



 Research Article

Lifestyle Determinants of Psychological Well-Being Among University Students: An Integrative Analysis of Stress, Dietary Patterns, And Physical Activity in The Context of Global Health Transitions

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ABSTRACT

The rapid transformation of global lifestyles, particularly among university students, has intensified concerns regarding the interplay between stress, dietary habits, and physical activity and their cumulative impact on psychological well-being. This study presents a comprehensive, theory-driven exploration of the lifestyle triad-stress levels, dietary patterns, and exercise behaviors-within the broader framework of noncommunicable disease prevention and mental health promotion. Drawing upon interdisciplinary literature, including epidemiological data, psychological theories, and global health policy frameworks, this research aims to elucidate the complex interrelationships that define student well-being.

The study synthesizes findings from diverse sources to examine how academic stress, lifestyle behaviors, and psychological constructs such as self-efficacy and coping mechanisms interact to influence mental health outcomes. Particular attention is given to the prevalence of stress and depression among university populations, as well as the role of lifestyle factors in modulating these conditions. The analysis is grounded in established theoretical models, including self-determination theory and social cognitive theory, which provide a conceptual basis for understanding behavior regulation and well-being.

Results indicate a strong association between high stress levels and poor dietary and exercise habits, which collectively contribute to diminished psychological well-being. Conversely, students who engage in regular physical activity and maintain balanced diets exhibit greater resilience and lower anxiety and depression. The study also highlights the of institutional and policy-level interventions in promoting healthy lifestyles,

in alignment with global initiatives such as the Sustainable Development Goals and the Shanghai Declaration on Health Promotion.

The discussion addresses methodological limitations, including variability in measurement and cultural differences, and proposes directions for future research. Overall, this study contributes a nuanced and integrative perspective on student well-being, emphasizing the of holistic approaches to health promotion in academic settings.

KEYWORDS

Academic stress, dietary habits, physical activity, psychological well-being, university students, lifestyle behavior, mental health.

INTRODUCTION

The contemporary university environment represents a complex and dynamic setting in which students are exposed to a multitude of academic, social, and personal challenges. These challenges often manifest as elevated of stress, which, when coupled with suboptimal lifestyle behaviors such as poor dietary habits and physical inactivity, can significantly impair psychological well-being. The increasing prevalence of mental health issues among university students has become a of global concern, prompting extensive research into that contribute to these outcomes.

From a public health perspective, of addressing lifestyle-related determinants of health is underscored by the rising burden of noncommunicable diseases (NCDs), which are responsible for a significant proportion of global morbidity and mortality (WHO, 2018). These diseases are often linked to modifiable risk factors, including unhealthy diets, physical inactivity, and crpecc, all of which are prevalent among student populations. The United Nations' Sustainable Development Goal 3 emphasizes the promoting healthy lives and well-being for all,

highlighting the relevance of this research in a broader global context (United Nations, n.d.).

The concept of well-being itself is multifaceted, encompassing both hedonic and eudaimonic dimensions. Hedonic well-being refers to the presence of positive affect and life satisfaction, while eudaimonic well-being emphasizes meaning, self-realization, and psychological functioning (Deci & Ryan, 2008; Diener, 2009). Understanding how lifestyle factors influence these dimensions is critical for developing effective interventions aimed at improving student health.

Academic stress has been identified as a primary contributor to mental health problems among university students. Studies have consistently shown high prevalence rates of stress, anxiety, and depression in this population, with some estimates suggesting that a significant proportion of students experience clinically relevant symptoms (Ibrahim et al., 2013; Sarokhani et al., 2013). The sources of academic stress are diverse, ranging from examination pressure and workload

to competition and future career uncertainty (Kumaraswamy, 2013; Bansal et al., 2019).

In addition to psychological stressors, lifestyle behaviors such as diet and physical activity play a crucial role in shaping mental health outcomes. Poor dietary habits, characterized by high consumption of processed foods and low intake of nutrients, have been associated with increased risk of depression and anxiety. Conversely, regular physical activity has been shown to enhance mood, reduce stress, and improve cognitive function. These relationships are further influenced by individual factors such as self-efficacy and coping strategies, which determine how students respond to stress and manage their behaviors (Bandura, 1982; Antonovsky, 1979).

Despite the extensive literature on individual components of the lifestyle triad, there remains a gap in integrative research that examines the combined effects of stress, diet, and exercise on student well-being. The study by Agarwal and Usharani (2026) represents an important step in this direction, highlighting the interconnectedness of these variables and their collective impact on lifestyle patterns among Indian college students.

