patterns related to digital technology use among individuals from diverse backgrounds. By examining screen time habits, awareness of AI and VR, and associated lifestyle factors, the research seeks to understand both the promise and the pitfalls of technology-based mental health solutions in underserved settings. The findings aim to inform the development of more effective, user-centered, and culturally sensitive digital interventions for mental health care.

REVIEW OF LITERATURE

Access to mental health services in rural and underserved populations remains a global challenge. According to the World Health Organization (2021), more than 75% of people with mental disorders in low-income countries receive no treatment at all. In India, rural regions often suffer from a severe shortage of mental health professionals, compounded by stigma, poor transportation, and inadequate infrastructure (Patel et al., 2018). These limitations highlight the

urgent need for scalable, cost-effective, and context-sensitive mental health delivery models.

Digital technology has emerged as a promising solution to bridge these gaps. Mobile-based mental health applications, telepsychiatry, and e-therapy platforms have been found effective in increasing access to care, especially in geographically isolated areas (Naslund et al., 2017). For instance, smartphone apps offering guided meditation, mood tracking, and cognitive behavioral therapy (CBT) modules have shown potential in reducing symptoms of anxiety and depression. A study by Mohr et al. (2019) emphasized the importance of digital interventions tailored to local languages, cultures, and user needs.

Artificial intelligence (AI) tools, such as chatbot counselors, are increasingly being integrated into mental health services. These tools offer 24/7 support and anonymity, which can be particularly useful in communities where stigma inhibits help-seeking behavior (Fulmer et al., 2021). However, critics argue that AI lacks emotional intelligence and may not replace human empathy, especially in sensitive psychological contexts.

Virtual reality (VR) has also demonstrated value in therapeutic settings. VR-based exposure therapy, relaxation training, and mindfulness experiences have been effective for anxiety, PTSD, and phobias (Freeman et al., 2017). Nevertheless, high costs, limited awareness, and accessibility issues have restricted its application in rural populations.

At the same time, digital overuse presents its own mental health risks. Excessive screen time has been linked to poor sleep quality, increased anxiety, and reduced attention span (Twenge et al., 2018). Among youth and working professionals, the compulsive use of digital devices often replaces physical activity and face-to-face interactions, which are crucial for mental well-being.

There is a growing consensus that while technology offers transformative potential, it must be implemented with caution and cultural sensitivity. Holistic approaches that combine technology with community outreach, health education, and lifestyle interventions may offer the most sustainable path forward. This study builds on these insights by exploring how digital tools are currently perceived and used among diverse individuals in underserved settings, and what barriers remain in leveraging them for mental health promotion.

METHODOLOGY

Study Design:

This study employed a qualitative, descriptive design to explore the perceptions and experiences of individuals regarding the role of digital technology in mental health, particularly in underserved and rural settings. A semi-structured questionnaire approach was used to collect in-depth insights into digital behavior, technology usage, mental well-being, and related lifestyle factors.

Study Population and Sampling:

A purposive sampling method was adopted to include a diverse range of participants representing different educational and occupational backgrounds. A total of 35 individuals aged between 20 and 44 years participated in the study. Participants included students, engineers, healthcare professionals, technicians, and rural workers, ensuring a varied demographic to capture multiple perspectives.

Data Collection Tool

Data were collected using a structured, self-administered questionnaire designed in bilingual format (English and regional language). The questionnaire consisted of open-ended and close-ended items covering themes such as daily digital screen usage, psychological impact of screen time, sleep and diet habits, awareness of artificial intelligence (AI) and virtual reality (VR), and views on technology's future in mental health care.

Data Collection Procedure

The survey was conducted both online and offline between April and May 2025. Participation was voluntary, and informed consent was obtained from all respondents. Confidentiality and anonymity were ensured throughout the data collection process.

Data Analysis

Responses were coded and analyzed thematically. Thematic analysis involved reading and categorizing responses to identify recurring patterns and sub-themes. Descriptive statistics were also used to summarize key quantitative variables such as screen time hours and frequency of fast food consumption. Microsoft Excel was used for basic data handling and visualization.

