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Sleep Practices and Academic Pressure Management Skills among Higher Education Students in Mirpur, Azad Jammu And Kashmir

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ABSTRACT

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Academic assignments, deadlines, exam handling, and competing demands must be managed by the student at the university, and adequate rest must be allowed for optimal cognitive and emotional functioning of the student. Sleep is therefore not just related to academic functioning, but also to students' organization and management of academic demands. In this study, sleep habits and academic stress management skills of undergraduate students at Mirpur University of Science and Technology (MUST), Mirpur, AJK were explored. A quantitative descriptive-correlational design was used. The target population for the study was 3,162 undergraduate students in 11 selected departments and 385 students were selected by simple random sampling using Cochran's formula. The data were obtained using a questionnaire developed by the researcher consisting of 25 questions with a Likert scale from 1 to 5. The items were related to sleep duration, sleep hygiene, sleep quality, academic workload management, and strategies and adaptation. The content validity was determined by experts and the Cronbach's alpha value from pilot testing with 40 respondents was .849. Descriptive statistics and Pearson product-moment correlations were used for analysis. The results suggest that sleep practices are linked to students' self-reported capacity to cope with academic tasks, but the small effect sizes suggest that sleep is not the only part of a larger academic coping structure. Implications for student support, academic advising, sleep-health education, and workload planning in higher education are discussed.

Introduction

Sleep is a fundamental biological state that has critical consequences for attention, memory, learning, emotion and functioning. They are especially important in the context of higher education, where the student ought to be able to handle intricate information, maintain focus, keep up with deadlines and manage their own study schedule. Other aspects of university life involve changing residence, social life, technology, work life, family life and the expectations of learning. This can lead to disrupted sleep patterns or poor sleep quality, causing students to feel tired and unable to focus at the exact moment they need it most.

Much research has been directed at the links between sleep and academic performance. Inadequate sleep length, poor sleep quality, irregular sleep and daytime sleepiness have been associated with poorer academic outcomes in a systematic review of university students (Suardiaz-Muro et al., 2020). Recent studies have continued to show a positive, though often weak, correlation between quality of sleep and academic achievement. Based on a meta-analysis of 59 studies and a sample of over 163,000, Zhou

et al. (2026) found a small positive relationship between sleep quality and academic outcomes, and they found that sleep duration was a related factor. The results of this research highlight the need to include sleep as a part of the school environment and not just a health concern.

This partnership is complicated by academic stress. Students are often tested on their knowledge, faced with competing deadlines, expected to perform well, and unsure of their subsequent career and/or academic path. There is no separate experience of stress among students, nor is there a separate experience of sleep. Gardani et al. (2022) pooled the results of 34 studies and arrived at moderate associations between stress and both poor sleep quality and insomnia among undergraduate students. The findings support the close linkage between academic and psychological demands and student's sleep experiences, and they also suggest large differences between studies.

The current research examines this issue not only with regard to academic achievement but also the academic pressure management. Academic pressure management is the ability of students as reported to organize academic tasks, prioritize tasks, seek help, avoid procrastination, manage stress, take breaks and maintain adaptive routines. This emphasis is crucial because academic achievement is a product, while workload management constitutes a collection of behaviours in which students react to academic demands. This distinction allows for analysis of the relationship between students' self-reports of healthier sleep behaviors and their self-reports of better daily functioning in relation to academic tasks.

The study was carried out in the area of Mirpur University of Science and Technology (MUST), Mirpur, AJK. The setting comprises students from social sciences and humanities, engineering and technology, natural sciences, health and medical sciences, business and technology related courses. This diversity of disciplines helps to put into perspective sleep and academic pressure among a broader undergraduate student population.

Purpose and Objectives

This study aimed to explore the correlation between sleep habits and academic pressure management skills among the higher education students of MUST, Mirpur, AJ&K. This study was conducted to achieve three objectives: (a) to find the level of sleep practice among the students, (b) to find out the level of academic workload management skills among students and (c) to see the correlation between the sleep practice and academic workload management among students.