This research aims to build upon existing knowledge by providing a comprehensive analysis of the lifestyle triad and its implications for psychological well-being. By synthesizing findings across disciplines, the study seeks to offer a holistic perspective that can inform both academic research and practical interventions.

METHODOLOGY

The methodological approach adopted in this study is grounded in an integrative, qualitative synthesis of existing literature, with a strong emphasis on theoretical triangulation and conceptual coherence. Rather than generating primary empirical data, this research systematically analyzes and interprets findings from a diverse set of scholarly sources to construct a comprehensive understanding of the relationships between stress, dietary habits, physical activity, and psychological well-being among university students.

The first step of the methodology involved the classification of the provided references into thematic domains. These domains included psychological stress and mental health, lifestyle behaviors (diet and exercise), theoretical frameworks of well-being, and global health policy perspectives. Each reference was carefully examined to identify key constructs, findings, and theoretical contributions relevant to the research objectives.

In exploring stress and mental health, studies on the prevalence and determinants of depression and anxiety among university students were analyzed. These studies provided quantitative estimates and qualitative insights into the magnitude of the problem and its underlying causes (Ibrahim et al., 2013; Kumar et al., 2021). Particular attention was given to research on academic stress, which highlighted the role of educational demands and in shaping student mental health (Misra & Castillo, 2004).

The analysis of lifestyle behaviors focused on dietary patterns and physical activity among students. Although direct empirical studies on diet and exercise were limited within the provided references, insights were derived from

broader literature on health behaviors and their relation with mental health outcomes. The study by Agarwal and Usharani (2026) served as a reference, offering an integrated perspective on the lifestyle triad.

Theoretical frameworks were incorporated to provide a conceptual reason for understanding the observed relationships. Self-determination theory was used to examine the role of intrinsic motivation and psychological needs in shaping behavior (Deci & Ryan, 2008), while social cognitive theory provided insights into self-efficacy and self-regulation processes (Bandura, 1991). The salutogenic model introduced by Antonovsky (1979) was also employed to explore how individuals maintain health exposure to stressors.

Global health perspectives were integrated through analysis of policy documents and reports, including those from the World Health Organization and the United Nations. These sources provided a macro-level context for the practice, emphasizing the of lifestyle interventions in achieving health promotion goals (WHO, 2016).

The synthesis process involved identifying patterns, contradictions, and gaps across the literature. Comparative analysis was used to examine how different studies approached similar constructs, while thematic integration allowed for the development of a cohesive narrative. Throughout the methodology, efforts were made to maintain critical rigor by evaluating the strengths and limitations of each source.

This approach enables a deep and nuanced understanding of the lifestyle triad, while also

highlighting areas where further empirical research is needed.

RESULTS

The integrative analysis of the literature reveals a deeply interconnected relationship between stress levels, dietary habits, physical activity, and psychological well-being among university students. These components do not operate in isolation; rather, they form a dynamic category in which each element influences and is influenced by the others.

One of the most consistent findings across studies is the high prevalence of stress among university students. Academic demands, including examinations, assignments, and competitive environments, are primary sources of stress. This stress is often accompanied by symptoms of anxiety and depression, which have been reported at significant levels in multiple (Ibrahim et al., 2013; Sarokhani et al., 2013). The experience of stress is not uniform, however, and varies in individual differences such as personality traits, coping mechanisms, and social support systems.

The relationship between stress and dietary habits is particularly noteworthy. Students experiencing high levels of stress are more likely to engage in unhealthy eating behaviors, such as increased consumption of fast food, rich snacks, and irregular meal patterns. These behaviors can be understood through the lens of coping strategies, individuals may use food as a means of emotional regulation. However, such dietary patterns can exacerbate mental health problems, creating a negative feedback loop.

Physical activity emerges as a critical moderating factor in this category. Regular exercise has been consistently associated with lower levels of stress and improved mood. It acts as a buffer against the health effects by promoting physiological and psychological resilience. Students who maintain active lifestyles tend to report higher levels of well-being and lower incidence of mental health issues.

The role of psychological constructs such as self-efficacy and coping strategies is also evident in Students with higher self-efficacy are more likely to engage in healthy behaviors and effectively manage stress (Bandura, 1982). Similarly, adaptive coping mechanisms, such as problem-solving and seeking social support, are associated with better mental health outcomes.

The study by Agarwal and Usharani (2026) provides further evidence of the interconnectedness of the lifestyle triad, demonstrating that stress, diet, and exercise are significantly associated with one another among Indian college students. Their findings suggest that interventions targeting one component of the triad may have cascading effects on the others.

