

Association between Sleep quality and Depression among Medical students

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ABSTRACT

This analytical cross-sectional study was conducted with an objective to determine the association between sleep quality and depression among university medical students from 1st December 2016 to 30th May 2017. A data of 234 students was collected from both genders between 19-30 years while students who had the habit of late night awakening, antidepressants were excluded from the study. Sleep quality was measured by Pittsburgh Sleep Quality Index scale and depression was measured by Beck Depression Inventory scale. The results shows that a mean age were 21.36 year (age ranges 18 - 26 years) and majority (76.9%) were male. Among them 47% had poor sleep quality having normal level of depression, 40% mild level, 25% borderline level of depression, 37% moderate level and 21% severe level of depression and 19% students with normal sleep quality and depression. There were 11% students with normal sleep quality but had moderate level of depression. These results shows poor sleep quality in medical students but no significant ($p=0.429$) association with depression.

Keywords: Medical students, University, Sleep quality, Association, Depression, Pittsburgh Sleep Quality Index, Beck Depression Inventory

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INTRODUCTION

Depression is the feeling of sadness or lack of interest in anything which plays a significant role on person's ability to do functional activities¹. Insomnia may be a risk factor for the development of depression among medical students². It is the most common form of sleep disruption, which includes the difficulty in maintaining sleep^{3,4}. The development of depression due to poor sleep quality among medical students is alarming. Due to social life and tough academic demands the pattern of sleep-wake cycle affects the healthy students and it may lead to the development of depression⁵. It is showed from various researches that medical study lead to the development

of different kind of bad habits such as alcohol and drug abuse. There are some other traumatic factors such as death, dissecting bodies and pathological processes that may lead to the development of depression⁶. Because there is a close relationship between sleep quality and health of a person, this study concludes the association between sleep quality and depression in healthy medical students. The reason of this associational study of sleep quality and depression is because depression is the major risk factor due to poor sleep quality, depression is the common cause for increase rate of death and disability in general population. Various studies have been done on sleep quality and depression among medical students in different regions of Pakistan but there was no study conducted on association between sleep quality and depression among medical students in Lahore. We conducted this study with an objective to determine the association between sleep quality and depression among the university medical students.

METHODOLOGY

This analytical cross-sectional study was done with a sample size of 234 students through convenient sampling technique. Duration of the study was 6 months from 1st December 2016 to 30th May 2017. Both male and female students, ages between 18-30 years were included in the study while Students who had financial issues, habit of late night awakening, sedative medications, use antidepressants and recent death in family were excluded.

Data was collected after informed consent and complete explanation of information and criteria for solving

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questionnaire. Pittsburgh Sleep Quality Index Scale was used for sleep quality and Beck Depression Inventory Scale was used for depression. The data was collected after an informed consent from students. The data was analyzed through IBM SPSS 21. The Pearson chi-square was used to determine the association between sleep quality and depression.

RESULTS

Among total of 234 students, the mean age was 21.36 year and S.D of 1.87 ranges between 18 and 26 years. Majority 180(76.9%) of the students were male while 54(23.1%) were female. Out of 234 respondents, 47% had poor sleep quality having normal level of depression, 40% mild level, 25% level of depression, 37% moderate level and 21% severe level of depression and 19% students with normal sleep quality and depression. There were 11% students with normal Sleep quality but had moderate level of depression. These results shows poor sleep quality in medical students but no significant ($p=0.429$) association with depression (Table-I)

Table-I: Association between Sleep Quality and Depression (N=234)

| ASSOCIATION | | DEPRESSION | | | | | | | p-Value |
|---------------|----|------------|------|-------|-------|-------|-------|-----|---------|
| | | 0 | 1-10 | 11-16 | 17-20 | 21-30 | 31-40 | >40 | |
| SLEEP QUALITY | >5 | 7 | 47 | 40 | 25 | 37 | 21 | 1 | 0.429 |
| | <5 | 5 | 19 | 9 | 9 | 11 | 3 | 0 | |

DISCUSSION

The study conducted by Sharif et al⁷ indicated that academic stress plays a significant role in developing depression and poor sleep quality in medical students. The study found that due to higher rate of developing depressive symptoms and anxiety, students must need psychiatric treatment to get out of this. They have poor sleep quality due to academic overload. Maintaining the quality of health and scheduled academic course would help to improve the sleep quality among medical students. Study having poor sleep quality alone cannot produce the depressive symptoms; some other factors must contribute to produce depression. Another study indicated that year of study and academic performance have an association with the prevalence of depression and students need help to overcome the symptoms of depression. They found that production of depressive symptoms in medical students is high. Steps should be taken to decrease the depression among medical students⁸. Brik et al observed that majority of the students reported poor sleep quality. It can be improved by improving sleep hygiene educational programs. The study suggested that age and class year have not an interaction with poor sleep. possibilities might be there the last year students learns to deal with sleep hygiene⁹. Another study by Jeong et al¹⁰ found that poor sleep quality, malnutrition, and poor health status may be the symptoms of depression in medical students. Depression could be consider as a predictor to develop due to poor sleep quality. Students fail to engage in social and extra-curricular activities and

developing personal relationships which results in higher rates of depression than other individuals. The study also revealed that individual with satisfactory marital status lowers the risk of developing psychological problem. Knowing that poor psychological and physical health at its peak, social support help them in maintaining their overall health. The study conducted by Baldassin and colleagues¹¹ analyzed the characteristics of depression during medical education and training in medical students. 34% students reported depressive symptoms also the trainers develop depressive symptoms more than in students. the prevalence of depression among medical trainers are at higher rates than medical students, there are many other factors that disturbs their sleep quality in medical students¹¹. The results are same as in our study that poor sleep quality cannot lead to develop depression as primary cause.

In our study most of the students with poor sleep quality have normal level of depression. 47% with poor sleep quality having normal level of depression, 40% have mild level, 25% have borderline level of depression, 37% at moderate level, 21% have severe level of depression. 19% students with normal sleep quality and depression. There were 11% students with normal sleep quality but have moderate level of depression. These results shows poor sleep quality in medical students but no significant association with depression. Other factors may be contribute of developing the depressive symptoms and collectively affect their sleep quality. More studies must be needed because of the lack of interest of some medical students.

CONCLUSION

Majority of students had poor sleep quality in medical students with insignificant association with depression.

AUTHOR'S CONTRIBUTION

Tanveer F: Conceived idea, Designed research methodology, Critical revision and Final approval of manuscript.

Shahid S: Data collection, Statistical analysis

Hafeez MM: Data analysis, Data interpretation

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