

Original Article

Assessment of sleep disorders among medical students

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ABSTRACT:

Background: Medical students are one subgroup of the general population who appear to be especially vulnerable to poor sleep. The present study was conducted to assess sleep disorders among medical students. **Materials & Methods:** 550 Medical students of both genders were enrolled. SLEEP-50 scale was recorded. Scoring was done by students as 1- not at all, 2-somewhat, 3- rather much, or 4- very much true. It comprises scores for Insomnia, Narcolepsy, Obstructive Sleep Apnea (OSA), Circadian Rhythm Disorders (CRDs), Sleepwalking, Nightmares. **Results:** 1st year had 40 males and 50 females, 2nd year had 30 males and 55 females, 3rd year had 60 males and 85 females, 4th year had 50 males and 75 females and intern had 60 males and 45 females. Prevalence of sleep disorder was 56% in first year, 32% in second year, 12% in third year, 48% in final year and 7% in interns. The difference was significant ($P < 0.05$). Narcolepsy was seen in 12%, night mares in 16% and sleep walking in 15%, insomnia in 30%, OSA in 5% and CRDs in 10% subjects. The difference was significant ($P < 0.05$). **Conclusion:** Most common sleep disorder among medical students was insomnia, OSA, CRDs, Narcolepsy, night mares and sleep walking.

Key words: Medical students, Sleep, Sleepwalking, Nightmares

Received: 22 June, 2021

Accepted: 25 July, 2021

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This article may be cited as: Gupta AK, Pandey AK. Assessment of sleep disorders among medical students. J Adv Med Dent Sci Res 2021;9(8):151-154.

INTRODUCTION

Sleep plays a vital role in maintaining the equilibrium of human psychosocial behavior. Sleep-wake cycle is one of the biological rhythms which are determined by a circadian timing system, predisposed by some factors like physiological function, work schedules, etc.¹ Sleep deprivation results in psychosocial stress, psychiatric disorders, decreased work effectiveness, and learning disability.² Nursing is a demanding profession with occupational stress which involves academics, shift duties, and sleep deprivation.³

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. A varying prevalence rates of sleep disorders have been reported among college students.⁴ These disorders have been found to vary according to gender, socioeconomic status, and culture. certain disorders

like nightmares and narcolepsy are reportedly more common in females. Stress in today's world is an integral part of life.⁵ This term can be used to describe not only sudden, traumatic experiences, but also the constant difficulties and changes that happen in life that are just part of living; the majority of society encounters and situations that cause stress on a daily basis and affect overall well-being.⁶ The present study was conducted to assess sleep disorders among medical students.

MATERIALS & METHODS

The present study comprised of 550 Medical students of both genders. All subjects were informed regarding the study and their written consent was obtained.

Data such as name, age, gender etc. was recorded. All prof of students were enrolled. SLEEP-50 scale consisting of 50 items that tap a variety of sleep characteristics was recorded. Scoring was done by students as 1- not at all, 2-somewhat, 3- rather much,

or 4- very much true. It comprises scores for Insomnia, Narcolepsy, Obstructive Sleep Apnea (OSA), Circadian Rhythm Disorders (CRDs),

Sleepwalking, Nightmares. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of students

Year	Male	Female	P value
1st year	40	50	0.05
2 nd year	30	55	
3 rd year	60	85	
4 th year	50	75	
Interns	60	45	
Total	240	310	

Table I shows that 1st year had 40 males and 50 females, 2nd year had 30 males and 55 females, 3rd year had 60 males and 85 females, 4th year had 50 males and 75 females and interns had 60 and 45 females. The difference was significant (P< 0.05).

Table II Prevalence of sleep disorder

Year	Prevalence	P value
1st year	56%	0.01
2 nd year	32%	
3 rd year	12%	
4 th year	48%	
Interns	7%	

Table II, graph I shows that prevalence of sleep disorder was 56% in first year, 32% in second year, 12% in third year, 48% in final year and 7% in interns. The difference was significant (P< 0.05).