From a broader perspective, the results highlight of considering lifestyle factors in the context of global health challenges. The unhealthy lifestyles and noncommunicable diseases underscores the need for preventive strategies that address these risk factors early in life (WHO, 2018).

DISCUSSION

The findings of this study offer a rich and multifaceted understanding of the lifestyle determinants of psychological well-being among university students, particularly through the lens

of the lifestyle triad comprising stress, dietary habits, and physical activity. The discussion extends beyond mere interpretation of observed relationships and engages deeply with theoretical frameworks, global health implications, and the nuanced interplay of behavioral, psychological, and social determinants.

A central insight emerging from this analysis is the cyclical and reinforcing nature of the relationships among the three components of the lifestyle triad. Stress, often originating from academic and social pressures, not only directly affects mental health but also indirectly influences it by shaping behavioral choices. For instance, heightened stress levels are associated with poor dietary habits and reduced physical activity, both of which further contribute to psychological distress. This cyclical dynamic aligns with the अवधारणा of self-regulation as proposed in social cognitive theory, where behavior, cognition, and environment interact in a reciprocal manner (Bandura, 1991).

The role of self-efficacy in this context cannot be overstated. Individuals with high self-efficacy are more likely to adopt and maintain healthy behaviors, even in the face of stress. This suggests that interventions aimed at enhancing self-efficacy could have far-reaching effects on student well-being. Moreover, the concept of salutogenesis, which focuses on factors that support human health and well-being rather than those that cause disease, provides a valuable perspective for understanding how students can thrive despite stress (Antonovsky, 1979).

Dietary habits, while often overlooked in mental health research, emerge as a significant determinant of well-being. The take of nutrient-poor foods not only affects physical health but

also has implications for mental functioning, including mood regulation and cognitive performance. The relationship between diet and mental health is complex and mediated by biological mechanisms such as neurotransmitter synthesis, as well as psychological factors such as emotional eating.

Physical activity, on the other hand, serves as a powerful protective factor. Its benefits extend beyond physical fitness to include improved mood, reduced anxiety, and enhanced cognitive function. The mechanisms underlying these effects include the release of endorphins, regulation of stress hormones, and sleep quality. Importantly, physical activity also provides opportunities for social interaction, which can further enhance well-being.

The integration of these findings with global health frameworks highlights the of addressing lifestyle in achieving broader health The Sustainable Development Goals and the Shanghai Declaration both emphasize the role of health promotion and preventive strategies in improving population health (United Nations, n.d.; WHO, 2016). College settings represent a critical stage for implementing such strategies, given their influence on young adults during a formative in life.

However, the study also acknowledges several limitations. The reliance on secondary data and literature synthesis means that the findings are subject to the scope of existing research. Variability in measurement cultural contexts, and study designs poses challenges for generalization. Additionally, the cross-sectional nature of many studies limits the ability to infer causal relationships.

Future research should aim to address these limitations by employing longitudinal designs, standardized measurement and diverse populations. There is also a need for intervention studies that inspection of the effectiveness of integrated lifestyle in improving student well-being. Furthermore, the role of digital technologies and social media in shaping lifestyle behaviors warrants further exploration.

CONCLUSION

The present study provides a comprehensive and deeply analytical exploration of the lifestyle determinants of psychological well-being among university students, emphasizing the intricate and interdependent relationships between stress levels, dietary habits, and physical activity. By synthesizing a wide range of theoretical perspectives and empirical findings, this research underscores of adopting a holistic approach to understanding and promoting student health.

A key conclusion is that the lifestyle triad functions as a dynamic category in which each component influences the others in both direct and indirect ways. Stress, as a central not only affects mental health outcomes but also shapes behavioral patterns with diet and exercise. These behaviors, in turn, can either mitigate or exacerbate the effects of stress, highlighting the of integrated interventions.

The study also reinforces the of psychological constructs such as self-efficacy and coping strategies in determining how students respond to stress and manage their lifestyles. These constructs through targeted could significantly improve well-being and reduce the prevalence of mental health issues.

From a policy perspective, the findings align with global health priorities that emphasize prevention and health promotion. Universities have a critical role to play in this regard, as they are uniquely positioned to influence the behaviors and attitudes of young adults. Implementing comprehensive health promotion that address multiple aspects of lifestyle could yield substantial benefits.

In conclusion, this research contributes to a deeper understanding that shape student well-being and provides a foundation for future studies and interventions. The integration of stress management, nutritional education, and physical activity promotion represents a promising for enhancing the health and quality of life of university students.

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