Ethical Considerations

The study received approval from the Institutional Ethics Committee. Participants were briefed about the purpose of the study, and written informed consent was obtained. No identifying personal data were collected.

RESULTS

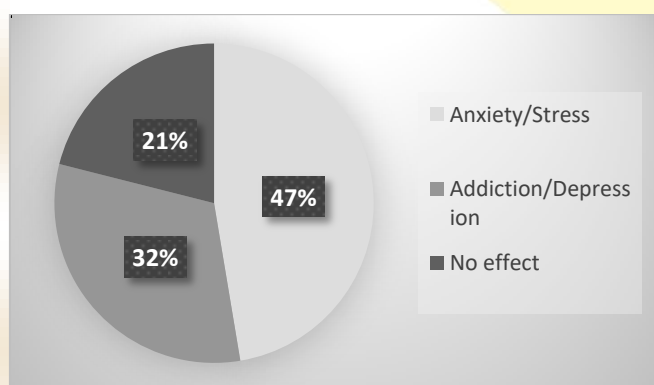
Demographic Profile

A total of 35 participants, aged between 20 and 44 years, were included in the study. The sample comprised both males and females from diverse educational backgrounds such as electrical engineering, MBA, GNM, DMLT, and MPH. Occupations included students, engineers, doctors, nurses, and technicians, offering a broad view across rural and semi-urban socioeconomic contexts.

Digital Usage and Mental Health Perceptions

Daily screen time varied significantly among participants, ranging from 2–3 hours to more than 17 hours in a 24-hour period. High digital exposure was common among professionals and students. Many respondents reported adverse mental health effects due to prolonged screen use, including anxiety, addiction, depression, negative thinking, loneliness, and reduced attention span. A few participants, however, did not perceive any psychological effects from screen usage.

Figure No.1 Reported Mental Health Effects of Digital Use



Breaks from Screen and Sleep Quality

Most participants acknowledged that taking breaks from digital screens had positive effects on their mental clarity and sleep patterns. Benefits cited included reduced eye strain, better focus, and enhanced sleep. Conversely, those who refrained from taking breaks reported difficulties such as emotional dependency on screen

interaction and disturbed sleep cycles. Factors contributing to poor sleep included rotational job shifts, excessive screen time, and mental stress.

Perceptions of Artificial Intelligence in Mental Health

Awareness of artificial intelligence (AI) and its application in mental health was limited. Some participants expressed concerns about AI's emotional disconnect and the risk of over-dependence. Comments included fears that AI systems may misinterpret emotional nuances or reinforce prior biases based on search history. A few respondents had no opinion, indicating a lack of awareness or exposure to AI-driven mental health tools.

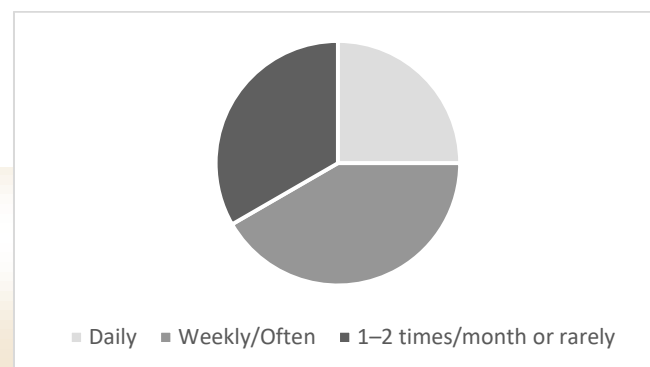
Virtual Reality (VR) Usage and Impact

VR usage among participants was minimal. Those who had used VR, primarily for films or educational purposes, reported mild calming effects. One participant mentioned hearing about its application in gaming and mental health, but hands-on experience was rare. Limited access, awareness, and cost barriers were cited as possible reasons for low adoption of VR in mental wellness strategies.

Fast Food Consumption and Its Mental-Physical Impact

Fast food was commonly consumed, with several respondents indicating daily or weekly intake. While some participants felt no strong negative impact, others reported issues such as acidity, bloating, weight gain, and sluggishness. Reducing fast food intake led to noticeable improvements, including better digestion, mood enhancement, and increased energy levels—suggesting an indirect link between diet and mental well-being.

