

Sleep Quality and Psychological Well-Being Among Postgraduate Students

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Abstract: Sleep is a fundamental biological process that supports cognitive functioning, emotional regulation, and overall mental health. Postgraduate students represent a population that is particularly vulnerable to disturbed sleep because of intensive academic workloads, research pressures, career uncertainty, and lifestyle irregularities. This article examines the relationship between sleep quality and psychological well-being among postgraduate students by reviewing recent empirical literature and outlining a conceptual and methodological framework for further research. Evidence consistently indicates that poor sleep quality is associated with lower psychological well-being, higher levels of depressive symptoms, anxiety, and stress, whereas adequate and restorative sleep is linked to better emotional stability, life satisfaction, and academic functioning. The article discusses contributing factors such as academic stress, interpersonal sensitivity, psychological capital, and lifestyle habits, and proposes a correlational research design using standardised tools such as the Pittsburgh Sleep Quality Index (PSQI) and Ryff's Scales of Psychological Well-Being. The discussion highlights implications for student counselling services, sleep hygiene interventions, and institutional mental health policy, and concludes with recommendations for future longitudinal and intervention-based research.

Keywords: sleep quality, psychological well-being, postgraduate students, academic stress, mental health

1. Introduction

Sleep occupies nearly a third of human life and plays an indispensable role in physical restoration, memory consolidation, and emotional regulation. In recent decades, researchers have paid growing attention to the psychological correlates of sleep, moving beyond the traditional view of sleep as a purely physiological necessity. Among various population groups, university and postgraduate students have emerged as a group at heightened risk of poor sleep quality due to demanding academic schedules, thesis or dissertation pressures, financial concerns, and transitions into independent adult life.

Postgraduate education, in particular, places distinctive demands on students. Compared with undergraduates, postgraduate students often work with greater autonomy, face higher expectations of original research output, and experience uncertainty about career trajectories. These conditions frequently disrupt regular sleep-wake cycles and can compromise psychological well-being over time. Well-being, in this context, is understood not merely as the absence of mental illness but, following Ryff's multidimensional model, as a state comprising autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance.

Understanding how sleep quality relates to psychological well-being among postgraduate students is therefore both a theoretically important and practically urgent concern, with direct implications for student support services, curriculum design, and institutional mental health policy.

2. Review of Literature

A growing body of research supports a consistent association between sleep quality and psychological well-being in student populations. In a large cross-sectional survey of final-year university students in China, poor sleep quality was found to be linked with substantially higher levels of negative psychological well-being, while students

reporting normal sleep quality showed comparatively lower rates of well-being problems (Zhai, Gao, & Wang, 2018).

Similarly, research conducted among health-profession students found that a majority of participants reported poor sleep quality, which was closely tied to indicators of psychological distress, underscoring the need for early institutional intervention in academically demanding programmes (Ghrouz et al., 2019, as cited in related sleep and psychological factors literature).

Focusing specifically on postgraduate students, a study conducted during the COVID-19 pandemic in China examined how interpersonal sensitivity relates to depressive symptoms, with both psychological capital and sleep quality acting as mediating variables. The findings showed that sleep quality significantly and independently mediated the relationship between interpersonal sensitivity and depression, and that its effect combined with psychological capital in a chain-mediation pathway, suggesting that positive psychological resources and adequate sleep jointly buffer postgraduate students against depressive symptoms (Liu, Peng, Wang, Zeng, Mi, & Xu, 2023).

Research in residential college settings has similarly found that sleep deprivation correlates negatively with psychological well-being, and that both insufficient and excessive sleep durations are associated with poorer social and emotional outcomes, indicating a non-linear, optimal-range relationship between sleep duration and well-being (Tan, Healey, Gray, & Cheng, 2021, drawing on findings originally reported by Richter, 2015, and Zhai et al., 2018).

Additional evidence from studies on physical exercise and subjective well-being among undergraduates shows that sleep quality functions as a mediating mechanism through which healthy lifestyle behaviours translate into improved emotional well-being, further reinforcing the centrality of sleeps in students' psychological functioning (Sun et al., 2022).

