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A Cross-Sectional Study of Sleep Quality and Daytime Sleepiness in a Nigerian University Cohort: Insights from PSQI and Epworth Scores

Evelyn Osemhen Eziagu[1], Oyedele Oyewumi Ajayi[2], Eberechukwu Desmond Eziagu[3], Emmanuela Ifunanya Akpu[4], Mumini Wemimo Rasheed[5], Uchechukwu Brian Eziagu[2]

[1]*Department of Mental Health, University of Uyo Teaching Hospital, Uyo, Akwa Ibom State, Nigeria.*
[2]*Department of Histopathology, University of Uyo Teaching Hospital, Uyo, Akwa Ibom State, Nigeria.*
[3]*Department of Family Medicine, University of Uyo Teaching Hospital, Uyo, Akwa Ibom State, Nigeria.*
[4]*Department of Nursing Sciences, Enugu State University of Science and Technology, Enugu State, Nigeria.*
[5]*Department of Anatomic Pathology, Federal University Dutse, Dutse, Jigawa State, Nigeria.*

Abstract

Background: Sleep quality is critical for academic performance, mental health, and cognitive function in university students, yet data from sub-Saharan Africa remain limited. This study aimed to assess the prevalence, patterns, and predictors of poor sleep quality and excessive daytime sleepiness (EDS) among undergraduates in a Southern Nigerian university using validated instruments.
Methods: A cross-sectional survey was conducted among 229 undergraduate students selected using a convenience sampling technique from medical and non-medical faculties at the University of Uyo, Nigeria. Sociodemographic and academic data were collected alongside the Pittsburgh Sleep Quality Index (PSQI) and Epworth Sleepiness Scale (ESS) to evaluate nighttime sleep quality and daytime sleepiness. Both the standard Pittsburgh Sleep Quality Index (PSQI) and a shortened version were administered to assess sleep quality, identify associated sociodemographic and academic factors, and compare the psychometric performance of the two instruments.
Results: Overall, 119 participants (55.1%) exhibited poor sleep quality (PSQI > 5), with no significant difference between medical and non-medical students ($p = 0.44$). Excessive daytime sleepiness was identified in 62 respondents (28.6%), including 12 participants (5.5%) with severe daytime sleepiness. Sleep quality and sleep duration were significantly associated with excessive daytime sleepiness categories ($p = 0.0027$ and $p = 0.0057$, respectively), whereas no significant associations were observed with sex, socioeconomic status, campus residence, or roommate status. The shortened PSQI version slightly underestimated sleep disturbances but showed strong psychometric alignment with the full version.
Conclusion: Poor sleep quality and clinically relevant EDS are highly prevalent among Nigerian undergraduates across all disciplines and sociodemographic groups. The strong correlation between impaired sleep quality and daytime sleepiness underscores the need for institution-wide sleep hygiene interventions. The shortened PSQI also offers a practical, time-efficient screening option for large-scale student health assessments.

Keywords: Sleep Quality, Daytime Sleepiness, Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness Scale (ESS), University Students, Nigeria

Corresponding Author:

Dr. Uchechukwu Brian Eziagu
Department of Histopathology, University of Uyo Teaching Hospital, P. M.B. 1136, Uyo, Akwa Ibom State, Nigeria.

ubeziagu@gmail.com

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Introduction

Sleep is a fundamental physiological process essential for optimal brain function, emotional regulation, memory consolidation, and overall physical health.[1–3] In the context of academic performance and psychosocial wellbeing, good sleep quality is particularly critical for university

students, who often face unique stressors related to academic workload, social adjustment, and lifestyle transitions.[4–8] Research has shown that excessive daytime sleepiness (EDS) is prevalent among university students, with rates ranging from 45% to 56.6%.[4–8] Globally, emerging literature has shown that sleep disturbances, daytime sleep dysfunction, insufficient sleep, and sleep disorders among undergraduates is associated with adverse academic outcomes, impaired cognitive performance, emotional instability, and increased risk of depression and substance use.[5,7,9–13] This highlights the complex relationship between sleep quality, sleep quantity, and academic performance among undergraduate students.