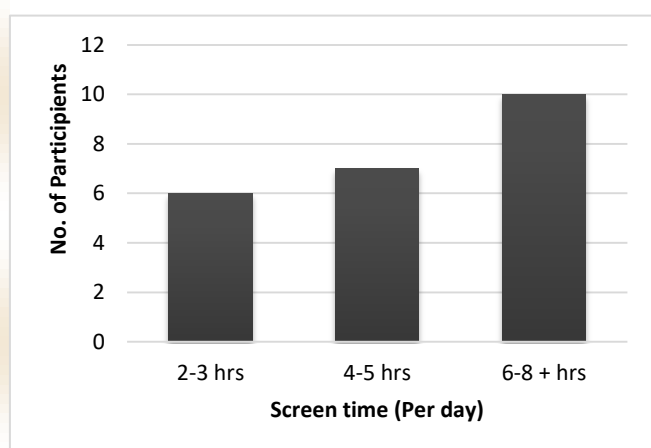
Figure 2: Fast Food Consumption and Its Mental-Physical Impact



Technology and the Future of Mental Health

Participants shared mixed feelings about technology's future role in mental health care. While many expressed concerns about tech addiction, eye strain, and increased stress, a few emphasized the importance of using technology in balance with physical and social activities. Suggestions included integrating sports, music, and limited digital use to enhance mental resilience. Overall, participants acknowledged that while technology can aid mental health care, it must be implemented with cultural sensitivity, awareness, and emotional intelligence.

Figure 3: Daily Screen Time Distribution Among Participants



DISCUSSION

This study explored the role of digital technology in influencing mental health among individuals from diverse professional and educational backgrounds in underserved and rural contexts. The findings reveal both the potential and challenges associated with integrating technology into mental health support systems in such populations.

A significant proportion of participants reported prolonged daily screen time, often exceeding 6–8 hours. This aligns with previous literature linking excessive digital use to increased anxiety, reduced attention span, and disrupted sleep patterns (Twenge et al., 2018). Participants who incorporated breaks from digital devices experienced noticeable improvements in sleep quality and focus, supporting the idea that mindful use of technology can mitigate its negative psychological effects.

Awareness and use of advanced technologies like artificial intelligence (AI) and virtual reality (VR) were limited. While a few respondents recognized the calming and educational effects of VR, its overall adoption remained low. This suggests a gap in digital exposure and access, especially in

rural and semi-urban areas, where infrastructure and digital literacy may be lacking. Similar findings have been noted in other studies that emphasize the digital divide in low-resource settings (Naslund et al., 2017).

Concerns about AI were centered on its emotional inadequacy and risk of dependency. These perceptions reflect the broader ethical and clinical debates about using AI in psychological care, where machine-led interventions may not fully replicate human empathy (Fulmer et al., 2021). Therefore, while digital tools hold promise, they must be integrated carefully and ethically into mental health strategies, especially in communities with limited awareness.

Fast food consumption emerged as a secondary but relevant lifestyle factor affecting mental well-being. Many participants reported daily or frequent intake, leading to complaints such as acidity, fatigue, and digestive discomfort. Reducing fast food improved both physical and mental states in several cases. This finding is consistent with literature connecting dietary habits to mood and cognitive function (Jacka et al., 2011).

Interestingly, most participants expressed a mixed attitude toward technology's future in mental health care. While they acknowledged its benefits for education and access, there was also fear of over-dependence, distraction, and emotional isolation. This calls for the development of digital mental health interventions that are culturally sensitive, emotionally intelligent, and balanced with offline wellness activities such as physical exercise and social interaction.

Overall, the study underscores the need for a hybrid approach that combines technological innovation with community-based education, human support systems, and lifestyle improvements. Such a model would be more effective in addressing the complex mental health needs of rural and underserved populations.

