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EFFECT OF EXAMINATION STRESS ON SLEEP QUALITY IN MEDICAL STUDENTS

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ABSTRACT

Introduction: Academic examinations stress is known to compromise sleep quality in medical students. Studying the relation between sleep quality and examinations stress can be useful in implementing an organized mental health program in medical colleges. The main objective is to study the effect of examinations stress on sleep quality in young adult medical students.

Methods: A cross sectional study to recognize the effect of examinations stress on sleep quality among 100 medical students in 1st and 2nd year of MBBS. The instruments used for data collection were a self-report Pittsburg Sleep Quality Index (PSQI) and the Epworth Sleepiness Scale (ESS), Data collection was performed at both times during and without examination.

Results: The readings of PSQI and ESS (during and without examinations) were analyzed by the Wilcoxon signed ring test and the result shows that there is a decrease in sleep quality during the exams ($p<.001$) i.e., highly significant and daytime sleepiness increases during exams($p<.05$) i.e., significant.

Statistical Analysis: Wilcoxon signed ring test was applied for statistical analysis of data where P valve <0.05 considered as statistically significant and <.001 considered as highly significant.

Conclusions: Our study concluded that, a considerable proportion of medical students are affected by poor sleep quality during examinations. Sleep disruption acts as a barrier to students' performance in clinical practices and academic performances. So, it is important to implement health promotion and educational programs for them.

KEYWORDS – *PSQI, ESS, Examination, Stress, Sleep*

INTRODUCTION

Adequate sleep is imperative for mental and physical well-being and it has been found that chronic sleep deprivation is associated with diminished cognitive & behavioral functioning.[1] There is rising evidence of risk factors and symptoms of several sleep disorders among college students.[2] Medical students are infamous for being under particularly high levels of stress, thus, requiring adequate sleep to accomplish their goals.[3] There is high occurrence of symptoms and an elevated risk of several sleep disorders among medical students.[4] Sleeping is a natural repetitive state of rest for the mind and body which is vital to life.[5] It is a chief component of normal human physiology as it provides a restorative homeostatic function and is crucial for standard thermoregulation and energy conservation.[6] Multiple studies have analyzed the harmful effects of sleep deficiency on medical versus non-medical students.[7,8] 'Sleep deprivation' is the condition of not having enough sleep; it can be either chronic sleep deprivation or acute sleep deprivation. An average adult needs about 7 - 9 hours of sleep each night, teenagers need 9.5 hours of sleep and infants need 16 hours of sleep per day.[9] Medical students are particularly vulnerable to poor sleep, which may partially be attributed to their extensive study years, extreme academic load, tiring clinical duties, emotionally challenging situations, and highly demanding routine.[10] According to a study conducted on 305 medical students, poor sleep quality was present in 30% students, excessive daytime sleepiness in 40% students, and insomnia symptoms in 33% of students.[11] Other studies report a significant emotional exhaustion and significant reduction in sleep quality in the majority of the participants [12, 13]. The mounting level of stress on students, as well as the frantic schedule of interns and residents working at the hospital is affecting their health and life style. Numerous studies have showed the harmful effects of sleep deprivation on medical house staff in various medical as well as surgical branches.[14-17] During Covid-19 home quarantine, individuals experienced psychosocial and emotional disorders with a tendency towards an unhealthy lifestyle.[18] Medical students are a subgroup of the population who are susceptible to poor sleep quality which may be due to greater academic pressure, longer study hours, frequent examinations, anxiety associated with their studies and results and irregular work schedule.[19,20] Sleep duration and the timing of sleep also influence cognitive performance. Sleep timing depends on both the length of prior wakefulness and on the control of the circadian clock.

A myriad of studies have been conducted on the subject matter in various medical colleges, different states, even different countries, but, no such study has been conducted in SMS Medical College Jaipur. Thus, the objective is to study the effect of examinations stress on sleep quality in young adult medical students.