Notably, risk factors contributing to poor sleep quality and EDS in university students include course of study, environmental factors, chronic illnesses, increased waist circumference, adverse childhood experiences, irregular sleep schedules, psychological distress, anxiety, depression, smoking, consuming stimulating beverages before bedtime, and using electronic devices late at night.[1,8,10,14–18] Aderinto et al., reported that students resort to sleep medications to cope with their sleep disturbance.[17] In another study, medical students were found to have a higher prevalence of daytime sleepiness compared to non-medical students, possibly due to heavier academic workloads.[5]

In studying sleep, the Pittsburgh Sleep Quality Index (PSQI) and the Epworth Sleepiness Scale (ESS) are internationally validated instruments widely used in epidemiological and clinical studies to evaluate sleep disturbances and their consequences.[19–22] Interestingly, most available data on student sleep patterns using PSQI and ESS originate from developed countries, with relatively limited representation from sub-Saharan Africa, including Nigeria—a region with a growing university student population and rapidly evolving academic environments.[14–17] Two studies highlight the prevalence of poor sleep quality among Nigerian university students, with rates ranging from 32.5% to 50.1%.[14,15]

Notably, in 2018, Famodu et al., shortened the PSQI for use among young adults, though, very few studies have assessed the utility of this short version of the PSQI and its reliability in evaluating sleep quality compared to the original version of the tool.[23]

However, it remains unclear whether poor sleep quality and EDS are disproportionately prevalent among Nigerian medical students, who are frequently assumed to experience higher academic stress, or whether these disturbances are broadly distributed across academic disciplines and sociodemographic strata, though a study showed that medical students have an average sleep duration of only 5.74 hours per night.[17]

This study was therefore designed to: assess the prevalence of poor sleep quality and daytime sleepiness in a Nigerian university undergraduate population using the PSQI (the original and shortened versions) and ESS tools; determine whether medical training status or sociodemographic factors influence sleep outcomes; explore the association between sleep quality and daytime sleepiness in this context; and compare the short version of the PSQI to the original version. By identifying the burden and predictors of sleep dysfunction, this study aims to inform institutional health policy and promote evidence-based student wellness interventions in Nigerian universities and similar settings.

Methods:

Study Design and Setting: This was a descriptive cross-sectional study conducted at the University of Uyo, a public tertiary institution in Akwa Ibom State, Southern Nigeria. The study population comprised undergraduate students across medical and non-medical faculties. Data were collected between August and October 2022 at designated lecture venues where undergraduate students were awaiting scheduled lectures.

Participants and Sampling: A total of 229 undergraduate students were recruited using a convenience sampling method. All participants gave verbally informed consent prior to participation. Inclusion criteria included active undergraduate enrollment and willingness to complete the questionnaire fully. No exclusion was made based on academic discipline or year of study.

Data Collection Instrument: A structured, self-administered questionnaire was employed, comprising three sections:

1. Sociodemographic and academic variables: age, sex, year of study, course of study, type of program, residence location, number of roommates, and parental education/occupation.
2. Pittsburgh Sleep Quality Index (PSQI): a

validated 19-item instrument assessing subjective sleep quality and disturbances over the past month. A global score >5 was used to define poor sleep quality.[19,20]

3. ShortPSQI: a shortened 13-item instrument that assesses subjective sleep quality over one month. A global score >4 was used to define poor sleep quality.[23]
4. Epworth Sleepiness Scale (ESS): an eight-item scale measuring excessive daytime sleepiness (EDS) in various real-world scenarios. Scores 0–10 indicated normal sleepiness, while scores ≥11 were categorized as mild (11–12), moderate (13–15), or severe (16–24).[21,22]

Ethical Considerations: The study was conducted in accordance with the ethical principles of the World Medical Association Declaration of Helsinki. Participation was voluntary, informed consent was obtained from all participants, and data were collected anonymously without personal identifiers; the study involved an anonymous, questionnaire-based survey with no risk to participants, and formal institutional ethical approval was not applied for.

Data Management and Statistical Analysis: Data were entered and cleaned in Microsoft Excel and analyzed using Python (pandas, scipy, seaborn). Descriptive statistics (frequencies, means, standard deviations) were computed. Chi-square tests assessed associations between categorical variables. Independent sample t-tests compared sleep quality metrics across dichotomous groups, while one-way ANOVA tested differences across EDS categories. A p-value < 0.05 was considered statistically significant.

