



## Sleep Hygiene and Quality among Medical Students

Busha Arsalan<sup>1</sup> :bushraarsalan786@gmail.com( Corresponding author)

Farah Ahmed<sup>2</sup>

Pakistan

### **ABSTRACT:**

**Objective:** *To assess the sleep hygiene and quality of sleep among the medical college students in a university located in Karachi.*

**Methods:** *This is a cross sectional study based on a self-made questionnaire carried out among medical students located in Karachi, a dense city of Pakistan from 1<sup>st</sup> January 2015 to 30<sup>th</sup> August 2015. A convenience sample of medical students underwent two validated self-administered questionnaires i.e. Pittsburgh Sleep Quality and Index and Sleep Hygiene Index. The data was then entered and analysed in SPSS 16.*

### **Results:**

*Our study showed statistically no significant difference in sleep quality of male and female i.e. male (63.4%) and females (59.9%) had poor sleep quality.*

### **Conclusion:**

*Our study shows that most of the students had poor quality of sleep in spite of having moderate sleep practice.*

### **INTRODUCTION:**

Many studies have reported sleep habits among medical students [1]. There are many factors that are likely to affect sleep quality. However long study hours, exam stress has found to be imposing more worsen affect on student's lifestyle severely, these are more specific to medical students [2]. Sleep quality among medical students cannot be denied or shouldn't be ignored due to its correlation with stress levels and ominous impact on patient care [3].

Sleep hygiene is a behavioral and environmental practice that is intended to promote better quality quantity and quality of one's sleep [4]. Good quality sleep hygiene can overcome the inadequateness of the sleep [2, 5].

In previous studies, poor sleep hygiene has been reported to impact thinking and freshness among young doctors [6] while other studies have shown better patient satisfaction among good sleep hygiene doctors [7,8].

### **MATERIAL AND METHODS:**

*We included both male and female medical students after taking verbal consent. The participants filled the structured questionnaire by themselves. The sample size was calculated to be 405 taking the figures from a local study at the confidence interval of 95% at figure 3 as margin of error [6].The questionnaire comprising of basic demographic details and two scales SHI and PSQI were administered. SHI was used to assess the practice of sleep hygiene by participants .It is a 13 itemed self-report scale.*

Each item is rated on 5 point scale from 1(never) to 5 (always). Total score ranges from

1 to 65, with higher score showing poor sleep hygiene behaviour. Researchers have demonstrated the reliability and validity of scale [9]. PSQI was used to assess the quality of sleep of the participants. It is a self rated index it is widely used and internationally recognized to evaluate sleep disturbance during last one month. It consists of nineteen total items making seven components subjective sleep quality, sleep duration, sleep latency, habitual sleep efficiency, daytime dysfunction, use of medications, sleep disturbances. Global PSQI score ranges from 0-21. A score of >5 shows that the subject has severe difficulty in at least 2 areas/moderate difficulty in >3 areas. It's a reliability coefficient (Cronbach's alpha) of 0.83. Its validity is demonstrated by many researchers[10]

## **RESULTS:**

Among 405 participants 33.33% were male and 66.67% were female. The mean age of participants was 20 (+/-1.766), in our study. Overall, 65.3% of participants were classified as poor sleepers, having a global PSQI score of >5 and 34.7% were good sleepers, with PSQI score of 0-5. SHI of most 290 students was found to be moderate 64.8%, 64 had 18.9% students had SHI score showing good practices, 51 had 15.5% showed inadequate sleep hygiene practices. In relationship of SHI & PSQI those who had inadequate sleep hygiene practice, had also poor sleep quality at a p value of 0.00 which is significant. Our study showed that students who had poor sleep quality, most of them were falling in the moderate practice of sleep hygiene group. While students who were falling in the group of

inadequate sleep practices were more having poor quality of at a significance of 0.002 then good quality. In comparison, adequate practice of sleep hygiene did not result in significant increase in good quality of sleep then poor quality.

## **DISCUSSION:**

The current study investigated sleep hygiene practice, sleep quality and their relation using. Sleep disturbance commonly results in psychological problems resulting from effects on emotional state and behaviour, cognitive function and performance [11]. In the present study most of the participants had moderate sleep hygiene practice as compared to the adequate sleep hygiene practice of medical students from a university located in United States [12].

In the following study, quality of sleep was not different significantly between both genders. This is different from previous researches that showed poor sleep quality more prevalent in females.[13]

The results of the current study showed that many university students suffer from a suboptimal level of overall sleep quality. Previous studies on students claimed that poor sleep quality is associated with significant psychological distress, depression, confusion, and generally lower life satisfaction.[14] In our study, adequate practice of sleep hygiene did not result in significant increase in good quality of sleep which is inconsistent with the study of Brown FC, Buboltz WC Jr, Soper B as they reported that knowing about proper habits did not necessarily influence sleep quality, whereas practising proper habits were strongly related to a good overall sleep quality. Poor sleep hygiene practices are associated with a higher

*prevalence of insomnia and chronic difficulties in initiating or maintaining sleep.[14]*

*The majority of this medical student sample reported poor sleep quality, which is of concern to educators. It may be that adequate sleep hygiene behaviours for the general population are not enough to protect sleep in medical students. Further studies on medical students are needed, with local comparison populations and including a more comprehensive screening of individual (e.g., anxiety, depression, sleep attitudes) and school-related (e.g., academic schedule) risk factors with objective sleep outcomes. Sleep quality in medical students may be improvable through sleep hygiene education programs. [11]Our study also supports the use of sleep hygiene strategies as an intervention to improve university students' sleep practices. Therefore, sleep hygiene guidelines relating to activities that can either help or hinder sleep should be determined and listed.*

**Conclusion:**

*Our study shows that most of the students had poor quality of sleep in spite of having moderate sleep practice.*

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