CONCLUSION

This study highlights the dual role of technology in mental health care among underserved populations. While digital tools offer valuable opportunities for education, support, and access to care, excessive or unregulated use contributes to stress, poor sleep, and emotional fatigue. Limited awareness and usage of advanced tools like AI and VR suggest that significant barriers—such as digital literacy and cultural acceptability—still exist in rural and semi-urban areas. Participants expressed a desire for more balanced, human-

centered approaches that integrate technology with physical activity, nutrition awareness, and emotional support. Bridging the mental health care gap in underserved regions will require not only improved digital infrastructure but also community engagement, health education, and ethical integration of emerging technologies. A hybrid model that values both innovation and local relevance can make mental health care more accessible, effective, and inclusive.

LIMITATIONS AND FUTURE RESEARCH

This study had a small sample size and used self-reported data, which may limit generalizability. Participant understanding of advanced technologies like AI and VR was also limited, affecting response depth. Future studies should include larger, more diverse populations and combine qualitative insights with clinical or behavioral data. Research should also assess the long-term impact and cultural suitability of digital mental health tools in underserved settings.

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FAST FOOD CONSUMPTION AND ITS HEALTH CONSEQUENCES AMONG ADULTS IN PRIMARY CARE SETTINGS

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Abstract : Fast food consumption is an emerging public health concern within family medicine and primary care, as it contributes to poor dietary patterns and long-term health risks. This qualitative study explores perceptions, motivations, and health experiences associated with fast food consumption among adults attending family medicine clinics. In-depth interviews were conducted with 35 participants aged 18 to 45 years, selected through purposive sampling to capture diverse perspectives. Thematic analysis revealed four key themes: convenience-driven dietary choices, limited awareness of nutritional risks, self-reported symptoms such as fatigue and digestive discomfort, and a strong preference for receiving dietary guidance from primary care providers. Participants described fast food as an accessible but unhealthy option, often linked with low energy levels and poor eating routines. The findings emphasize the role of family medicine in addressing dietary behaviors by incorporating nutrition counseling and lifestyle education into routine care. Promoting dietary awareness and early intervention strategies can strengthen preventive health efforts in primary care settings.

Keywords: Fast food consumption, Family medicine, Primary care, Dietary habits, Qualitative study, Lifestyle counseling, Preventive health, adult nutrition, Health perceptions, Patient education

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INTRODUCTION

The increasing prevalence of ultra-processed food (UPF) consumption has sparked significant concern among public health professionals and primary care physicians. These ready-to-eat, industrially formulated products—often high in sugar, salt, saturated fats, and additives—are becoming dietary staples globally (Monteiro et al., 2019). Numerous studies have established strong correlations between high UPF intake and a range of adverse health outcomes. Hall et al. (2019) demonstrated that UPFs contribute to excess caloric intake, leading to rapid weight gain and metabolic disturbances. Similar findings were echoed in population studies linking UPFs to obesity, type 2 diabetes, and cardiovascular diseases (Srouf et al., 2019; Pagliai et al., 2021). Longitudinal research has also suggested that frequent consumption of UPFs may elevate all-cause mortality risk and cancer incidence (Fiolet et al., 2018; Rico-Campà et al., 2019). These associations have been confirmed across varied demographics and dietary environments, including the UK, France, Brazil, and the US (Rauber et al., 2018; Julia et al., 2018; Louzada et al., 2015). In Brazil, household-level studies have shown that increased UPF consumption is closely linked to higher rates of obesity, particularly

among low-income groups with limited access to fresh foods (Canella et al., 2014).

From a nutritional standpoint, UPFs are characterized by poor nutrient density and high glycemic loads, factors that contribute to insulin resistance and inflammatory states (Elizabeth et al., 2020). Recent meta-analyses and systematic reviews affirm the role of UPFs in deteriorating overall diet quality, reducing intake of fiber, essential vitamins, and healthy fats (BMJ, 2023; Steele et al., 2016). Moreover, research suggests that excessive UPF consumption during childhood may lead to long-term consequences such as dyslipidemia and poor cognitive development (Rauber et al., 2015).

Primary care settings provide a crucial platform to address these concerns. Family medicine practitioners are increasingly called upon to screen dietary patterns and counsel patients on reducing UPF consumption as part of chronic disease prevention (Nicholson et al., 2020). Qualitative insights, such as those by He et al. (2018), reveal the psychosocial motivations behind fast food consumption—including stress relief, habit, and convenience—suggesting that behavioral interventions should be culturally and contextually informed.