Results:

Descriptive Characteristics of Study Participants: A total of 229 undergraduate students were recruited through convenience sampling at designated lecture venues and participated in the study, comprising 175 Medicine and Surgery students (76.4%), 42 students from other science faculties (18.3%), and 12 students from Arts disciplines (5.1%). After data cleaning, 216 respondents (94.3%) had complete and analyzable sociodemographic data. The mean age of participants was 23.4 ± 3.4 years (range: 18–35 years). Regarding sex distribution, 120 participants (55.6%) were male and 96 (44.4%) were female. Nearly all respondents (99.6%) were enrolled as full-time students.

The largest proportion of students were in their third or fourth year (n=136, 61.3%), followed by fifth/sixth years (n = 66, 29.7%), and first/second years (n = 20, 9.0%). In terms of socioeconomic status, most students identified as high socioeconomic class (n = 159, 73.3%), with fewer reporting middle class (n = 23, 10.6%) and low class (n = 35, 16.1%). A majority of students (n = 161, 70.6%) resided on campus, while the remainder (n = 67, 29.4%) lived off-campus. Concerning apartment sharing, 172 (77.1%) students had roommates, whereas 51 (22.9%) lived alone. Of those with roommates, 102 (59.3%) had fewer than two roommates, 70 (40.7%) had five or more, and only 6 (3.5%) had three or four roommates. Overall, the sociodemographic diversity supports the

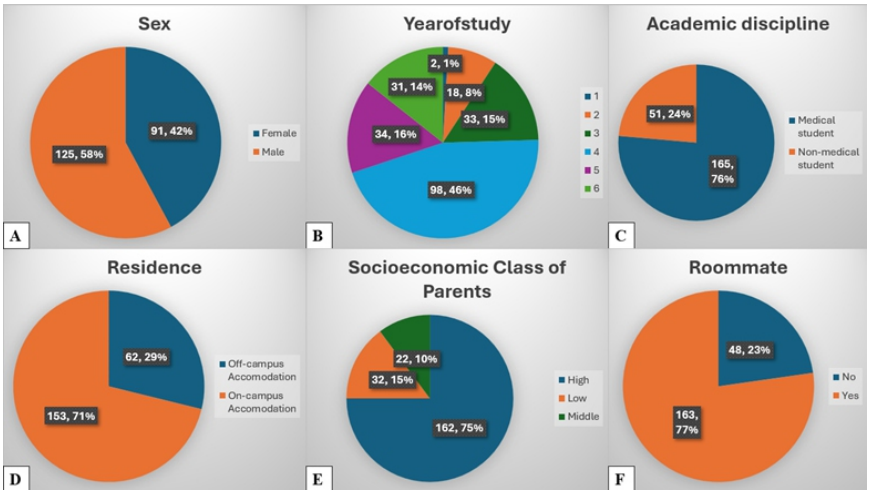

Figure 1 (A-F): Sociodemographic and Academic Characteristics of Study Participants. Each panel presents a pie chart summarizing key sociodemographic and academic variables among the 229 undergraduate participants, illustrating the diversity of the study cohort and supporting the generalizability of findings across different student subgroups. (A) Distribution by sex, showing 58% male (n = 125) and 42% female (n = 91) participants. (B) Year of study, with the largest proportion (46%) in third year (n = 98), followed by fourth (15%, n = 33), fifth (16%, n = 34), sixth (14%, n = 31), second (8%, n = 18), and first year (1%, n = 2). (C) Academic discipline, with 76% medical students (n = 165) and 24% non-medical students (n = 51). (D) Residence location, indicating 71% on-campus accommodation (n = 153) versus 29% off-campus (n = 62). (E) Socioeconomic class of parents, showing 75% high (n = 162), 15% middle (n = 32), and 10% low (n = 22). (F) Roommate status, with 77% living with roommates (n = 163) and 23% living alone (n = 48).

generalizability of findings across academic and residential groups. (Figure 1)

Prevalence of Poor Sleep Quality and Daytime Sleepiness: Among the 216 participants with complete and analyzable data, 119 students (55.1%) were classified as poor sleepers (global PSQI > 5), while 97 students (44.9%) reported good sleep quality. Poor sleep was prevalent across all academic disciplines and years of study. Specifically, poor sleepers included 93 (75%) medical students and 31 (25%) students from non-medical faculties. Proportionally, poor sleep was slightly more common among non-medical students (57.4%) compared to medical students (53.1%). The mean global PSQI score across the entire cohort was 5.43 ± 2.57.

