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Original Research Article

Prevalence of insomnia and sleep pattern among MBBS students of Stanley Medical College, Chennai

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ABSTRACT

Background: Having a healthy behavior and physiology is impossible without normal sleep pattern. Between the ages 18 and 25, people are prone to sleep disturbances. College life, which mostly occurs during this ages also affects the sleep pattern.
Methods: This is a descriptive cross sectional study conducted among MBBS students of Stanley Medical College during august to September 2009. About 300 students were randomly selected using table of random numbers. Data was collected using a questionnaire and entered in SPSS version 16 software. Analysis was done using chi-square test. P value of less than 0.05 was taken as statistically significant.
Results: Prevalence of insomnia is found to be 37% and is significantly higher among males. Disturbed sleep is higher among males.
Conclusions: Prevalence of insomnia is 37% and is significantly higher among males. About 26.3% of the participants had disturbed sleep.

Keywords: Insomnia, MBBS students, Prevalence, Disturbed sleep

INTRODUCTION

Having a healthy behavior and physiology is impossible without normal sleep pattern. Between the ages 18 and 25, people are prone to sleep disturbances.[1,2] College life, which mostly occurs during this ages also affects the sleep pattern.[2]

Social and physical changes, entering adult life and having to make various choices that affect the rest of their lives are several risk factors that affect sleep pattern.[3] Students have developed the habit of sleeping late and less in order to satisfy the needs of academics.[4] Sleep deprivation and symptoms related to sleep disorders have not only been ignored but also inadequately understood.[5] Even a small reduction in the amount of sleep, especially when accompanied with a varying sleep schedule, may cause fatigue.[6]

When college life starts, the students face lot of challenges like new schedules and environment, social obligations as well as academic stress.[7] The stress of adjusting to the changes in city, environment, food etc., may be reason for this in addition to missing of their homely atmosphere especially for hostellers according to a pilot study assessing quality of life, sleepiness and mood disorder among first year undergraduates.[8]

Good quality of sleep is essential for keeping the mind and body refreshed to do every work with full pack of energy. If their duration of good quality of sleep is increased or if they have a sound sleep, they would get up

refreshed from bed, feel fresh throughout the day, during their class hours and study hours, increased span of concentration, thus increasing their overall quality of work. This study was conducted with the following objectives:

- To determine the prevalence of insomnia and sleep pattern among MBBS students of Stanley Medical College.
- To determine the association insomnia and sleep pattern with gender.

METHODS

This is a descriptive cross sectional study conducted among MBBS students of Stanley Medical College during august to September 2009. About 300 students were selected by convenient sampling.

Inclusion criteria

Inclusion criteria were all the MBBS students of Stanley Medical College.

Exclusion criteria

Exclusion criteria were those students who could not be contacted after trying for two times.

Operational definition for insomnia

Qualitative criteria

A questionnaire assessing the quality of sleep with questions like (like difficulty in falling asleep, difficulty in staying asleep, day time sleepiness, reduced quality of work and studies, diminished concentration, etc.) with a scoring system and who score ≥8.

Quantitative criteria

Severity of sleep onset latency or wake time after sleep onset of: (a) ≥31 min; (b) occurring ≥3 nights a week; (c) for ≥6 months.

For categorization as short sleepers

≥ 9 hours per night.

Ethical issues

Before starting the study, the approval was sought from Institutional Ethical Committee. Then, started the study in the month of September and prepared a questionnaire in two weeks time.

Study tool

Questionnaire on duration and quality or sleep (like difficulty in falling asleep, difficulty in staying asleep, day time sleepiness, reduced quality of work and studies, diminished concentration, etc.), if disturbance in sleep, its cause, with basic personal details.