The null hypothesis was H0: There is no significant relationship between sleep practices and academic pressure management among university students. Since the empirical analysis considered each dimension of the sleep practices separately from the dimension of academic workload management, the hypothesis was tested by Pearson correlations for sleep duration, sleep hygiene, and sleep quality.

The study has an educational value because it transcends the notion that academic pressure can only be dealt with through study skills. When workload management is seen as related to sleep practices, then university support systems, which are also used for time management, academic advising and counseling, and student well-being can be used for sleep, as well. The correlational design needs to be interpreted with caution, as statistically significant relationships may not indicate that altering sleep habits will lead to changes in academic pressure management.

Literature Review

Quality, length and regularity of sleep are interrelated but not the same aspects of sleep behaviors. Sleep duration refers to the length of sleep, sleep quality refers to the subjective and functional aspects of sleep, e.g., feeling rested, uninterrupted sleep. Sleep hygiene relates to behaviours and circumstances that lead to proper and regular sleep, such as going to bed and waking up at the same time, creating an appropriate sleep space, etc. It is important to think about these dimensions individually because the quality of sleep might be good, timings may be regular, but the environment may be disruptive or students may get adequate sleep but not get good quality sleep.

Multiple behavioral, social and academic factors are shown to affect sleep through research with university students. In their literature review of factors that affect sleep quality in college students, Wang and Bíró (2021) found stress, irregular sleep-wake cycles, caffeine consumption, physical activity, and social interactions to be relevant factors. It is crucial to understand and interpret student sleep in a multidimensional way because a single measure of hours slept does not accurately reflect the whole sleep experience.

Sleep also facilitates cognitive functions critical to higher education. Reading, problem-solving, note-taking, preparing for exams, and complex academic work all involve attention, working memory, executive functioning and memory consolidation. Thus, it does appear as though there is a plausible basis in the literature to suggest a relationship between sleep and academic functioning. Academic performance, however, depends on numerous factors, and sleep can't be viewed as a single or primary factor in achievement.

One of the easiest-to-observe aspects of students' sleep is its duration. Students can sacrifice sleep hours in order to finish classwork, study for exams, socialize, or even use digital media. Other students, however, might try to make up for their shorter

night's sleep on school days by sleeping longer on the weekends. These patterns may lead to differences in sleep timing and have an impact on how one feels throughout the day.

Machado et al. (2022) conducted a systematic literature review of population-based studies that investigated the association between sleep time and cognitive and academic performance. The review revealed significant differences in study methods and measurement approaches and concluded that there is a need for more well-designed studies, especially in low and middle income countries. This fact is applicable to the present research because the association between sleep duration and academic functioning should be understood based on the features of the population and the measurement methods used.

Other research from university settings indicates that the length of a student's time at the university is not the only determinant of academic performance. In a study of college and university students in Norway, insomnia and deviation from the optimal sleep duration was linked to academic difficulties (Sivertsen et al., 2019). Likewise, university students' GPA was correlated with sleep efficiency, daytime dysfunction and total sleep time; and, subjective sleep quality was correlated with dissatisfaction with academic performance (Desjardins & Grandbois, 2022). Combined these results suggest that sleep quality is as important as sleep quantity.

Sleep hygiene is related to behaviour and the environment associated with sleep. University students' relevant behaviours could involve using the bed for sleep only, avoiding stimulating activities before bedtime, controlling electronic device use and creating a comfortable sleep setting, and keeping a relatively quiet environment. These practices are especially significant in the context of students as there are significant differences in daily activities that may be caused due to social and academic routines.

According to Wang and B  r   (2021), some of the factors reported to affect sleep quality in college students are irregular sleep-wake patterns. This regularity was also found to be in line with the overall literature giving evidence of the relationship of sleep timing and sleep quality to daytime functioning. But it's not just about knowing what students should do to sleep well; it's about whether academic and social habits make it possible for them to do so on a regular basis.