Regarding excessive daytime sleepiness (EDS), 164 (71.6%) students had normal daytime sleepiness (ESS score ≤10), 35 (16.1%) reported mild EDS, 14 (6.4%) had moderate EDS, and 12 (5.5%) experienced severe daytime sleepiness. Thus, a total of 61 students (28.6%) exhibited varying levels of significant daytime sleepiness. (Figure 2)

Influence of Sociodemographic and Academic Factors on Sleep Outcomes: Chi-square analyses demonstrated no statistically significant associations between sleep quality or excessive daytime sleepiness and key sociodemographic or academic variables. Our study showed:

- Sex: PSQI (p = 0.314), ESS (p = 0.2152)
- Academic discipline (Medical vs. Non-medical): PSQI (p = 0.439), ESS (p = 0.3884)
- Residence location (on-campus vs. off-campus): (p = 0.4545)
- Socioeconomic status, roommate presence or number, and year of study similarly showed no statistically significant associations.

Further supporting these results, independent sample t-tests confirmed no significant differences between medical and non-medical students regarding global PSQI scores (p = 0.1175) or reported sleep duration (p = 0.9666). These findings collectively suggest that sleep disturbances uniformly affect undergraduates, independent of demographic and academic factors. (Table 1)

Relationship Between Sleep Quality and Excessive Daytime Sleepiness: Analysis revealed a statistically significant association between poor sleep quality and excessive daytime sleepiness, as demonstrated by one-way ANOVA (p = 0.0027). Specifically, higher EDS scores correlated strongly

Table 1: Association Between Sociodemographic Variables and Sleep Outcomes Among Undergraduate Students

A. Sleep Quality (PSQI ≤ 5 vs > 5)			
Variable	**Good Sleep Quality n (%)**	**Poor Sleep Quality n (%)**	**p-value**
Sex			**0.314**
Female	49 (61.3%)	31 (38.8%)	
Male	65 (56.0%)	51 (44.0%)	
Academic Discipline			**0.439**
Medical	90 (61.2%)	57 (38.8%)	
Non-medical	24 (49.0%)	25 (51.0%)	
Residence			**0.4545**
On-campus	79 (58.1%)	57 (41.9%)	
Off-campus	35 (58.3%)	25 (41.7%)	
Roommate Status			**0.9707**
Yes	85 (56.7%)	65 (43.3%)	
No	29 (63.0%)	17 (37.0%)	
Year of Study			**0.053**
Pre-clinical	28 (56.0%)	22 (44.0%)	
Clinical	86 (58.9%)	60 (41.1%)	
B. Excessive Daytime Sleepiness (EDS ≤ 10 vs ≥ 11)			
Variable	**Normal EDS n (%)**	**EDS Present n (%)**	**p-value**
Sex			**0.2152**
Female	54 (67.5%)	26 (32.5%)	
Male	90 (77.6%)	26 (22.4%)	
Academic Discipline			**0.3884**
Medical	111 (75.5%)	36 (24.5%)	
Non-medical	33 (67.3%)	16 (32.7%)	
Residence			**0.8836**
On-campus	98 (74.2%)	34 (25.8%)	
Off-campus	46 (73.0%)	17 (27.0%)	
Roommate Status			**0.6843**
Yes	109 (72.7%)	41 (27.3%)	
No	35 (76.1%)	11 (23.9%)	
Year of Study			**0.1186**
Pre-clinical	34 (68.0%)	16 (32.0%)	
Clinical	110 (75.3%)	36 (24.7%)	

Note: Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI), with scores > 5 indicating poor sleep quality. Excessive daytime sleepiness (EDS) was assessed using the Epworth Sleepiness Scale (ESS), with scores > 11 indicating EDS. Percentages are calculated within rows. Chi-square test was used. A p-value < 0.05 was considered statistically significant.

