(p) ISSN Print: 2348-6805

ORIGINAL ARTICLE

Sleep disorders among nursing students

¹Mahendra Singh, ²Vandana Patel

¹Assistant Professor, Department of Psychiatry, Career Institute of Medical Sciences Lucknow, U.P., India; ²Associate Professor, Department of Humanities, BBDNITM, Lucknow, U.P., India

ABSTRACT:

Background: Relationship between sleep problems and psychiatric disorders is complex and multifaceted. The present study was conducted to assess sleep disorders among nursing students. **Materials & Methods:** 650 nursing students of both genders were assessed for SLEEP-50 scale. **Results:** Prevalence of sleep disorder was 40% in first year, 32% in second year, 15% in third year, 25% in final year and 4% in interns. Insomnia was seen in 46%, OSA in 15%, CRDs in 30%, narcolepsy in 12%, night mares in 16% 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:** sleep disorder, sleep walking, Nursing

Corresponding author: Vandana Patel, Associate Professor, Department of Humanities, BBDNITM, Lucknow, U.P., India

This article may be cited as: Singh M, Patel V. Sleep disorders among nursing students. J Adv Med Dent Scie Res 2016;4(4):261-264.

INTRODUCTION

Sleep is defined as a state of decreased awareness of environmental stimuli that is distinguished from states such as coma or hibernation by its relatively rapid reversibility. It has been found that there is massive interaction between the physiologic systems involved in regulation of sleep and wakefulness and those of the same involved in the regulation of emotion and other behaviors.¹ Relationship between sleep problems and psychiatric disorders is complex and multifaceted. Sleep disturbances are so commonly observed in the psychiatric patients that they have been incorporated in the official diagnostic criteria of some disorders like the depressive disorders and the generalised anxiety disorders.²

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. 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 hamper health, mood and academic performance.⁴ Sleep deprivation is a common sleep problem among college students that can induce excessive daytime sleepiness. Many college students are older adolescents and are still dealing with adolescent physiology such as a biologically driven delayed sleep phase.⁵ 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.⁶ The present study was conducted to assess sleep disorders among nursing students.

MATERIALS & METHODS

The present study was conducted among 650 nursing 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. SLEEP-50 scale was used for recording sleep. 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. It comprises 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	70	74	0.05
2 nd year	65	52	

3 rd year	68	70	
4 th year	55	48	
Interns	42	106	
Total	300	350	

Table I shows that 1st year had 70 males and 74 females, 2nd year had 65 males and 52 females, 3rd year had 68 males and 70 females, 4th year had 55 males and 48 females and interns had 42 males and 106 females. The difference was significant (P < 0.05).

Table II Prevalence of sleep disorder

Year	Prevalence	P value
1st year	40%	0.01
2 nd year	32%	
3 rd year	15%	
4 th year	25%	
Interns	4%	

Table II, graph I shows that prevalence of sleep disorder was 40% in first year, 32% in second year, 15% in third year, 25% in final year and 4% in interns. The difference was significant (P < 0.05).



Graph I Prevalence of sleep disorder

Table III Sleep scale score

Disorders	Number	P value		
Insomnia	46%	0.04		
OSA	15%			
CRDs	30%			
Narcolepsy	12%			
Night mares	16%			
Sleep walking	20%			

Table III shows that insomnia was seen in 46%, OSA in 15%, CRDs in 30%, narcolepsy in 12%, night mares in 16% and sleep walking in 20 subjects. The difference was significant (P < 0.05).

DISCUSSION

Sleep problems are common in the general population, and approximately one-third of adults report some form of insomnia.⁷ 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. Sleep disturbances are a common complaint among college students worldwide, likely as a result of stress due to increased academic demands.⁸ Moreover, busy schedules, new social opportunities, and a sudden change in sleeping environment can be additional

contributing factors.⁹ 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.¹⁰ The present study was conducted to assess sleep disorders among nursing students.

In present study, 1st year had 70 males and 74 females, 2nd year had 65 males and 52 females, 3rd year had 68 males and 70 females, 4th year had 55 males and 48 females and interns had 42 males and 106 females. Pace-Schott et al¹¹ 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. Chokroverty¹² 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 six hours over the duration of days or even weeks results in sleep debt. College students have higher risk of these habits which short come their performance and daily activity.