Graph I Prevalence of sleep disorder

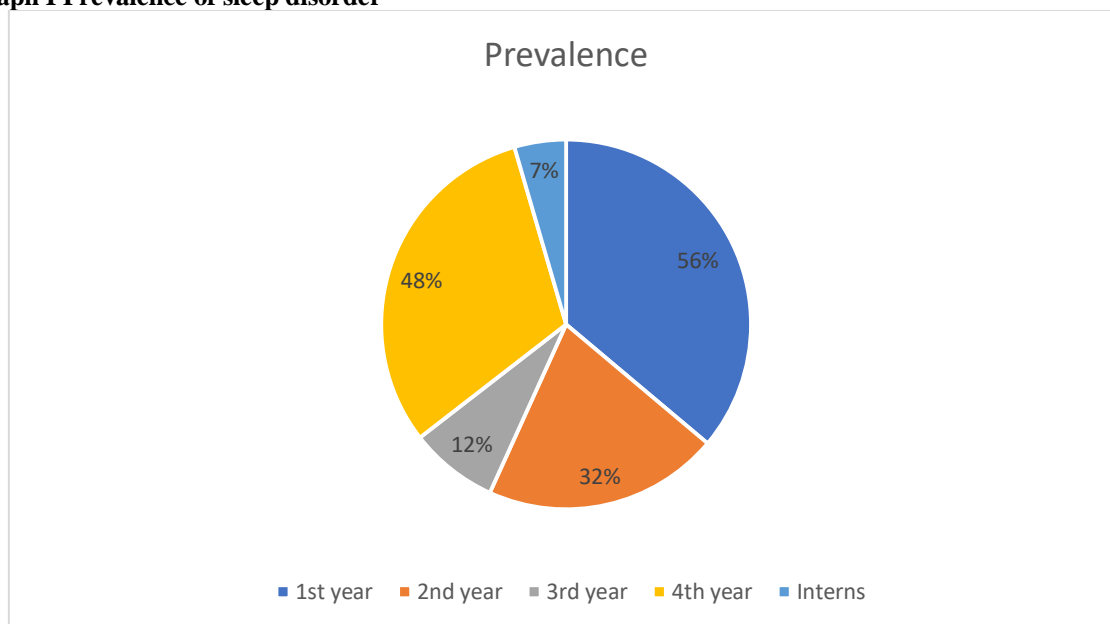
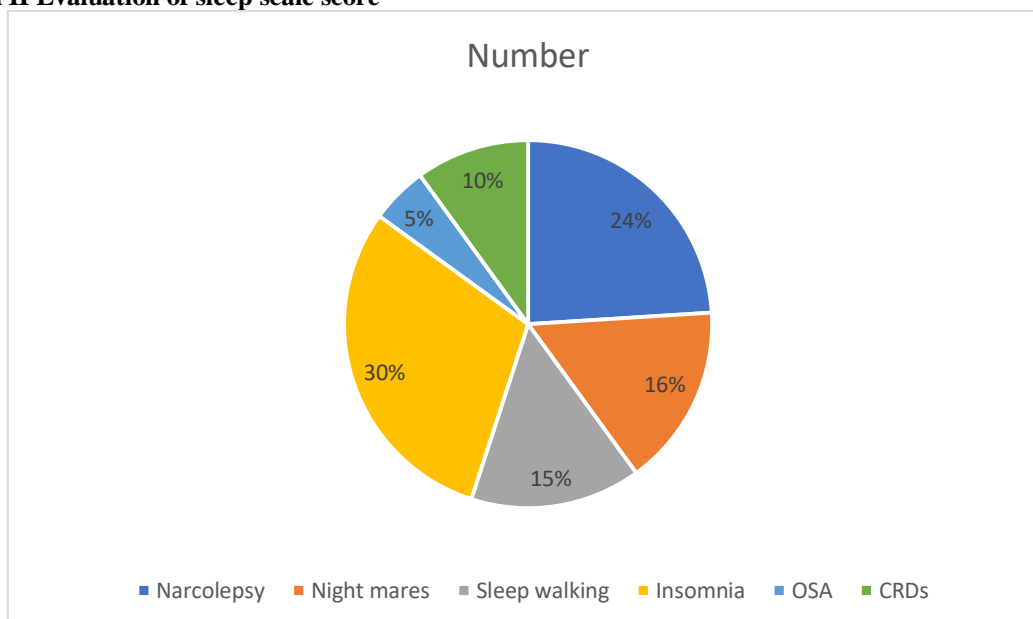


