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Letter to the Editor

Polysomnography is a Better Method Compared to PSQI for Examining the Sleep Quality of Shift Workers

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Letter to the Editor

We read with interest the article by Dias *et al*. about an exploratory longitudinal study on sleep quality (sleep-wake rhythm) of 15 day and night shift workers. Using the Pittsburgh Sleep Quality Index (PSQI), sleep efficiency, sleep latency, total sleep duration, and frequency of nocturnal wakefulness were analyzed [1]. Shift workers with more than ten years of work experience showed greater insomnia, lower sleep efficiency, and a higher number of wakefulness compared to control values [1]. Early shift workers had a better sleep rhythm with longer sleep duration and higher sleep efficiency compared to late and night shift workers [1]. The study is interesting, but some points warrant further discussion.

First, sleep quality was assessed using the PSQI [1]. The PSQI has several limitations regarding the assessment of sleep quality [2]. It is based on subjective assessments and correlates only weakly with objective sleep measurements. Further limitations include inconsistent results across different populations, limited validity for individuals with comprehension or writing difficulties, low test-retest reliability, and a lack of guidelines regarding test-retest intervals [2]. Sleep quality and sleep patterns can only be reliably analyzed using polysomnography [3].

Second, the group size was small (n = 15) [1]. The small group size limits the study's validity. Therefore, the study should be repeated with larger groups and including patients from other centers. Furthermore, it should be ensured that the group sizes are the same in the study and control groups. General conclusions about the sleep quality of shift workers from the present sample should therefore be interpreted with caution.

Third, no control group was included in the analysis [1]. What normative values were used for comparison and evaluation of the results for shift workers?

Fourth, sleep quality depends not only on working conditions but also on numerous other influencing factors. These include endogenous factors such as personality type, acute and chronic stress (balance between the sympathetic and parasympathetic nervous systems), the ability to cope with exogenous or endogenous stressors, genetic predisposition, comorbidities, and lifestyle habits (e.g., sleep habits such as fixed bedtimes, television, headphones, radio, mobile phone, iPad, bedroom lighting, fresh air, pain, and the removal and switching off of all devices that generate electromagnetic radiation). Exogenous factors influencing sleep quality include noise, light, vibrations, drafts, insects, pets, earthquakes, bed type, children, partners, electromagnetic radiation, cell phone towers, relationships with neighbours, socioeconomic status, time of last meal or fluid intake, concurrent medication use, alcohol consumption, use of adrenergic stimulants or illegal dietary supplements, and local and geopolitical stress [4]. Sleep quality also strongly depends on the type of work performed by the 15 employees studied. Working as a bouncer likely has different effects on sleep than heavy physical labour in a blast furnace.

Fifth, the included patients were not systematically examined using computed tomography, cerebral magnetic resonance imaging, or EEG [1]. Since sleep is strongly dependent on brain function, it would have been essential to examine all patients for abnormal brain morphology and function. In this context, it would be important to know how many patients had a history of diseases of the central or peripheral nervous system.

In conclusion, the quality of a sleep study depends on the intensity and care with which participants were examined for possible abnormalities in sleep architecture.

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References
1. Dias MS, de Andrade MJO. Influence of professional experience and work schedule on sleep quality. Rev Bras Med Trab. 2025; 23(2):e20251428. Doi: 10.47626/1679-4435-2025-1428
2. Tan C, Wang J, Lu J, Yin J, An Y, Ye J, *et al*. The Limitations of Using the Pittsburgh Sleep Quality Index to Assess Athletes' Sleep Quality: Evidence from Reliability and Validity in Chinese Professional Athletes. Psychol Res Behav Manag. 2024; 17:2603-2617. Doi: 10.2147/PRBM.S463289
3. Kohyama J. Which Is More Important for Health: Sleep Quantity or Sleep Quality? Children (Basel). 2021; 8(7):542. Doi: 10.3390/children8070542
4. Gordon HW. Differential Effects of Addictive Drugs on Sleep and Sleep Stages. J Addict Res (OPAST Group). 2019; 3(2):10.33140/JAR.03.02.01. Doi: 10.33140/JAR.03.02.01