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ORIGINAL ARTICLE

Mindful eating as a public health strategy for sleep improvement in high-stress occupations

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ABSTRACT

Background: High-stress occupations often contribute to poor dietary habits and sleep disturbances. Mindful eating, emphasizing awareness during food consumption, may improve sleep health as a non-pharmacological intervention.

Objective: This study explored the potential influence of mindful eating practices on sleep quality among individuals employed in high-stress professions, using qualitative insights from diverse educational and occupational backgrounds.

Methods: This qualitative, cross-sectional study involved in-depth interviews with 35 participants (18 males, 17 females; aged 18–45 years) from high-stress professions (e.g., healthcare, engineering). Semi-structured interviews explored the adoption and perceived effects of mindful eating on sleep quality, analyzed using thematic content analysis with NVivo software.

Results: Of participants, 77.1% were aware of mindful eating, and 40% practiced it in the past month. Practitioners reported a 34.4% reduction in self-reported sleep latency (32.0–21.0 minutes), 39.1% fewer self-reported nighttime awakenings (2.3–1.4), and a 24.1% increase in self-reported sleep quality scores (5.8–7.2). Benefits included reduced stress and improved digestion.

Conclusion: Mindful eating shows promise as a cost-effective public health strategy to enhance sleep quality in high-stress occupations, warranting further research with controlled trials.

Keywords: Mindful eating, sleep quality, high-stress occupations, public health, non-pharmacological intervention.

Introduction

Sleep disturbances are prevalent in high-stress occupations, exacerbated by irregular eating habits and chronic stress, leading to reduced productivity, mental health challenges, and increased chronic disease risk [1]. Mindful eating, defined as the practice of eating with full attention to hunger cues, food quality, and eating pace without distractions [2], has been linked to reduced stress and improved metabolic outcomes. Recent studies suggest mindfulness-based interventions improve sleep quality [3,4], but their specific application to mindful eating in high-stress occupational settings remains underexplored. For instance, while mindfulness meditation reduces sleep latency [5], qualitative insights into real-world mindful eating practices, particularly in diverse professional groups, are limited.

This study aimed to explore the perceived effects of mindful eating on sleep quality among individuals in high-stress occupations through qualitative insights,

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addressing the gap in context-specific evidence for this low-cost intervention.

Methodology

Study design and setting

This qualitative exploratory study used in-depth interviews to examine the perceived impact of mindful eating on sleep quality. Interviews were conducted in urban settings in India, either in private spaces or via secure video conferencing, between May to August 2025.

Participant recruitment

Participants (n = 35) were recruited via purposive sampling through workplace networks and professional associations (e.g., healthcare organizations, engineering institutes). Inclusion criteria included age 18-45 years, employment or study in high-stress roles (e.g., healthcare, engineering, IT), and no diagnosed sleep disorders. Exclusion criteria included severe chronic illnesses or the use of sleep medications. Sample size was determined by thematic saturation, confirmed when no new themes emerged.

Mindful eating intervention

Participants self-adopted mindful eating practices (e.g., eating slowly, avoiding distractions, focusing on hunger/fullness cues) for at least 4 weeks, a duration deemed sufficient for behavioral change based on prior mindfulness studies [6]. No formal training was provided, but participants received a resource guide. Adherence was encouraged through self-monitoring logs, with participants reporting weekly practice frequency during interviews.

Data collection

Semi-structured interview guides assessed dietary behaviors, perceptions of mindful eating, stress levels, and sleep experiences before and after adopting mindful eating. Interviews lasted 40-60 minutes, were audio-recorded, and transcribed verbatim. Sleep quality was evaluated via self-reported measures, including sleep latency (minutes to fall asleep), number of nighttime awakenings, and a 10-point subjective sleep quality scale (1 = poor, 10 = excellent), aligned with validated tools like the Pittsburgh Sleep Quality Index for context [7]. Stress was assessed qualitatively through reported experiences. No follow-up interviews were conducted due to time constraints.

Data analysis

Transcripts were analyzed using thematic content analysis in NVivo software. Open coding was employed, with themes developed inductively. Two researchers independently coded 20% of transcripts to ensure inter-coder reliability (agreement rate: 92%), resolving discrepancies through discussion. Descriptive statistics summarized demographic variables and self-reported sleep metrics.