Taken together, these studies converge on the conclusion

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that sleep quality is not simply a background variable but an active psychological mechanism that shapes stress reactivity, emotion regulation, and overall well-being in student populations. However, most existing studies focus on undergraduate or final-year students, with comparatively fewer investigations specifically targeting post-graduate students, who face a distinct set of academic and personal stressors. This gap justifies further focused research of the kind proposed in this article.

3. Rationale and Significance of the Study

Postgraduate students are frequently overlooked in institutional mental health planning, which tends to prioritise undergraduate populations. Yet postgraduate students face unique stressors: prolonged research timelines, isolation during independent study, financial pressure related to fellowships or assistantships, and the psychological burden of producing original scholarly work. Chronic sleep disruption in this group may not only impair academic productivity but also elevate long-term risk for anxiety and depressive disorders. Investigating the sleep–well-being relationship in this specific population can inform targeted interventions, such as sleep hygiene workshops, flexible academic scheduling, and counselling services tailored to research-stage students.

4. Objectives

- 1) To examine the relationship between sleep quality and psychological well-being among postgraduate students.
- 2) To assess whether sleep quality significantly predicts levels of psychological well-being after accounting for demographic variables such as age, gender, and discipline.
- 3) To identify specific dimensions of well-being (e.g., autonomy, environmental mastery, purpose in life) that are most strongly associated with sleep quality.
- 4) To draw implications for sleep-hygiene and mental health interventions within postgraduate academic settings.

5. Proposed Methodology

Research Design: A cross-sectional correlational design is proposed, allowing examination of the association between sleep quality and psychological well-being without manipulating either variable.

Sample: A purposive or stratified random sample of postgraduate students (approximately 150–250 participants) drawn from various disciplines and academic years, using an online or paper-based survey.

Tools: The Pittsburgh Sleep Quality Index (PSQI) is recommended for assessing subjective sleep quality, and Ryff's Scales of Psychological Well-Being (short form) for assessing multidimensional well-being. A brief demographic sheet should capture age, gender, discipline, year of study, and living arrangement.

Procedure: After obtaining institutional ethical clearance and informed consent, questionnaires may be administered

in a single sitting, either online or in person, ensuring anonymity and voluntary participation.

Statistical Analysis: Pearson's correlation is recommended to examine the association between sleep quality and psychological well-being scores, and multiple regression to determine the predictive value of sleep quality after controlling for demographic covariates. Independent-samples t-tests or ANOVA may be used to explore group differences by gender, discipline, or year of study.

6. Discussion

The reviewed literature converges on a robust negative relationship between poor sleep quality and psychological well-being, and this pattern is expected to extend to postgraduate populations, who face compounded academic and personal stressors. Several mechanisms may explain this association. First, poor sleep impairs prefrontal cortical functioning, which governs emotion regulation and stress appraisal, making students more reactive to academic setbacks. Second, sleep disturbance often co-occurs with rumination about research deadlines or career uncertainty, creating a bidirectional cycle in which stress disrupts sleep and poor sleep, in turn, exacerbates stress. Third, insufficient sleep may reduce students' engagement in protective social and recreational activities, thereby lowering the relational and purpose-related dimensions of well-being described in Ryff's model.

Interventions that address sleep hygiene—such as maintaining consistent sleep schedules, limiting screen exposure before bedtime, and structured relaxation techniques—may therefore have a meaningful downstream effect on postgraduate students' overall psychological well-being. Institutional measures, including flexible research timelines, peer-support groups, and accessible counselling services, may further help mitigate the compounding stress that undermines both sleep and well-being.

7. Limitations and Future Directions

As a conceptual and review-based article, this paper draws primarily on existing cross-sectional literature, which limits causal inference. Future research should employ longitudinal designs to clarify the directionality of the sleep–well-being relationship, and intervention studies (e.g., sleep hygiene programmes) to test whether improving sleep quality causally enhances well-being outcomes in postgraduate students. Cross-cultural and discipline-specific comparisons would also enrich understanding of how contextual academic pressures shape this relationship.

8. Conclusion

Sleep quality and psychological well-being are closely and consistently interrelated among student populations, and postgraduate students, given their distinctive academic and personal stressors, represent a group deserving focused research and institutional attention. Promoting healthy sleep practices among postgraduate students may serve as a practical and cost-effective avenue for enhancing their psychological well-being, academic performance, and long-

term mental health.

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