MATERIAL AND METHOD

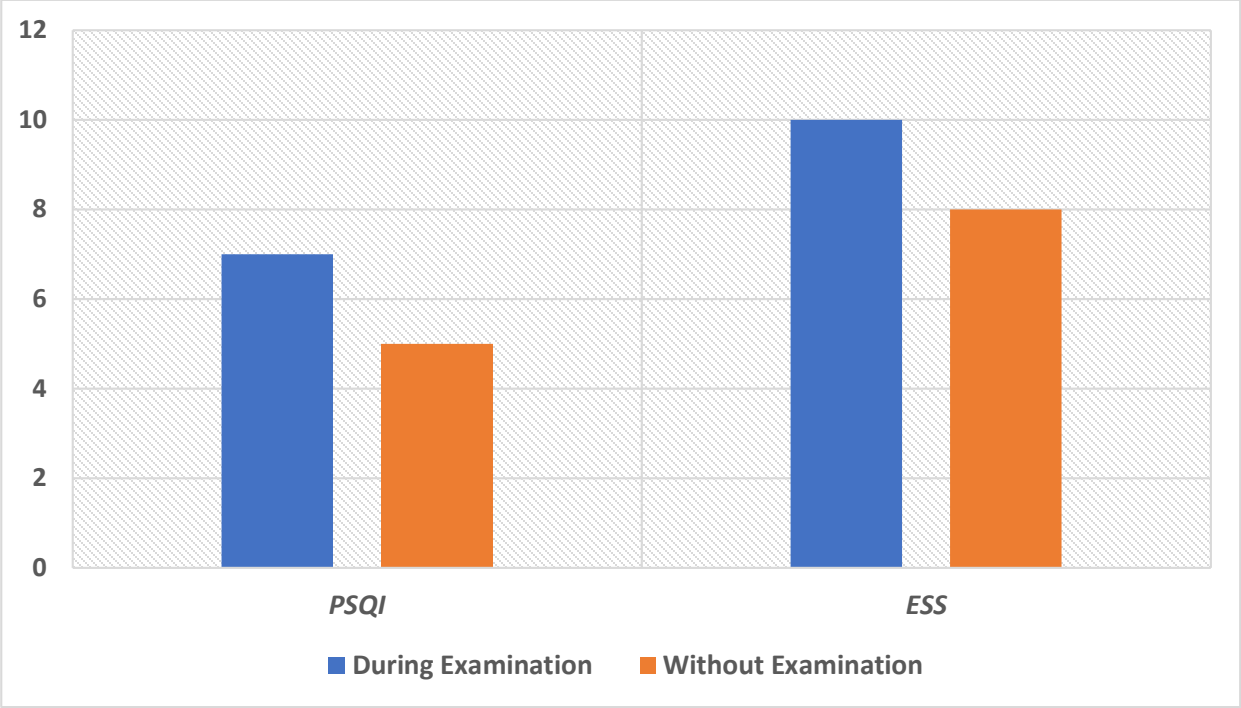
A cross sectional study was conducted at SMS Medical College & Attached Hospitals, Jaipur to recognize the effect of examinations stress on sleep quality among 100 medical students in 1st and 2nd year of MBBS. The instruments used for data collection were a self-report Pittsburg Sleep Quality Index (PSQI) and the Epworth Sleepiness Scale (ESS), Data collection was performed at both times during and without examination.

STATISTICAL ANALYSIS - Wilcoxon signed ring test was applied for statistical analysis of data where P valve <0.05 considered as statistically significant and <.001 considered as highly significant.

RESULTS & DISCUSSION

The readings of PSQI (Pittsburg Sleep Quality Index) and ESS (Epworth Sleepiness Scale) were analyzed both during and without examinations by the Wilcoxon signed ring test. The result shows that there is a decrease in sleep quality during the exams ($p < 0.001$) i.e., highly significant and daytime sleepiness increases during examination ($p < 0.05$) i.e., significant.

	During Examination	**Without Examination**	**p value**	**Significance**
PSQI	7.93 ± 2.93	4.36 ± 2.72	0.0004	Highly Significant
ESS	10.66 ± 2.71	7.73 ± 5.03	0.03	Significant



CONCLUSION

Our study concluded that, a considerable proportion of medical students are affected by poor sleep quality during examinations. Sleep disruption acts as a barrier to students' performance in clinical practices and academic performances. So, it is important to implement health promotion and educational programs for them.

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CONFLICT OF INTEREST: No conflict of Interest.

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