The evolving field of food classification (e.g., the NOVA system) has further improved our ability to identify and communicate dietary risks

associated with processing levels (Moubarac et al., 2014). In parallel, public health researchers advocate for stronger food labeling laws and taxation policies to curb UPF marketing and accessibility, especially among vulnerable populations (Popkin et al., 2020; Touvier et al., 2020).

Collectively, the literature underscores the urgent need for integrated dietary education, early intervention, and community-level nutrition strategies within primary healthcare systems. A comprehensive understanding of the biological, social, and policy-driven determinants of UPF consumption is essential for mitigating its long-term public health impact.

REVIEW OF LITERATURE

Student wellbeing is a multidimensional construct influenced by physical, emotional, social, and academic factors (Dodge et al., 2012). Among university populations, lifestyle behaviors such as sleep, diet, and physical activity have shown strong associations with overall health and academic success.

1. Sleep Patterns and Student Wellbeing

Sleep is a foundational element of wellbeing, yet it is often disrupted among university students. Lund et al. (2010) reported that irregular sleep schedules are linked to lower academic performance, increased stress, and depressive symptoms. A study by Galambos et al. (2009) found that students with poor sleep quality exhibited higher levels of psychological distress and diminished life satisfaction. Sleep disturbances have also been associated with internet overuse and late-night screen exposure, exacerbating mental fatigue (Hirshkowitz et al., 2015).

2. Dietary Habits and Mental Health

Dietary behaviors play a significant role in psychological and physical health. A high intake of fast food, sugary beverages, and processed foods has been linked to anxiety, poor mood regulation, and obesity (Francis & Stevenson, 2013). In contrast, balanced diets rich in fruits, vegetables, and omega-3 fatty acids have been shown to improve emotional resilience and cognitive function (O'Neil et al., 2014). Mikolajczyk et al. (2009) also observed a correlation between frequent junk food consumption and elevated stress levels in European students.

3. Integrated Lifestyle Behaviors and Holistic Health

Emerging literature emphasizes that wellbeing should not be evaluated through isolated behaviors but rather through the interaction of sleep, diet, and lifestyle habits (Moore et al., 2020). Physical inactivity, excessive screen time, and poor time management have been identified as co-occurring patterns that impair mental health among youth (Keles et al., 2020). Integrative wellness models suggest that modifying one lifestyle component—like improving sleep—can positively influence other areas such as diet and mood regulation (Coulthard et al., 2017).

4. University Environment and Preventive Strategies

Environmental and institutional factors also shape student behaviors. Beiter et al. (2015) stressed the role of university policies in addressing stressors related to academic workload and social pressures. Wellness programs promoting sleep hygiene, nutrition education, and mental health services have shown promising outcomes in enhancing student engagement and wellbeing (Buboltz et al., 2001).

METHODOLOGY

Study Design

This research employed a qualitative exploratory design to gain in-depth insights into the dietary behaviors and perceptions of adults regarding the health consequences of consuming fast food, particularly in the context of family medicine and primary care. A qualitative approach was chosen to capture the lived experiences and subjective interpretations of dietary choices and their perceived impacts on health (Creswell & Poth, 2018).

Participants and Sampling

A purposive sampling method was used to recruit 35 participants between the ages of 18 and 45 years from urban and semi-urban primary care settings. Participants included individuals who reported regular consumption of ready-to-eat, convenience, or processed meals at least twice a week. Recruitment was facilitated through outpatient departments (OPDs) of family

medicine clinics, ensuring a diverse representation of socioeconomic and occupational backgrounds.

Inclusion and Exclusion Criteria

Eligible participants were adults aged 18–45 years who had visited a primary care center at least once in the past 6 months and were willing to share their dietary habits. Individuals with diagnosed severe psychiatric illness or those undergoing medical nutrition therapy were excluded.