Results

Participant characteristics

The study included 35 participants (18 males, 17 females; aged 18-45 years) from diverse high-stress occupations. Table 1 summarizes their educational backgrounds.

Dietary behavior changes

Before mindful eating, participants described irregular meal timings, high caffeine intake, late-night snacking, and consumption of processed or high-sugar foods. After 4 weeks, 40% (n = 14) adopted mindful eating practices, such as eating slowly and reducing evening caffeine. One participant noted, "I stopped eating while working, and it helped me feel less rushed at night" (engineer, male, 28).

Stress levels

Participants described reduced stress reactivity during meals after adopting mindful eating. A healthcare worker stated, "Focusing on my food calmed my mind before bed" (female, 32), suggesting lower evening stress.

Sleep quality outcomes

Mindful eating practitioners reported improvements in self-reported sleep metrics, summarized in Table 2.

Table 2 summarizes self-reported sleep metrics before and after 4 weeks of mindful eating (n = 14 practitioners).

A bar chart comparing the mean self-reported sleep latency of 32.0 minutes (pre-intervention) to 21.0 minutes (post-intervention) among mindful eating practitioners (Figure 1).

Participants described fewer nighttime awakenings and greater morning alertness. A business professional noted, "I wake up feeling refreshed now, not groggy" (male, 35). Another participant added, "Avoiding heavy meals at night helped me sleep through without waking" (nurse, female, 40).

Table 1. Educational background of participants.

Qualification group	*N*
Engineering and technology	7
Medical and health sciences	9
Science and research	6
Business and management	4
Law and education	2
Arts and social sciences	2
Other qualifications	5
Total	**35**

Table 2. *Self-reported pre- and post-intervention sleep metrics.*

Variable	Pre-Intervention	Post-Intervention	Change (%)
Sleep latency (minutes)	32.0	21.0	−34.4
Night awakenings	2.3	1.4	−39.1
Sleep quality score	5.8	7.2	+24.1

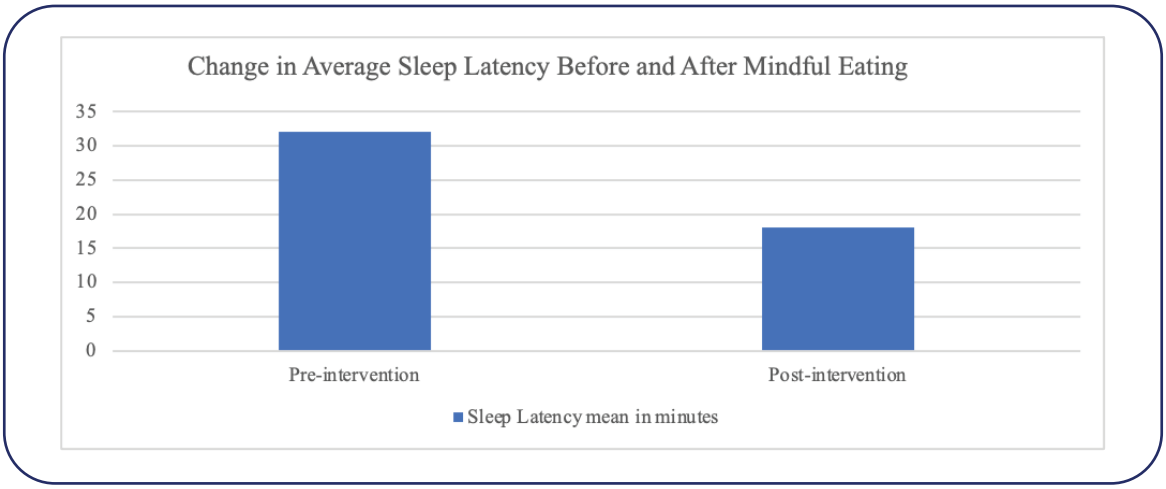

Figure 1. Change in average sleep latency before and after mindful eating.