Table 2: Comparison of Global Sleep Quality (PSQI Scores) by Academic Discipline and Excessive Daytime Sleepiness Categories

A. Comparison by Academic Discipline (Independent Samples t-test)				
Outcome Variable	**Medical Students (Mean ± SD)**	**Non-medical Students (Mean ± SD)**	**Statistical Test**	**p-value**
Global PSQI score	4.69 ± 2.44	5.10 ± 2.74	Independent samples t-test	**0.1175**
B. Comparison by Excessive Daytime Sleepiness (EDS) Categories (One-Way ANOVA)				
EDS Category	**Global PSQI Score (Mean ± SD)**		**Statistical Test**	**p-value**
Normal ESS	4.21 ± 2.19		One-way ANOVA	**0.0027**
Mild EDS	4.14 ± 2.06			
Moderate EDS	7.79 ± 2.67			
Severe EDS	6.83 ± 2.61			

Note: Values are presented as mean ± standard deviation. Global sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI). Independent samples t-test was used to compare Global PSQI scores between medical and non-medical students, while one-way analysis of variance (ANOVA) was used to compare Global PSQI scores across excessive daytime sleepiness (EDS) categories. A p-value < 0.05 was considered statistically significant.

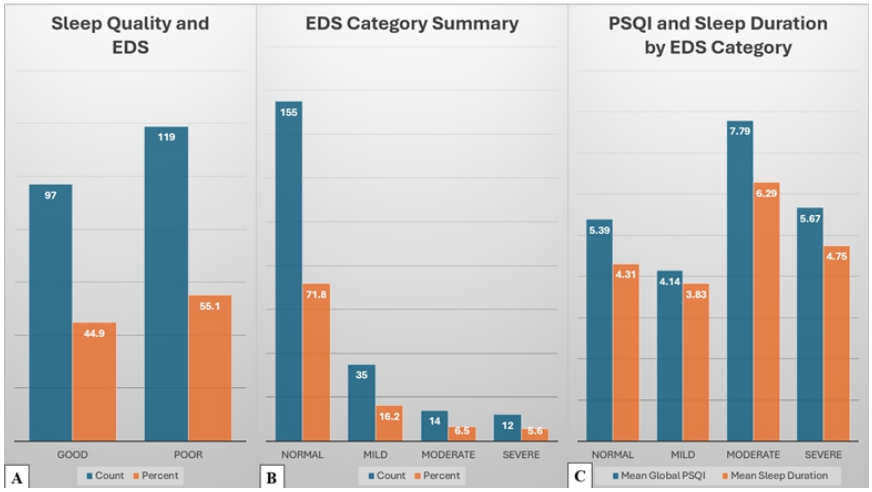

Figure 2 (A-C): Sleep Quality, Daytime Sleepiness, and Their Relationship Among Study Participants. These panels illustrate the high prevalence of poor sleep quality and excessive daytime sleepiness (EDS) among University of Uyo undergraduate students and highlight the significant relationship between impaired nighttime sleep quality and daytime functional impairment. (A) Sleep Quality and EDS: Distribution of participants by PSQI-defined sleep quality, showing 55.1% (n = 119) with poor sleep and 44.9% (n = 97) with good sleep quality. (B) EDS Category Summary: Epworth Sleepiness Scale (ESS) classification showing 71.8% (n = 155) with normal daytime sleepiness (ESS ≤10), 16.2% (n = 35) with mild EDS, 6.5% (n = 14) with moderate EDS, and 5.6% (n = 12) with severe EDS. (C) PSQI and Sleep Duration by EDS Category: Mean global PSQI and mean sleep duration (hours per night) across EDS categories. Students with moderate EDS reported the highest mean PSQI (7.79) and longest mean sleep duration (6.29 hours), while those with mild EDS had lower mean PSQI (4.14) and shortest sleep duration (3.83 hours), indicating variations suggestive of compensatory but potentially ineffective sleep patterns.

Table 3: Agreement and Correlation Between the Full and Shortened Pittsburgh Sleep Quality Index Scores

Analysis	Full PSQI (Mean ± SD)	Short PSQI (Mean ± SD)	Test Statistic	p value	Interpretation
Descriptive statistics	5.41 ± 3.23	4.47 ± 2.38	—	—	Full PSQI scores were higher on average
Paired comparison	—	—	t = 7.60	**< 0.001**	Significant mean difference
Linear association			r 0.831	**< 0.001**	Strong positive correlation
Categorical agreement (Good vs Poor sleep)			κ 0.656	**< 0.001**	Substantial agreement
Bland–Altman mean difference	—	—	0.94 ± 1.82	—	Acceptable agreement with slight positive bias
Limits of agreement	—	—	−2.62 to ·4.50	—	No proportional bias observed