This distinction is important for educational institutions. Although a student knows that sleep hygiene is important, he/she still studies late due to tightly packed up load of assignments or exams. Therefore, education related to sleep should not be considered as a replacement for sensible planning of academic workload. Student conduct and institutional timetables can interact and either can be relevant to sleep experiences.

Stress is particularly connected with sleep quality. In undergraduate students, moderate pooled associations were found between sleep quality and stress and between insomnia and stress by Gardani et al. (2022). The authors also found significant variation, suggesting that this relationship is stronger in some settings and research designs than others. This is because what is seen in one population of students cannot be assumed for other populations.

The relationship may reasonably go along more than one way. Study requirements can disrupt sleep by causing stress, longer study periods, and changes in sleep patterns. This may, in turn, cause students to feel less alert during the day, which can make schoolwork more challenging. This can perpetuate a vicious cycle of academic pressure and sleep difficulties. A cross-sectional correlation study does not determine the temporal direction of such a cycle, but only the statistical relationship of the variables in each population.

The significance of sleep in academic functioning is also well supported by systematic reviews. According to Suardiaz-Muro et al. (2020), 30 studies were reviewed in which poor sleep was found to be associated with poorer academic performance in university students in general. Recent metanalytical studies also suggest that sleep quality is slightly associated with academic achievement (Zhou et al., 2026). The uniformity of the general association across studies reinforces both the need for continued focus on sleep and the fact that effect sizes were not large enough just to consider sleep to be the only factor contributing to academic outcomes.

Academic pressure is the pressure the students face regarding coursework, examinations, deadlines, performance expectations, and other academic responsibilities. Pressure is not bad in and of itself. A suitable amount of challenge can foster planning and persistence while too much or unmanaged challenge can hinder concentration, recovery, and well being. The question then is not, "do students feel the pressure," but rather, "how do they manage their reaction to it?"

Academic workload management encompasses behaviours like task prioritisation, realistic goal setting, asking for help, tracking progress, organised time off and planning time by the demands of the task.

Because these strategies involve students' self-regulation in their learning process, they are related to self-regulation. By managing well, one can minimise the risks of many deadlines coming at once as a disorganised task.

The present study uses self-reported measures of management rather than workload measures. This distinction matters. A high score does not mean students think their workload is low or that they are achieving good results of study, but rather they think they employ a particular strategy. However, perceived ability to organise work is an important educational variable as perceived control has the potential to affect how academic demands are approached.

One conceptual explanation for the potential relevance of sleep to academic pressure management is given by the Cognitive Load Theory. One conceptual explanation for the potential relevance of sleep to academic pressure management is given by the Cognitive Load Theory. Sweller (1988) presented a theory which suggested that working memory has a limited capacity and that learning is influenced by the demands placed on the working memory during the problem solving and teaching process. Academic tasks are more complex when students are tired or distracted, as this may decrease their cognitive resources for task processing. Sleep thus has the potential to have relevance to the conditions in which students process and organize academic information.

An alternate view is offered by self-efficacy theory. Bandura (1997) described self-efficacy as one's confidence in his or her ability to initiate and sustain activities needed to cope with future situations. In the school environment, this might be demonstrated by students' attitudes towards doing what's important, asking for assistance, goal setting and persevering when things are challenging. Self-efficacy is not actually measured in the present study, but the theory described above can be used to gain insights into how self-efficacy might be related to students' sense of self-efficacy in managing academic responsibilities when they feel rested.

These views imply that sleep might be a facilitator of cognitive and self-regulatory processes. The SLR is about how much information a learner can take in and the SET is about thoughts and behaviours concerning coping with difficulties. Both theories do not suggest that sleep is responsible for academic achievement. Instead, they offer a conceptual framework to explore sleep as part of a larger system of cognitive, behavioural, and contextual processes.