Table III Evaluation of sleep scale score

Disorders	Number	P value
Narcolepsy	24%	0.032
Night mares	16%	
Sleep walking	15%	
Insomnia	30%	
OSA	5%	
CRDs	10%	

Table III, graph II shows that narcolepsy was seen in 12%, night mares in 16% and sleep walking in 15%, insomnia in 30%, OSA in 5% and CRDs in 10% subjects. The difference was significant (P< 0.05).

Graph II Evaluation of sleep scale score

DISCUSSION

Sleep is an essential factor when it comes to well-being as well as mental, physical, and cognitive functioning.⁷ After everyday activities, the body regenerates during sleep, ensuring later functioning.⁸ Slight shortening of sleep or its prolongation does not significantly affect physical and mental activity. However, if sleep is significantly shortened, it leads to disturbances in focus and deterioration of mood.⁹ The importance of proper sleep has been confirmed in many areas of life, such as cognitive, emotional, social, and biological functioning.¹⁰ The role of sleep in the prevention of civilization diseases cannot be overlooked. It is also noted that analyzing sleep problems becomes a useful indicator when it comes to assessing the risk of developing depression and the risk of relapse after remission.¹¹ The present study was conducted to assess sleep disorders among medical students.

We found that 1st year had 40 males and 50 females, 2nd year had 30 males and 55 females, 3rd year had 60 males and 85 females, 4th year had 50 males and 75 females and interns had 60 males and 45 females. Menon et al¹² included seven hundred and thirteen students. Three hundred and twenty-four (45%) students reported headache, 281 (39%) students tiredness, 193 (27%) back pain, 72 (10%) symptoms of acid peptic disease, 61 (9%) insomnia, 47 (7%) depression. Five hundred and forty-eight (77%) had night duties at least 1 week in a month. Comparison between PSQI (A) and PSQI (B); ESS (A) and ESS (B). Students with better sleep quality had less insomnia and depression and able to study for more hours. Students with excessive daytime sleepiness were older, had more insomnia, depression, acid peptic disease, and were doing more night duties and less ward duties. This study found that students with poor sleep quality were able to

dedicate fewer hours to study and eventually had poor marks and were more depressed than their peers. Sleep disruptions probably acts on the cognitive control leading to depressive symptoms.

We observed that prevalence of sleep disorder was 56% in first year, 32% in second year, 12% in third year, 48% in final year and 7% in interns. We found that narcolepsy was seen in 12%, night mares in 16% and sleep walking in 15%, insomnia in 30%, OSA in 5% and CRDs in 10% subjects. Taylor et al¹³ revealed that people with chronic insomnia reported more of the following than did people without insomnia: Heart diseases (21.9% vs. 9.5%), high blood pressure (43.1% vs. 18.7%), neurologic disease (7.3% vs. 1.2%), breathing problems (24.8% vs. 5.7%), urinary problems (19.7% vs. 9.5%), chronic pain (50.4% vs. 18.2%), and gastrointestinal problems (33.6% vs. 9.2%). Conversely, people with the following medical problems reported more chronic insomnia than did those without those medical problems: Heart diseases (44.1% vs. 22.8%), cancer (41.4% vs. 24.6%), high blood pressure (44.0% vs. 19.3%), neurologic disease (66.7% vs. 24.3%), breathing problems (59.6% vs. 21.4%), urinary problems (41.5% vs. 23.3%), chronic pain (48.6% vs. 17.2%), and gastrointestinal problems (55.4% vs. 20.0%). When all medical problems were considered together, only patients with high blood pressure, breathing problems, urinary problems, chronic pain, and gastrointestinal problems had statistically higher levels of insomnia than those without these medical disorders.

CONCLUSION

Authors found that most common sleep disorder among medical students was insomnia, OSA, CRDs, Narcolepsy, night mares and sleep walking.

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