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Original Research

Assessment of sleep disorders among medical students

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ABSTRACT:
Background: Sleep problems are common in the general population, and approximately one-third of adults report some form of insomnia. The present study was conducted to assess sleep disorders among medical students. **Materials & Methods:** 792 medical students of different years were subjected to the SLEEP-50 scale. The SLEEP-50 provides scores for Insomnia, Narcolepsy, Obstructive Sleep Apnea (OSA), Circadian Rhythm Disorders (CRDs), Sleepwalking, Nightmares.
Results: 1st year had 75 males and 65 females, 2nd year had 90 males and 55 females, 3rd year had 80 males and 45 females, 4th year had 90 males and 85 females and interns had 65 males and 80 females. Out of 792, 210 had sleep disorders. Insomnia was seen in 42, OSA in 38, CRDs in 36, Narcolepsy in 24, night mares in 30 and sleep walking in 20 subjects. The difference was significant (P< 0.05). **Conclusion:** Most common sleep disorder was insomnia was, OSA, CRDs, Narcolepsy, night mares and sleep walking.
Key words: Medical, sleep disorder, sleep walking

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INTRODUCTION

Sleep problems are common in the general population, and approximately one-third of adults report some form of insomnia.[1] An international survey in 10 countries showed 32.6% prevalence of insomnia among primary care patients, and data from other countries are fairly consistent with this result. Medical students are one subgroup of the general population who appear to be especially vulnerable to poor sleep, perhaps due to the long duration and high intensity of study, clinical duties that include overnight on-call duties, work that can be emotionally challenging, and lifestyle choices.[2] Research on sleep disturbances in undergraduate medical students is of particular interest because of the known relationship between sleep and mental health and the concern that the academic demands of medical training can cause significant stress.[3]

College students experience a number of sleep problems. These problems can hampers health, mood and academic performance. Sleep deprivation is a common sleep problem among college students that can induce excessive daytime sleepiness (EDS). Many college students are older adolescents and are still dealing with adolescent physiology such as a biologically driven delayed sleep phase.[4]

However, varying prevalence rates of sleep disorders have been reported among college students. Notably, these disorders have been found to vary according to gender, socioeconomic status, and culture. In one study, approximately 30.7% and 13.6% of medical students had RLS and OSA, respectively. In contrast, other researchers have indicated the prevalence of these disorders to be 8% and 4%, respectively. Moreover, certain disorders like nightmares and narcolepsy are reportedly more common in females.[5] The present study was conducted to assess sleep disorders among medical students.

MATERIALS & METHODS

The present study was conducted among 792 medical students of different years of both genders. All enrolled were recruited after obtaining their consent.

Data such as name, age, gender etc. was recorded. All were subjected to the SLEEP-50 scale. It consists of 50 items that tap a variety of sleep characteristics. Scoring was done by students as 1- not at all, 2- somewhat, 3- rather much, or 4- very much true. The SLEEP-50 provides scores for Insomnia, Narcolepsy, Obstructive Sleep Apnea (OSA), Circadian Rhythm Disorders (CRDs), Sleepwalking, Nightmares. Results thus obtained were subjected to statistical analysis using Mann Whitney U test. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of subjects

Year	Male	Female	P value
1st year	75	65	0.081
2nd year	90	55	
3rd year	80	45	
4th year	90	85	
Interns	65	80	
Total	400	392	

Table I shows that 1st year had 75 males and 65 females, 2nd year had 90 males and 55 females, 3rd year had 80 males and 45 females, 4th year had 90 males and 85 females and interns had 65 males and 80 females. The difference was on- significant (P> 0.05).

Table II Prevalence of sleep disorder

Year	Total	Prevalence
1st year	140	56
2nd year	145	44
3rd year	125	30
4th year	175	60
Interns	145	20
Total	792	210

Table II, graph I shows that out of 792, 210 had sleep disorders.