Note: Data distribution was assessed for normality prior to analysis. Global PSQI and shortened PSQI scores were approximately normally distributed; therefore, results are presented as mean ± standard deviation, and parametric tests (paired samples t-test and Pearson correlation) were applied. Bland–Altman analysis was used to evaluate agreement between the two instruments.

with poorer sleep quality. Moreover, sleep duration differed significantly across EDS categories (ANOVA p = 0.0057). Students with mild EDS reported the shortest sleep duration (mean = 3.83 hours/night), while those with moderate EDS reported the longest sleep duration (mean = 6.29 hours/night), suggesting ineffective compensatory sleeping behaviors and disrupted sleep patterns among students experiencing daytime somnolence. (Table 2)

Comparison Between the Full and Shortened PSQI: The full PSQI produced a significantly higher mean score (M = 5.41, SD = 3.23) than the shortened version (M = 4.47, SD = 2.38), with a mean difference of 0.94 (t = 7.60, p < 0.001). Despite this, both versions were strongly correlated (r = 0.831, p < 0.001) and showed substantial agreement in classifying sleep quality (Cohen's Kappa = 0.656, p < 0.001). Bland-Altman analysis confirmed acceptable limits of agreement (mean difference = 0.94, SD = 1.82), with no proportional bias observed. (Table 3)

Discussion:

This study assessed the prevalence and correlates of sleep disturbances among Nigerian university undergraduates using validated sleep assessment instruments. More than half of the students (55.1%) reported poor sleep quality, which was observed across both medical and non-medical disciplines and showed no statistically significant association with key sociodemographic and academic variables, including gender (p = 0.314) and academic discipline (p = 0.439); other factors such as socioeconomic status, residential status, and roommate presence were similarly not associated with sleep quality. Excessive daytime sleepiness (EDS), though less prevalent overall (28.6%), affected a notable proportion, with 5.5% experiencing severe daytime somnolence and 22.5% reporting mild-to-moderate EDS. Daytime sleepiness correlated significantly with impaired sleep quality and variations in sleep duration (p = 0.0027), highlighting the intertwined relationship between

nighttime disturbances and daytime functional impairment. These findings demonstrate that sleep dysfunction is a pervasive, systemic issue among our study participants, emphasizing an urgent need for comprehensive, institution-wide sleep interventions tailored to improve students' sleep and consequently their academic performance, psychological wellbeing, cognitive functioning, and overall quality of life.

Our findings indicate that poor sleep quality (55.1%) is notably prevalent among University of Uyo undergraduate students, aligning with prior research globally, which consistently reports rates exceeding 50% among tertiary students.[1,14–16] Previous Nigerian studies document poor sleep quality rates between 32.5% and 50.1% among university populations.[14,15] Associated factors in these studies included psychological distress, chronic illness, irregular sleep schedules, and adverse environmental conditions.[14,16] In the broader Nigerian context, poor sleep quality prevalence reaches approximately 42%, with predictors such as higher educational attainment, anxiety, depression, increased waist circumference, and caffeine consumption.[1] Our study confirms and extends these findings, emphasizing academic lifestyle pressures, such as frequent examinations, irregular schedules, and late-night social commitments, as potentially crucial drivers of sleep disruption in the university context. Thus, the standardized PSQI provides valuable screening and comparative tool to identify sleep dysfunction within resource-limited academic environments.

Excessive daytime sleepiness (EDS), present in nearly one-third (28.6%) of our respondents, signifies an important area of concern. Although severe daytime sleepiness was relatively infrequent (5.5%), mild to moderate somnolence was widespread and significantly associated with impaired sleep quality ($p = 0.0027$) and altered sleep duration ($p = 0.0057$). Studies by El Hangouche et al., and Machado-Duque et al., similarly reports EDS prevalence between 36.6% and 49.8% among medical students, confirming the global dimension of this problem.[2,24] Furthermore, El Hangouche et al., and Rodríguez et al., found that poor sleep quality is even more common, affecting 58.2% to 83.1% of students.[2,25] Notably, Sameer et al., and Rodríguez et al., in their studies report that daytime sleepiness is clinically relevant due to its known negative associations with academic performance, vigilance, cognitive functioning, psychological wellbeing, and overall health-related quality of life.[25,26] Also, our finding of shorter sleep duration among students with mild EDS suggests ineffective compensatory sleep behaviors and disrupted sleep architecture. This further underscores the importance of comprehensive sleep-health strategies that address both nighttime sleep quality and daytime functional impairment.