There are some common observations reported in the literature. Sleep problems are a common issue among university students due to academic, social and behavioural pressures that can disrupt sleep habits (Wang & B    , 2021), which is the first reason. Second, there is evidence of the relationship between sleep quality and insomnia with stress in undergraduate studies, but the strength of this relationship is different in various studies (Gardani et al., 2022). Third, sleep characteristics are associated with academic functioning, but findings indicate that these characteristics provide unique information regarding sleep quality, efficiency, daytime functioning, and duration (Desjardins & Grandbois, 2022; Suardiaz-Muro et al., 2020). Fourth, sleep quality and academic performance are related, although the relationship is modest, according to recent meta-analytic studies (Zhou et al., 2026).

The current research builds on this literature by specifically examining academic pressure management and not relying on grades or GPA as the sole academic outcome. Students' natural approaches to managing their own day-to-day behaviours such as prioritization, seeking help, setting realistic goals, managing stress, and taking breaks are emphasised. The outcome is strongly related to educational practice in that it can be tackled through advising, programmes for student support, and skills development. Contextual evidence from a general undergraduate population of Mirpur, AJ&K is also provided by the study.

It is therefore not necessary for this study to list the many gaps in the literature that would be found in a study of this kind as it is provided for the present investigation by the conceptual and empirical foundations. The central research question is simple: Are sleep practices also linked to students' reported management of academic workload (in a diverse undergraduate setting) and if so, is that link explained by the association of sleep practices with academic functioning and/or stress? This study aims to answer this question by using descriptive statistics and Pearson correlation.

Specific combination of variables examined in this context: sleep duration, sleep hygiene, and sleep quality were examined in relation to academic workload management among general undergraduate students at MUST. A great deal of the literature has focussed on academic performance, sleep issues, stress issues, or specific groups of students. In this context, the current study offers institution-specific evidence of the links between sleep practices and academic workload management but cannot infer causality due to the design.

Method

Research Design

The research design used was quantitative descriptive-correlational design. The descriptive aspect summarized the students' reported sleep behaviours and the academic workload management behaviours, and the correlational component analysed the nature and magnitude of relationship between the sleep dimensions and the academic workload management. A correlational design is suitable when variables are measured in their natural state and the researcher is interested in finding out whether relationships exist among variables, but is not interested in changing the behaviour of participants.

Population and Sample

The population in the study consisted of 7,773 students in the university. A total of 3,162 undergraduate students from 11 departments of the university namely English, Education, Mechanical Engineering, Software Engineering, Zoology, Computer Science, Pharmacy, Nutrition and Dietetics, Business Administration, Banking and Finance and Civil Engineering Technology were included in the study. Cochran's formula was used to determine a sample size of 385 students for a 1.96, $p = .50$, and $e = .05$. Simple random sampling was used to select participants.

Research Instrument

The data were gathered by a self-designed survey to check the response of 25 items on the 5-point Likert scale. The instrument comprised two general parts. The first segment assessed the sleep habits using three aspects of sleep, namely sleep duration, sleep hygiene and sleep quality. The second part involved academic pressure management: academic workload management and strategies/adaptation. There were five items on each dimension. They focused on behaviours and perceptions of getting sufficient sleep, having a regular sleep schedule, using electronic devices at night, feeling rested, academic disruption of sleep, prioritizing tasks, seeking assistance, goal setting, stress management, taking breaks, organization, and perceived stress around deadlines.

Validity and Reliability

Content validation of the questionnaire was conducted with an education expert. Prior to the main data collection, a pilot study was done with 40 respondents. Cronbach's alpha was used to assess internal consistency and was .849 for the 25 item instrument. This value is a result of good internal consistency used for the purpose of present study. The reliability estimate is for the instrument as a whole and does not imply that all sub scales have the same reliability.

Data Collection and Analysis

385 questionnaires were distributed and 385 usable questionnaires were obtained. The data were entered and analyzed by SPSS. Responses were summarized using descriptive statistics, such as means and standard deviations. Pearson product-moment correlation was employed to explore the correlation between each sleep-practice dimension and academic workload management. The .05 significance level was used for statistical significance. As a correlational and cross-sectional design, significant correlations were interpreted as associations as opposed to causal effects.