- The questionnaire consists of a bunch of questions on personal details like name, age, sex, place of dwelling, number of members in family and family income.
- Then the questionnaire consists of a set questions assessing the quality of sleep and basic details, as to assess the cause of insomnia.
- The most important part of the questionnaire is the scoring system, which is the insomnia severity indeed test (qualitative criteria for insomnia – score ≥8).[2]
- Then a question about the severity of sleep onset latency was also included enquiring how long they stay awake after going to bed and how many days in a week, if they do so and since how many months does this problem persist.[5,28]
- The questionnaire also contains questions about their duration of sleep and sleep timings, as to know the current sleeping patterns of the students.

Process of data collection

After that, 300 copies of the questionnaire and consent form were made. Each one questionnaire and consent form were made. Each one questionnaire and consent form were individually given by me to every student in the sample population. The terms used in the questionnaire was explained and made clear by me to everyone.

Data were entered and analysed in SPSS version 46. Description statistics like percentages were used. Analysis was done using chi-square test. P value of ≥ 0.05 was taken as statistically significant.

RESULTS

Figure 1 shows that out of the 300 students, 111 of them had insomnia constituting a total of 37%.

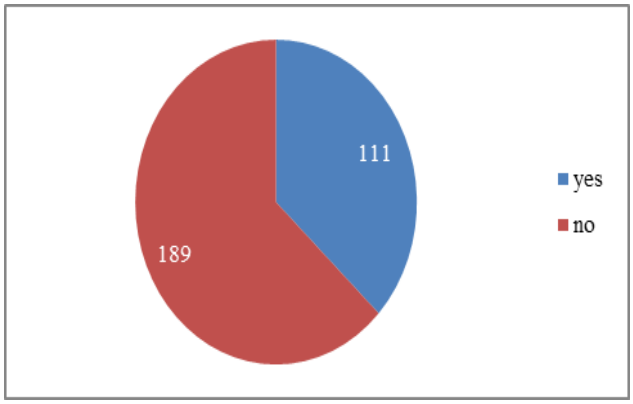

Fig 1: Prevalence of insomnia.

Table 1: Distribution of insomnia by gender.

	Male	Female	Total	P value
+insomnia cases	68	43	111	0.00
-insomnia cases	73	116	189	

Table 1 shows that insomnia prevalence is higher among males and is statistically significant.

Out of the total 300 samples, 278 of them slept for ≥9 hours a day, but only 22 of them had a sleep for >9 hours a day.

Out of the total 300 sample cases, 79 of them turned out to have had disturbed/disrupted sleep, while the remaining 221 of them were sleeping normally.

Table 2: Distribution of male and female having disturbed/disrupted sleep

	Male	Female	Total	P value
Distrubed/ disrupted + cases	38	41	79	0.05
Disturbted/ disrupted - cases	103	118	221	

Table 2 shows that prevalence of disturbed sleep is higher among males but is not statistically significant.

Out of the total 300 sample students, 76 of them turned out to be positive for the criteria, while the remaining 224 were normal.

Table 3: Distribution of male and having quantitatively positive insomnia.

	Male	Female	Total	P value
Quantitative + cases	29	47	76	0.08
Quantitative – cases	112	112	224	

Table 3 shows that quantitative insomnia prevalence is higher among males but is not statistically significant.

DISCUSSION

Prevalence of insomnia is 37%. This is slightly higher than a previous study done in India at a health university, Ahmednagar, Maharashtra by Syed and Mishra, where it was found to be 31%.[9] Among the studies carried out in foreign countries, 22% of Estonian medical students and 28.1% of Brazilian medical students were suffering from sleep disorder.[10,11] The results of the current study revealed that males as compared to females had more frequency of sleep disorder, which was in contrast with those observed by Buboltz et al in the USA and Canellas et al in Mallorca, reporting that the prevalence of sleep disorder was more common among females.[12,13] Cause of insomnia various among students, of which the common are new environment, change in place of dwelling, life style modification, late night studies, Stress and Work load.

CONCLUSION

Prevalence of insomnia is 37% and is significantly higher among males. About 26.3% of the participants had disturbed sleep. About 25.3% of the participants had insomnia according to quantitative criteria. This study showed that sleep disorder is more prevalent among medical students, the causes of which have to be studied further.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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