Interestingly, our analysis demonstrated that sleep dysfunction was not significantly influenced by demographic variables such as sex, socioeconomic status, residential setting, roommate status, or academic discipline (medical vs. non-medical). This is consistent with the findings of Basu et al., in their study.[18] Interestingly, this lack of significant demographic differentiation contrasts with research from developed nations contexts, where female students and medical trainees often report higher levels of sleep disturbance due to elevated stress and clinical demands.[27,28] However, the homogeneity of poor sleep patterns across different demographic and academic groups in our study implies that broader environmental and institutional factors, such as inconsistent schedules, environmental disturbances (noise and overcrowding), and general poor sleep hygiene, play dominant roles in sleep disruption among University of Uyo undergraduate students. This observation underscores the necessity of holistic, universally applied sleep hygiene interventions rather than targeted subgroup approaches.

Our study further reinforces the strong association between poor nighttime sleep quality and daytime somnolence, highlighting their interdependent nature. Consistent with prior studies by Sonia de la Portilla-Maya et al., and Tarcisio Eduardo Sargo dos Passos et al., who found that poor sleep quality was significantly correlated with higher daytime sleepiness scores.[29,30] These findings stress the importance of addressing not merely sleep duration, but also sleep consistency, quality, and timing to mitigate daytime impairment effectively. Notably Conceição et al., and Araújo et al., in their studies strongly recommended educational interventions emphasizing sleep hygiene, including avoiding stimulating substances before bedtime, limiting electronic device use late at night, and maintaining regular sleep-wake cycles.[3,8]

Comparison between the full and shortened PSQI revealed a higher mean score for the full version (M = 5.41, SD = 3.23) than the short form (M = 4.47, SD = 2.38), with a mean difference of 0.94 (t = 7.60, p<0.001). Despite this difference, both versions demonstrated strong correlation (r = 0.831, p<0.001) and substantial agreement in classifying sleep quality (Kappa = 0.656, p<0.001). These findings support the potential utility of shortened PSQI versions for screening in time-constrained settings, aligning with previous validation studies.[23,31] However, caution is warranted, as other instruments like the IPAQ have shown poor agreement between short and full versions despite moderate correlation.[32]

Lastly, it is important to consider several methodological limitations when interpreting our findings. Firstly, the cross-sectional design precludes causal inference, limiting conclusions regarding temporal relationships between sleep quality and daytime sleepiness. Secondly, convenience sampling from a single university setting may limit external validity and generalizability to broader student populations. Thirdly, reliance on self-reported instruments (PSQI and ESS), although validated, introduces potential biases related to recall accuracy and social desirability. Lastly, absence of objective sleep measurements (e.g., polysomnography or actigraphy) restricts findings to subjective assessments, potentially underestimating or overestimating actual sleep disturbances.

Given these findings, institution-wide sleep health education programs targeting sleep hygiene awareness and routine screening of sleep disorders using PSQI and ESS instruments are recommended. Longitudinal and interventional studies utilizing objective sleep measurements (e.g., actigraphy) should be conducted to clarify causal relationships and determine intervention efficacy. Furthermore, examining potential confounders such as psychological distress, dietary patterns, digital device use, and physical activity would provide deeper insight into additional factors influencing sleep among students. Developing culturally tailored sleep hygiene toolkits for African university campuses and implementing comparative studies across multiple universities in Nigeria and other sub-Saharan countries would also significantly enhance our understanding and capacity to address sleep dysfunction comprehensively.

Conclusion

The high prevalence of poor sleep quality and a notable rate of excessive daytime sleepiness among Nigerian university students underscores a systemic public health concern with potential significant academic and psychological implications. The consistent occurrence across diverse sociodemographic groups suggests that sleep dysfunction is driven predominantly by institutional and environmental factors rather than individual demographics. The strong association between impaired nighttime sleep and daytime impairment highlights an urgent need for comprehensive, culturally sensitive, and institution-wide sleep-health interventions to enhance student academic performance, mental well-being, cognitive function, and overall quality of life in Nigerian and similar academic settings.

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