Ethical Considerations

The participation was considered voluntary, and the information was explained for the research purpose. Data collection and data analysis were conducted in accordance with confidentiality and privacy. Responses were analysed in total and not de-identified when reporting.

Results

Overall Sleep Practices

Generally high levels of sleep practices were found. The overall grand mean was 4.09 on the 5-point scale. Sleep quality ($M = 4.12$) was the highest dimension mean followed by sleep duration ($M = 4.03$) and sleep hygiene ($M = 3.99$). The overall findings suggest that although there were positive sleep related behaviours and perceptions reported, there were also individual items that showed that academic demands and technology use continued to affect sleep.

Sleep dimension	Items	M	Level
Sleep duration	5	4.03	High
Sleep hygiene	5	3.99	High
Sleep quality	5	4.12	High
Overall	15	4.09	High

On the item level, the percentage of respondents who generally received adequate sleep to focus on their academic work ($M = 4.02$) and felt more energized and productive after getting adequate sleep ($M = 4.11$) were consistent. Sleeping for 7-8 hours had a somewhat lower level of agreement with a mean of 3.88. Additionally, participants indicated getting more sleep on the weekends when they are catching up on sleep during the weekdays ($M = 4.09$) and that they sometimes forgo sleep to complete academic tasks ($M = 4.00$). These results highlight an important difference between positive sleep attitudes and the competing demands that motivate student to sacrifice sleep for study.

Clean and comfortable bedroom (3.99) and a regular sleep schedule (3.91) were the most common sleep hygiene behaviours. Students indicated that they changed their sleep schedule to plan their academic or social activities ($M = 3.98$). The mean of late childhood/teen use of electronic devices that interferes with sleep was 4.11. The mean value for an environment free from noise and light was 3.98. The results indicate that at least generally sleep hygiene was known and used, but that the regularity of sleep and the disturbances related to technology were still significant elements in students' sleep routines reported.

Items related to sleep quality got the highest overall dimension mean. Pupils stated they felt well rested and ready to face the day ($M = 4.21$) and very strongly that their quality of sleep had an impact on their ability to focus on tasks and academic work ($M = 4.20$). Meanwhile, academic pressure was reported as a source of sleep disturbance ($M = 3.94$), difficulty falling asleep because of examinations and assignments had a mean of 4.04, and difficulty staying asleep because of academic responsibilities had a mean of 4.19. So students reported positive sleep experiences as well as significant academic disruption of sleep.

Academic Pressure Management

Academic workload management behaviours were reported as generally positive by students, too. Academic tasks are prioritized effectively ($M = 4.24$) was the highest mean. Being able to get help from classmates or tutor had a mean of 4.20, and the avoidance of procrastination with realistic goals had a mean of 4.19. There were means of 4.02 for managing academic stress, and 4.05 for taking breaks and managing workload to reduce academic stress. The findings indicate that students did not just use one coping strategy, but rather they perceived that they used multiple strategies.

The strategies and adaptation items were similar. Students stated that they did better with regard to academic tasks if they got a regular sleep pattern ($M = 4.26$). They also reported feeling more capable of handling academic stress when they are well rested ($M = 4.16$), to feel less overwhelmed when staying organized and meeting academic deadlines, when well rested ($M = 4.15$), and to feel less anxious about academic deadlines when well rested ($M = 4.19$). These are self-perceptions only and should not be seen as actual measures of academic achievement.

Academic workload-management item	M
Prioritize academic tasks effectively	4.24
Seek help from classmates/tutor when needed	4.2
Avoid procrastination through realistic goals	4.19
Manage academic stress effectively	4.02
Take breaks and manage workload to reduce stress	4.05

Relationship Between Sleep Practices and Academic Workload Management

There is a relationship between sleep practices and academic workload management. There is a relationship between sleep practices and management of academic workload. To assess the relationships between sleep duration, sleep hygiene, sleep quality and academic workload management, Pearson product-moment correlations were performed. The three relationships were positive and significant. But the magnitudes were small, which is important for interpretation of the practical significance of the results.