Data Collection

Data were collected through in-depth, semi-structured interviews using an open-ended interview guide. The guide focused on themes such as frequency of fast food consumption, reasons for preference, awareness of associated health risks, and any reported physical symptoms (e.g., fatigue, gastrointestinal discomfort, sleep issues). Interviews were conducted in the local language and recorded with participant consent, each lasting between 30–40 minutes. Field notes were also taken to capture non-verbal cues and contextual information (Kvale & Brinkmann, 2009).

Ethical Considerations

Ethical clearance was obtained from the Institutional Ethics Committee prior to the commencement of data collection. Written informed consent was secured from all participants. Confidentiality was maintained by anonymizing personal identifiers during transcription and analysis. The study followed ethical guidelines as outlined by the Declaration of Helsinki (World Medical Association, 2013).

Data Analysis

Thematic analysis was applied to transcribed interviews following the Braun and Clarke (2006) six-phase framework: (1) familiarization with data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. Coding was conducted manually and verified by two independent researchers to ensure reliability.

Emergent themes included "Taste-driven Habits," "Convenience Over Nutrition," and "Health Awareness Gaps."

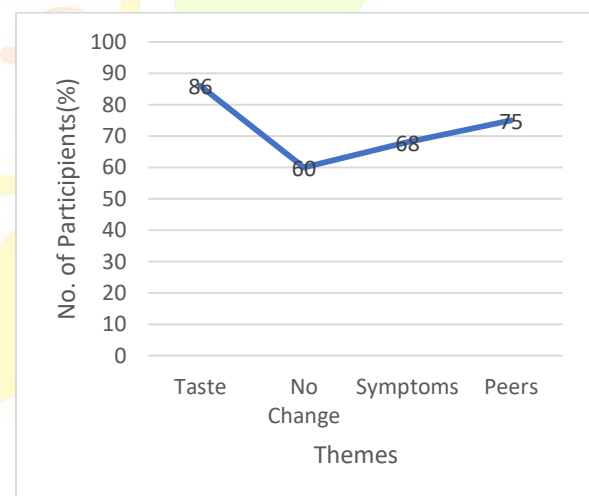
Trustworthiness and Rigor

To enhance credibility, the study employed member checking, peer debriefing, and triangulation of data sources. Dependability was ensured through detailed documentation of procedures and reflexive journaling. Confirmability was established by maintaining an audit trail and external peer review (Lincoln & Guba, 1985).

RESULTS

The analysis of interview data from 35 participants aged 18–45 years revealed four primary themes. These themes reflect participants' perceptions, experiences, and self-reported outcomes related to the frequent consumption of commercially prepared, ultra-processed meals.

Figure 1: *Percentage of Participants Reporting Key Themes Related to Fast Food Consumption*



Taste and Convenience as Primary Influencers

The most commonly cited reason for choosing ready-to-eat meals was convenience, coupled with taste. Approximately 86% of participants reported that these meals offered a quick solution to their busy lifestyles, especially during work hours or after long commutes. Many explained that affordability and wide availability also influenced their choices. For most, consuming convenience-

based foods was not an occasional decision but a routine dietary habit embedded in daily life.

Health Awareness with Limited Lifestyle Change

Although 60% of participants expressed awareness about the negative health effects associated with high consumption of pre-packaged and quick-service items, very few reported taking meaningful action to reduce intake. Commonly cited reasons included stress, lack of time to cook, emotional dependency on food, and lack of accessible healthy alternatives. Despite recognizing symptoms such as digestive issues or sleep disturbances, these participants continued habitual consumption, reflecting a psychological gap between knowledge and behavior.

Perceived Health Consequences and Emotional Impact

More than two-thirds (68%) of the individuals described experiencing physical discomfort—primarily fatigue, bloating, and indigestion—after eating ultra-processed foods regularly. Some participants also noted difficulty concentrating or feeling mentally drained, particularly after extended periods of poor eating habits. Interestingly, several individuals reported that when they reduced their intake of convenience meals, they noticed immediate improvements in energy levels, mood, and sleep quality.