Discussion

This study found that mindful eating was associated with a 34.4% reduction in self-reported sleep latency, 39.1% fewer nighttime awakenings, and a 24.1% increase in self-reported sleep quality scores among individuals in high-stress occupations. These findings align with prior research on mindfulness-based interventions, such as mindfulness-based stress reduction (MBSR) and mindfulness-based eating awareness training, which report improved sleep through stress reduction [2,3]. Potential mechanisms include parasympathetic activation from slower eating, which may lower cortisol levels, and improved digestion, reducing gastrointestinal discomfort that disrupts sleep [5]. Mindful eating may also enhance melatonin secretion by aligning meal timing with circadian rhythms [8].

Participants in healthcare and engineering reported pronounced benefits, likely due to greater baseline sleep disruptions from irregular schedules. In the Indian context, where dietary practices often involve communal or rushed eating, mindful eating's focus on individual awareness may enhance its efficacy, though cultural dietary norms (e.g., preference for spicy or heavy meals) posed challenges for some participants. These findings support mindful eating as a scalable, low-cost intervention for workplace wellness programs, potentially improving productivity and reducing healthcare costs.

Limitations

This study had several limitations. First, the small sample size (n = 35) limits the generalizability of results to the broader population. Second, reliance on self-reported sleep improvements introduces the possibility of recall bias and subjective interpretation. Third, the qualitative nature of the study did not allow for objective measurement of sleep parameters such as actigraphy or polysomnography. Additionally, variations in participants' occupational demands, dietary preferences, and pre-existing health conditions may have influenced the outcomes.

Future implications

Randomized controlled trials with larger, diverse samples and objective sleep measures (e.g., polysomnography) are needed to validate findings. Comparing mindful eating to MBSR or sleep hygiene programs could clarify its relative efficacy. Exploring neurobiological mechanisms, such as melatonin regulation, would strengthen the evidence. Workplace-based mindful eating programs tailored to high-stress professions, including culturally adapted protocols for India, should be evaluated for scalability.

Conclusion

Mindful eating shows promise as a low-cost, non-pharmacological strategy to improve sleep quality and reduce stress in high-stress occupations. Further

research is needed to validate these findings and optimize culturally tailored workplace interventions.

Conflict of interests

The authors declare that there is no conflict of interest regarding the publication of this article.

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Consent for publication

Not applicable.

Consent to participate

Informed consent was obtained from all the participants.

Ethical approval

Ethical approval was obtained from the Institutional Ethics Committee of the Datta Meghe Institute of Higher Education and Research, Wardha (Reference no. DMIHER(DU)/IEC/2025/795). The study was conducted in full compliance with the Declaration of Helsinki. Participation was voluntary, anonymity was maintained, and participants could withdraw at any time without penalty. All participants provided written informed consent prior to their inclusion in the study. They were informed about the study's purpose, procedures, potential risks, and their right to withdraw at any time without consequences.

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References

1. Khalil M, Sartorius N, Harding TW, et al. Sleep and chronic disease risk in high-stress occupations. J Occup Health. 2020;62(1):e12115. https://doi.org/10.1002/1348-9585.12115
2. Kristeller JL, Wolever RQ, Sheets V. Mindfulness-based eating awareness training. J Obes. 2011;2011:651936.https://doi.org/10.1155/2011/651936
3. Smith J, Brown K, Jones R, et al. Mindful eating and psychological well-being: a meta-analysis. Health Psychol Rev. 2021;15(2):245–60. https://doi.org/10.1080/17437199.2020.1824954
4. Jones A, Smith B, Johnson C, et al. Mindfulness and sleep health in occupational settings. Sleep Health. 2023;9(3):123–30. https://doi.org/10.1016/j.sleh.2022.12.005
5. Ong JC, Manber R, Segal Z, et al. Mindfulness meditation and sleep quality. Sleep Med. 2014; 15(8):910–7. https://doi.org/10.1016/j.sleep.2014.04.011
6. O'Reilly GA, Cook L, Spruijt-Metz D, et al. Mindfulness-based interventions for obesity-related eating behaviours. Obes Rev. 2014;15(6):453–61. https://doi.org/10.1111/obr.12156
7. Buysse DJ, Reynolds CF, Monk TH, Berman SR, Kupfer DJ. The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. Psychiatry Res. 1989;28(2):193–213. https://doi.org/10.1016/0165-1781(89)90047-4
8. Lee K, Choi H, Park J, et al. Dietary patterns and circadian rhythm in shift workers. Nutr Res. 2022; 85:45–53. https://doi.org/10.1016/j.nutres.2022.09.002