Sleep dimension	r	P	Interpretation
Sleep duration	.111	.030	Significant, weak positive
Sleep hygiene	.199	< .001	Significant, weak positive
Sleep quality	.245	< .001	Significant, weak positive

There was a positive association between sleep duration and academic workload management ($r = .111$, $p = .030$). The association was not strong but was statistically significant. So, those students who reported higher sleep durations also reported slightly higher workload management, but this was of small magnitude. This should not be taken to mean that a longer sleep time will significantly enhance the management of academic workload. Academic workload management was more correlated with sleep hygiene $r = .199$, $p < .001$. It was found that students who reported healthier or more favourable sleep-hygiene practices tended to report better academic workload management. However, the relationship is weak again, suggesting that there are other factors that have a significant effect on students' capacity to support their academic responsibilities. We found the strongest association between sleep quality and academic workload management, $r = .245$, $p < .001$. These findings indicate that there is a relationship between sleep quality and the ability to manage academic workload, with students who reported better sleep quality also reporting a better ability to manage academic workload. Although the correlation is still moderate, the cross-sectional design does not allow for conclusions to be drawn regarding the effect of sleep quality on workload management, the effect of effective workload management on sleep quality or the effect of other factors on both sleep quality and workload management. Overall, the statistical results led to rejection of the study's null hypothesis for the three tested relationships. The most important qualification is that statistical significance and practical magnitude are different concepts. Relatively small correlations can be significant with a sample size of 385. This means that the findings do not necessarily imply that there is a large, causal effect.

Discussion

The results confirm the literature overall on the relevance of sleep for students' academic functioning and give a more specific insight into how students manage their workloads. In the current study, students' sleep behaviours were generally more positive, but a few responses suggested that study persisted as a factor that affected sleep. This balance is crucial: students can appreciate sleep and feel good about their sleep habits overall, but at the same time, they may feel that the increased demands of the academic program outweigh the value of sleep.

The findings for sleep duration are in line with the literature indicating a relationship between sufficient sleep and cognitive and academic functioning and support the need to focus on more than sleep duration. Machado et al. (2022) identified a great deal of variation in the measurement of sleep duration and academic outcomes. A group of researchers, Desjardins and Grandbois (2022), obtained similar results in which several sleep parameters such as sleep efficiency and daytime dysfunction were associated with GPA. Sleep duration was the least of the three correlations with workload management in the present study ($r = .111$). A pattern

here is that the level of sleep might play a role, but more likely the entire sleep pattern may be more relevant to students' perceived ability to cope with academic requirements.

This correlation between academic workload management and sleep hygiene was slightly higher ($r = .199$). The current results align with literature that reports that abnormal sleep-wake cycles and stress are factors influencing sleep quality in college students (Wang & B  r  , 2021). Students in particular may be concerned about regularity as this is essential for planning academic activities which need to be scheduled during regular time periods for study, rest and recovery. It can thus coexist with other modalities of self-regulation and form a consistent sleep routine. However, it was not possible in the current study to determine whether sleep hygiene leads to improved workload management as both constructs were measured at a single time using self-report.

Academic workload management was the factor that was best correlated with sleep quality ($r = .245$). This finding aligns with the general literature that has established a relationship between sleep quality, stress, and academic performance. The pooled correlation of sleep quality and stress and the modest positive correlation of sleep quality and academic performance reported by Gardani et al. (2022) and Zhou et al. (2026) respectively, indicate moderate correlation in the two cases. The present study also corroborates that students reported academic workload management is also related to sleep quality. The difference is important because workload management is a proximal behavioural outcome that can happen prior to academic success.

The descriptive results also suggest an apparent conflict between schoolwork and sleep. Students reported that they sometimes forgo their rest to do academic work and that the exam and assignments could be a source of disturbance for them when it comes to sleeping. This finding is in line with the wider notion that academic stress and sleep issues could be linked. Most importantly, the relationship should not be described as a one way street. Academic demands can interfere with sleep and insufficient or sub-optimal sleep can make academic demands more challenging. Longitudinal studies are required for a more robust investigation of the directionality of the effect.