Role of Social Influence and Digital Platforms

Social dynamics and digital marketing were powerful forces shaping dietary choices. About 75% of participants acknowledged being influenced by advertisements, food delivery app promotions, or peer habits. Visual exposure to food through social media platforms and app notifications led to impulsive ordering behavior, often independent of hunger. Some participants described this as a cycle—where social pressure and visual triggers made it difficult to resist unhealthy eating patterns.

Table 1: Emergent Themes from Qualitative Interviews on Fast Food Consumption

Theme	Key Insight
Taste & Ease	86% liked it for quick, tasty meals
Risk but No Change	60% knew it's bad but didn't stop
Health Issues	68% felt tired or had stomach problems
Social Pressure	Ads and friends led to more eating

Discussion

This qualitative study offers valuable insights into the dietary behaviors and health perceptions of adults aged 18–45 concerning the frequent consumption of ready-to-eat meals within primary care settings. Thematic analysis revealed four key patterns: preference for taste and convenience, limited behavioral change despite health awareness, perceived physical complaints, and the influence of social and digital factors.

Participants frequently chose convenience foods due to their accessibility, affordability, and sensory appeal. This is consistent with previous literature indicating that quick-service items are particularly attractive to individuals with busy lifestyles, such as working professionals and students (He et al., 2018; Monteiro et al., 2019). Although many were aware of the potential negative health outcomes associated with these food choices, actual changes in eating behavior were minimal. This reflects the well-documented gap between nutritional knowledge and dietary practices, known as the “intention-behavior disconnect” (Julia et al., 2018).

Commonly reported symptoms—such as fatigue, digestive discomfort, and disturbed sleep—were linked to regular intake of ultra-processed foods. These self-reported effects align with evidence

suggesting that such items may contribute to gastrointestinal imbalance and metabolic fatigue (Fiolet et al., 2018; Elizabeth et al., 2020). Although subjective, these health complaints point to a growing concern among consumers regarding the long-term consequences of habitual consumption of low-nutrient, high-calorie food products.

In addition, social gatherings, peer behaviors, and aggressive marketing—particularly via mobile applications—were major contributors to frequent ordering and intake of convenient edible products. Digital platforms and food delivery apps were identified as major influencers, often encouraging impulsive eating even in the absence of hunger (Rauber et al., 2018; Touvier et al., 2020).

Given these findings, primary care practitioners—especially those in family medicine—can play a crucial role in initiating timely dietary counseling. Brief interventions that include personalized nutrition advice, behavioral nudges, and digital literacy on healthy eating can help individuals make more informed choices. Motivational interviewing and culturally appropriate counseling techniques can further enhance the impact of such interventions (Nicholson et al., 2020).

CONCLUSION

This study provides valuable insights into the patterns and perceptions surrounding the consumption of ready-to-eat and ultra-processed foods among adults attending primary care settings. While taste, affordability, and convenience emerged as major motivators, many participants were aware of the potential health consequences—yet struggled to modify their dietary behaviors.

Self-reported symptoms such as fatigue, poor digestion, and reduced mental clarity were commonly linked to frequent intake of commercially prepared meals. Despite this, social influences and digital marketing continued to drive high consumption levels, especially among younger adults and working professionals.

The findings underscore the importance of addressing nutrition education, digital behavior,

and emotional eating within primary care consultations. Family medicine practitioners can play a pivotal role in guiding individuals toward healthier food choices through counseling, brief interventions, and community-level awareness programs.

Promoting mindful eating, encouraging home-cooked alternatives, and integrating discussions around digital triggers into dietary advice can help individuals make sustainable improvements in their eating habits—ultimately reducing preventable health burdens associated with convenience-based eating.

Limitations

This study was limited by its small, purposive sample size, which may not reflect the broader population. All data were self-reported, possibly introducing recall or response bias. Additionally, variations in participants' definitions of ready-to-eat meals and lack of clinical assessments (e.g., BMI, labs) limit the generalizability of findings.

Future Research

Future studies should include larger and more diverse samples to enhance generalizability. Mixed-method or longitudinal designs can offer deeper insights into behavioral patterns over time. Additionally, exploring the effectiveness of primary care interventions—such as digital nutrition counseling or behavioral nudges—can help assess strategies to reduce excessive reliance on ready-to-eat meals.

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