Graph I Prevalence of sleep disorder

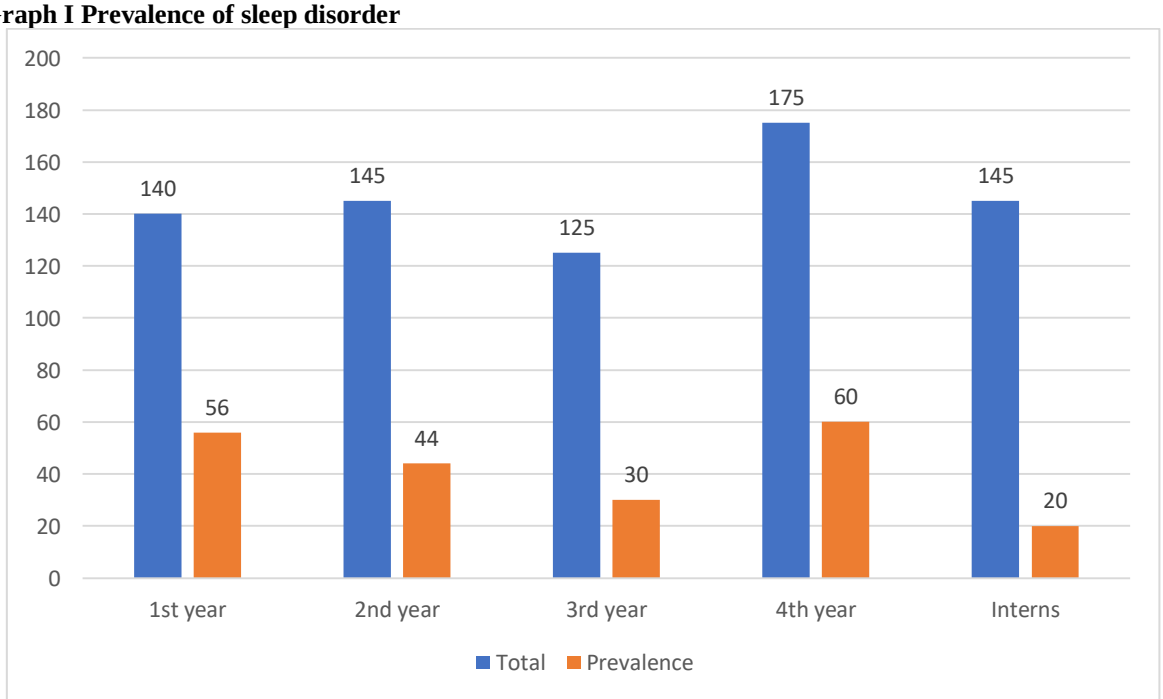
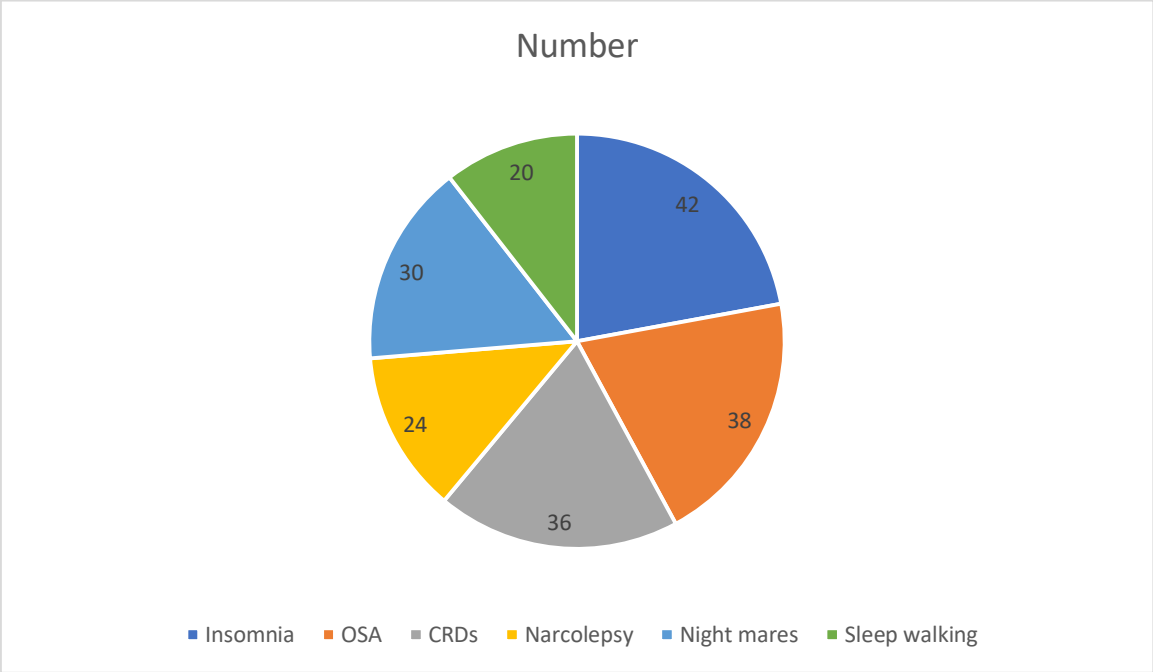