Students feel they are using adaptive academic strategies on task prioritization ($M = 4.24$) and on seeking help ($M = 4.20$). This is of relevance to the Self-Efficacy Theory as beliefs about self-efficacy in managing tasks could reinforce goal setting, persistence and help-seeking (Bandura, 1997). However, self-efficacy was not assessed directly on the present study. Hence, the theoretical explanation should be conceptual and not empirical tests of self-efficacy.

The findings can also be explained using the theory of cognitive load. Academic tasks demand only moderate use of working memory; fatigue or disruptions in sleep may make it harder to keep one's focus and to process information effectively. In the present study, the cognitive load, working memory, and cognitive performance were not directly measured. As a result, CLT should not be interpreted as evidence that the relationship between sleep and academic workload was mediated by cognitive load, but as an explanation of why sleep might be important to academic workload management.

The relatively small correlations are particularly important for a publication-quality interpretation. To conclude that sleep is the greatest determinant of academic pressure management is inappropriate. There are likely to be a variety of contextual factors that influence the management of students' time, including time-management skills, the demands of the course, prior academic preparation, social support, financial conditions, digital habits, personality, institutional scheduling, and others. The results, however, indicate that sleep behaviours are part of a larger system of students' self-regulation and well-being.

The findings are also consistent with the current evidence that supports the direction of sleep as part of student-support measures. Psychoeducation about sleep and stress in university environments was recommended by Gardani et al. (2022) and the literature validated the need to pay attention to sleep quality instead of sleep duration. For institutions, this translates to an opportunity to provide support that goes beyond a simple health message and instead is integrated into a supportive academic planning process.

Conclusion

The present study focused on sleep behaviours and academic workload management in 385 undergraduate students of MUST Mirpur, AJ&K. The students generally showed high sleep practices and academic workload management behaviours. Quality of sleep had the highest mean score for the sleep dimension, and academic task prioritization was the highest reported academic workload management behaviour. The results showed that there are significant positive correlation between sleep duration, sleep hygiene, sleep quality, and academic workload management. Sleep quality was found to be the most associated with sleep followed by sleep hygiene and sleep duration.

The findings are intended to be interpreted as 'associations', not 'causations'. The small correlation coefficients suggest that sleep practices are associated with academic workload management and that only a small proportion of the variation in academic workload management is accounted for by sleep practices. The study thus argues for an integrated approach to education that includes sleep health considerations alongside time management, academic advising, stress management, help-seeking and planning institutional workloads. Longitudinal mixed-methods, multi-institutional, and objective, standardized sleep monitoring are important designs for future studies that can provide more definitive evidence on the relationship between sleep and academic stress over time.

Recommendations

The results of the study will be used to add evidence-based information on sleep-health and workload-management to student orientation and academic advising to help students establish healthy sleep habits and effective academic management skills. Major assessments and deadlines can be coordinated (where possible) across academic departments to avoid excessive 'bunching' of academic demands, and where appropriate, student-support services can include sleep, study planning, stress management and help-seeking services in a coordinated fashion. Academic services and campus services can create appropriate or quiet sleeping areas, especially in exam time, and students can be encouraged to get a regular night's sleep and not routinely forego sleep to complete academic tasks. For future researchers, there were standardized measures of sleep and, where possible, objective measures of sleep behavior, such as sleep diaries or actigraphy, that might be used to obtain more reliable measures of sleep behavior. A longitudinal study can also be used to gain an insight into the temporal relationship between academic pressure, sleep and workload management. Comparative research can be conducted on a university-by-university and/or discipline-by-discipline level between AJ&K and other parts of Pakistan to understand to what degree the results are context-dependent. Other potential variables that could be explored in future studies to better understand associations with sleep practices and academic pressures include digital-device use, examination schedules, social support, financial pressures, and time-management strategies. Finally, researchers can also determine the difference between a significant and a practical significant when interpreting the relationship between variables in a study, by reporting the effect size in addition to the p value.

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