We observed that prevalence of sleep disorder was 40% in first year, 32% in second year, 15% in third year, 25% in final year and 4% in interns. We observed that insomnia was seen in 46%, OSA in 15%, CRDs in 30%, narcolepsy in 12%, night mares in 16% and sleep walking in 20 subjects. Park et al¹³ found that 93% of patients with depressive disorders. Though majority of the patients having manic episode of our study report symptoms of insomnia, none of them presents with clinically relevant insomnia. This result reflects the fact that the sleep condition found in manic episodes is decreased need for sleep which is not synonymous with insomnia.

A study on Malaysian patients attending primary care clinics showed that 38.9% patients had frequent insomnia symptoms (>3 times/week), 30.7% had chronic insomnia without daytime consequences, and 28.6% had chronic insomnia with daytime dysfunction. Indian ethnicity, age ≥ 50 , anxiety symptoms, and depression symptoms were risk factors for chronic insomnia with daytime dysfunction.14 Taylor et al¹⁵ demonstrated that people with chronic insomnia reported more of the following than did people without insomnia: Heart disease (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% 9.2%). VS. 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 most common sleep disorder was insomnia was, OSA, CRDs, Narcolepsy, night mares and sleep walking.

REFERENCES

- 1. Huen LL, Chan TW, Yu WM, Wing YK. Do medical students in Hong Kong have enough sleep? Sleep Biol Rhythms 2007;5:226–30.
- Zailinawati AH, Teng CL, Chung YC, Teow TL, Lee PN, Jagmohni KS. Daytime sleepiness and sleep quality among Malaysian medical students. Med J Malaysia 2009;64:108–10.
- Rodrigues RN, Viegas CA, Abreu E Silva AA, Tavares P. Daytime sleepiness and academic performance in medical students. Arq Neuropsiquiatr 2002;60:6–11.
- 4. Medeiros AL, Mendes DB, Lima PF, Araujo JF. The relationships between sleepwake cycle and academic performance in medical students. Biol Rhythm Res 2001;32:263–70.
- Ghoreishi A, Aghajani AH. Sleep quality in Zanjan university medical students. Tehran Univ Med J 2008;66:61–7.
- 6. Nojomi M, Bandi MFG, Kaffashi S. Sleep pattern in medical students and residents. Arch Iran Med 2009;12:542–9.
- Brick CA, Seely DL, Palermo TM. Association between sleep hygiene and sleep quality in medical students. Behav Sleep Med 2010;8:113–21.
- 8. Loayza HMP, Ponte TS, Carvalho CG, et al. Association between mental health screening by selfreport questionnaire and insomnia in medical students. Arq Neuropsiquiatr 2001;59:180–5.
- 9. Kessler RC, Berglund PA, Coulouvrat C, Fitzgerald T, Hajak G, Roth T, et al. Insomnia, comorbidity, and risk of injury among insured Americans: Results from the America Insomnia Survey. Sleep. 2012;35:825–34.
- Preišegolavičiūtė E, Leskauskas D, Adomaitienė V. Associations of quality of sleep with lifestyle factors and profile of studies among Lithuanian students. Medicina (Kaunas) 2010;46:482–9.
- Pace-Schott, E. F., Hutcherson, C. A., Bemporad, B., Morgan, A., Kumar, A., Hobson, J. & Stickgold, R. Failure to find executive function deficits following one night's total sleep deprivation in university students under naturalistic conditions. Behavioral Sleep Medicine. 2009; 7:136-163.
- Chokroverty, S. S. Overview of sleep and sleep disorders. Indian Journal Of Medical Research, 2010; 131:126-140.
- Park, S.C., Kim, J.M., Jun, T.Y., Lee, M.S., Kim, J.B., Jeong, S.H., Park, Y.C., 2013. Prevalence and clinical correlates of insomnia in depressive disorders: the CRESCEND Study. Psychiatry Investig. 10 (4), 373– 381.

- 14. Zailinawati AH, Mazza D, Teng CL. Prevalence of insomnia and its impact on daily function amongst Malaysian primary care patients. Asia Pac Fam Med. 2012;11:9.
- 15. Taylor DJ, Mallory LJ, Lichstein KL, Durrence HH, Riedel BW, Bush AJ. Comorbidity of chronic insomnia with medical problems. Sleep. 2007;30:213–8.