Depression and Insomnia among Medical Students in Bengaluru, India

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ABSTRACT

Introduction: Medical education involves rigorous training and study throughout the course of 5-6 years. Stress during this period can cause depression among the students. Depression can cause either insomnia or hypersomnia. In the view of this, a study was conducted with the following objectives: (1) Assessment of depression among medical students, (2) assessment of insomnia among medical students, and (3) association of insomnia and depression among medical students.

Methods: A cross-sectional study was undertaken among 160 medical students. Data collection was done by a predesigned, prestructured, and pretested questionnaire. Depression was assessed using the Automatic thought’s questionnaire and insomnia using Athens insomnia scale. Statistical analysis was done using SPSS Version 21. Data were analyzed using descriptive statistics.

Results: The average age of students was 20 ± 1.7 years. More than half, i.e. 53.8% students had depression score above 55 and 24.4% had score of 49, higher the score chances of depression are high. Depression was found to be more among females (62.5%) as compared to males (45%). The overall prevalence of insomnia was 39.4%. The prevalence of insomnia was almost equal among males and females. Statistically significant association was found between depression and insomnia.

Conclusion: Depression and insomnia were found in high percentages among the medical students. Mentoring programs should be planned for helping students in adjusting to the environment.

Key words: Depression, Insomnia, Medical education, Medical school, Medical students, Questionnaire

INTRODUCTION

Medical education involves rigorous training and study throughout the course of 5-6 years.¹ Due to which, there is psychological stress on the under-graduate students.² Stress during this period can also cause problems like compromising patient care in future.³ Depression among medical students can lead to dropouts from medical school, working ability can be affected, burnout, suicidal tendencies can increase.⁴ Depression can cause either insomnia or hypersomnia. Insomnia among students leads to sleepiness in the daytime and academic performance is also deteriorated.⁵ In the view of this, a study was conducted with the following objectives: (1) Assessment of depression among medical students, (2) assessment of insomnia among medical students, and (3) association of insomnia and depression among medical students.

METHODS

A cross-sectional study was undertaken among 160 medical students. Students from 1st year to 4th year (40 students from each batch) were randomly selected. The study was conducted in the month of September 2015.

Approval was obtained from the College Ethical Committee. Informed consent was obtained from students before the study. The students were explained the purpose of the study and were assured about the confidentiality and anonymity of the information so obtained. Those who were willing to participate and were present during the period of study were included.

Data collection was done by a predesigned, prestructured, and pretested questionnaire. The questionnaire included questions on sociodemographic profile, namely, age, sex, professional year, questions to assess insomnia and depression. Depression was assessed using the Automatic...
thought’s questionnaire and insomnia using Athens insomnia scale.6-10

Data were recorded on a predesigned proforma and were entered in Microsoft Excel. Statistical analysis was done using SPSS version 21. Data were analyzed using descriptive statistics. Fisher’s exact test was employed to find out the association between depression and insomnia measurements. A P < 0.05 was considered statistically significant.

RESULTS

This study included 160 medical students from 1st to 4th year. An equal number of males and females (40 each) were taken from each year. The average age of students was 20 ± 1.7 years. More than half, i.e., 53.8% students had depression score above 55 and 24.4% had score of 49, higher the score chances of depression are high as shown in Table 1. Depression was found to be more among females (62.5%) as compared to males (45%).

Depression score was found to be highest among 2nd year students (67.5%), followed by the 4th year students (60%) and was least among the 3rd year students (32.5%).

The overall prevalence of insomnia was 39.4%. Insomnia was more prevalent among final year students 52.5% followed by 40% among 2nd year students as shown in Table 2. The prevalence of insomnia was almost equal among males and females.

Statistically significant association was found between depression and insomnia. Out of the 63 students who had insomnia, 77.8% had depression score of >55. Whereas out of 97 students who had no insomnia, only 38.1% had depression score of >55 as shown in Table 3.

DISCUSSION

In this study, 78.2% students had depression score more than 49. In a study done in Sweden depression was 12.9%. It was more among females as compared to males, in the present study similar findings were seen.11 Among the Korean medical students, the prevalence of depression at the time of the study was 2.9%, and femtxales had more depression than males.12 In a study done by Basnet et al., among Nepali medical students, the overall prevalence of depression was 29.8%.13 Among the medical students of Karachi prevalence of depression and anxiety was 46.1%.4 In a study done by Iqbal et al., the percentage of depression among under-graduate medical students was 51.3%, and it was more among 2nd year than 1st year students, which corroborates with the present study.2 In a study done in Alexandria depression was 57.9% and was highest among females.14 Insomnia was prevalent in 39.4% medical students in the present study. In a study by Joshi et al., 5% students suffered from clinical insomnia.8 The prevalence of insomnia among Delhi medical students was 30.3%, and insomnia was more prevalent among males than females, whereas in our study the prevalence was same in both sexes.15 The association among insomnia and depression was found to be significant in the present study. Out of the 63 students who had insomnia 49 students (77.8%) had depression score more than 55. Medical students suffering from depression do not share their emotional problems and are reluctant to take treatment. Teachers can play an important role in identifying depression among medical students. The medical curriculum can be reformed to reduce stress among the medical students.

Limitations of the study were that socioeconomic status, substance abuse, exercise pattern, and residence of students were not recorded in the study.

CONCLUSION

Depression and insomnia were found in high percentages among the medical students. Vast medical curriculum, difficulty in coping with the environment could be the causes for depression as well as insomnia. The medical curriculum should be changed accordingly to reduce stress on the students. Mentoring programs should be planned for helping students in adjusting to the environment.

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REFERENCES

3. Tyssen R, Vaglum P, Granvold NT, Ekeberg O. Factors in medical school

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Table 1: Depression score among medical students

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<tr>
<th>Year of study</th>
<th>Depression score, n (%)</th>
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<td>Score 38</td>
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<tr>
<td>1st</td>
<td>4 (10)</td>
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<td>1 (2.5)</td>
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<tr>
<td>3rd</td>
<td>3 (7.5)</td>
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<tr>
<td>4th</td>
<td>5 (12.5)</td>
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<td>Total</td>
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Table 2: Insomnia among medical students

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</tr>
<tr>
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<td>14 (35)</td>
</tr>
<tr>
<td>2nd</td>
<td>16 (40)</td>
</tr>
<tr>
<td>3rd</td>
<td>12 (30)</td>
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<tr>
<td>4th</td>
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<tr>
<td>Total</td>
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Table 3: Association between depression and insomnia

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<tbody>
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<td></td>
<td>Score 38</td>
</tr>
<tr>
<td>Yes</td>
<td>1 (1.6)</td>
</tr>
<tr>
<td>No</td>
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