

01. Sleep Disorders among University of Khartoum Medical Students During Armed Conflict in Sudan: A Cross Sectional Study,2025

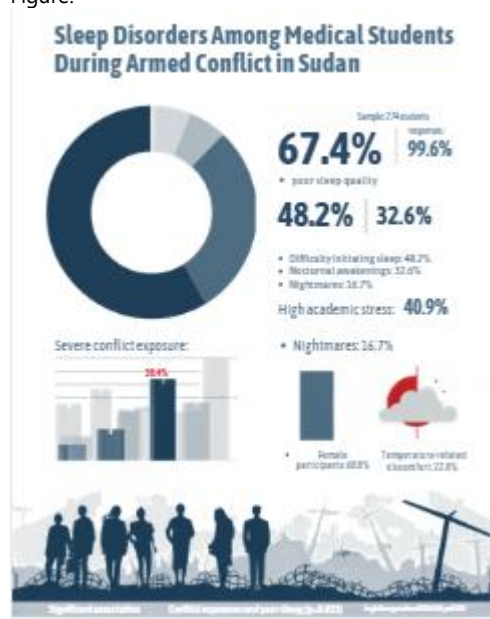
Ansam Eltayeb Saeid Eltayeb¹, Huda Magdi Ali Ahmed¹, Ejla! Mohammed Ibrahim Ali¹, Mohamed Yasir Yousif Eltayeb¹, Abeer Abdelbagi Elsiddig Yousif¹, Noor Izaldeen Shareef Taha¹, Rimaz Abdulmoniem Youssef Mohammed¹, Yosra Mohamed ElAmin Awad Elkareem Mohamed¹

¹ University of Khartoum Faculty of Medicine, Khartoum, Sudan

Background: Sleep is essential for cognitive function, memory, and emotional regulation, and medical students are especially vulnerable to poor sleep due to the demands of medical training. Since April 2023, the ongoing conflict in Sudan has disrupted the academic and social lives of University of Khartoum students through displacement, insecurity, and psychological stress, which may contribute to sleep disturbances. However, little is known about sleep disorders among these students during the conflict. Therefore, this study aimed to assess the prevalence of sleep disorders among medical students at the University of Khartoum and examine the relationship between academic stress, conflict exposure, and sleep. **Methods:** A cross-sectional study was conducted among undergraduate medical students at the Faculty of Medicine, University of Khartoum, Sudan, between July and September 2025. Participants were selected using stratified random sampling across all academic years. Data were collected using a structured 44-item online questionnaire distributed via WhatsApp and Telegram. The survey included socio-demographic variables, a modified Pittsburgh Sleep Quality Index (PSQI), academic stress assessment, conflict exposure scale, and lifestyle-related factors. Data were analyzed using IBM SPSS Statistics version 26. Descriptive statistics were used to summarize variables, while Chi-square tests and binary logistic regression were performed to identify factors associated with poor sleep quality. Statistical significance was set at $p < 0.05$. **Results:** A total of 274 medical students participated in the study (response rate: 99.6%), with females comprising 68.8% of the sample. Poor sleep quality was reported in 67.4% of participants. The most frequent sleep disturbances were difficulty initiating sleep (48.2%), nocturnal awakenings (32.6%), and temperature-related discomfort during sleep (22.8%). Severe conflict exposure was reported by 30.4% of students, while 40.9% experienced high academic stress. Conflict exposure showed a significant association with poor sleep quality ($\chi^2 = 8.624$, $p = 0.013$), whereas academic stress did not demonstrate a statistically significant relationship ($p = 0.175$). In multivariate logistic regression analysis, conflict exposure remained an independent predictor of poor sleep quality (AOR = 0.64, 95% CI: 0.454–0.903, $p = 0.011$). **Conclusion:** The study revealed high rates of poor sleep quality among medical students at the University of Khartoum. Sleep disorders were prevalent and associated with multiple disturbances, with difficulty falling asleep and nocturnal awakenings being the most commonly reported issues. Exposure to conflict was significantly associated with poor sleep quality, while academic pressure and sociodemographic factors such as age and gender did not have a significant influence on sleep quality. These findings highlight the importance to provide appropriate interventions for sleep problems among medical students, especially those exposed to conflict zones., such as promoting good sleep hygiene techniques, such as maintaining consistent sleep schedules and providing of mental health care

programs .these interventions are essential for improving students well-being and academic performance.

Figure:



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