Table III Assessment of sleep scale score

Disorders	Number	P value
Insomnia	42	0.04
OSA	38	
CRDs	36	
Narcolepsy	24	
Night mares	30	
Sleep walking	20	

Table III, graph II shows that insomnia was seen in 42, OSA in 38, CRDs in 36, Narcolepsy in 24, night mares in 30 and sleep walking in 20 subjects. The difference was significant (P< 0.05).

Graph I Assessment of sleep scale score



DISCUSSION

Sleep disturbances are a common complaint among college students worldwide, likely as a result of stress due to increased academic demands. Moreover, busy schedules, new social opportunities, and a sudden change in sleeping environment can be additional contributing factors.[6] Both the American Medical Association and American Academy of Sleep Medicine consider insufficient sleep to pose a serious risk to adolescents and young adults (American Medical Association, American Academy of Sleep Medicine; National Sleep Foundation, with sleep deprivation also having a significant impact on the health, wellbeing, and academic performance of this particular group.[7] The relationship between sleep and academic performance is well-established. Inadequate sleep leads to increased drowsiness and daytime sleepiness, which subsequently decreases mental alertness and concentration. This can affect the ability to deal with tasks involving problem-solving, memory, and attention to detail. Thus, students who suffer from sleep disorders have been found to be at a higher risk of failing academically, with lower grade point averages (GPAs) of < 2.0.[8] The present study was conducted to assess sleep disorders among medical students.

In present study, 1st year had 75 males and 65 females, 2nd year had 90 males and 55 females, 3rd year had 80 males and 45 females, 4th year had 90 males and 85 females and interns had 65 males and 80 females. We found that out of 792, 210 had sleep disorders. Jain et al[9] found that out of 1524 students examined, 381 were found to have sleep disorder. Females comprised 565 and males comprised 43%. Obstructive sleep apnea was seen in 11% of examined students. Narcolepsy was seen in 18% of students. Other sleep disorders were CRDs (6%), sleep walking (1%), night mares (3%) and insomnia (4%). The difference among different sleep disorders were significant (P- 0.04). Maximum numbers of student complaint of use of alcohol at night (17%).

We observed that insomnia was seen in 42, OSA in 38, CRDs in 36, Narcolepsy in 24, night mares in 30 and sleep walking in 20 subjects. In a Lithuanian survey, more than half (59.4%) of the university students scored > 5 on the PSQI, indicating poor sleep quality. That study compared sleep problems in medical students with students in law and economics

and concluded that medical students had the highest prevalence of poor sleep and poorer associated quality of life compared to other student groups.[10]

Pace-Schott et al[11] in his study suggested that most university students accumulate sleep debt over time. This debt is compensated on the weekends. Although an individual cannot catch up on sleep once sleep debt has been acquired, healthy sleeping patterns can return with time. Chokroverty[12] suggested that most individuals need an average of eight hours of sleep per day, but many people can tolerate an average of six hours. Limited sleep habits limit the performance and activity of individual. Sleep less than than six hours over the duration of days or even weeks results in sleep debt. College students have higher risk of these habits which shortcomes their performance and daily activity.

CONCLUSION

Authors found that students are at risk for sleep disorders. Most common sleep disorder was insomnia was, OSA, CRDs, Narcolepsy, night mares and sleep walking.

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