

ORIGINAL ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) TOWARDS SLEEP AMONG MEDICAL STUDENTS OF INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA (IIUM)

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Abstract

Objective: To determine the knowledge, attitude and practice (KAP) of sleep among medical students of IIUM towards and to determine the impact of socio-demographic data on the knowledge, attitude and practice. **Methods:** A cross-sectional study was carried out among 106 students from first, second and third year medical students of IIUM. Verbal consent was taken from the students who were willing to take part in this study. Student knowledge about sleep was studied using a questionnaire. **Results:** A total of 106 medical students completed the survey, there were 54 female and 52 male. The mean age of the students was 20 ± 0.56 and ranged from 18 to 22 years. In terms of their sleep knowledge, the mean \pm SD knowledge, attitude and practice scores were 81.8 ± 16.8 , 65.9 ± 15.3 and 176 ± 26.3 respectively. In univariate analysis, there was a significant difference between parents' marital status regarding knowledge of the students ($p = 0.03$). There was a significant difference between gender regarding attitude of the students ($p=0.05$). In multivariate analysis, gender and smoking status were significantly affected the overall KAP. **Conclusion:** This study showed that sleep medicine knowledge was generally low among medical students. Therefore, educational strategies to improve knowledge regarding sleep-related problems and the development of proper sleep practices among medical students are needed. *ASEAN Journal of Psychiatry, Vol.11 (1): Jan – June 2010: XX XX.*

Keywords: Knowledge, Attitude, Practice, Sleep among medical students

Introduction

Sleep is an active, cyclic biological phenomenon necessary for survival [1]. Sleep and lack of sleep are common human behaviours and experiences. Sleep disorders though highly prevalent are rarely diagnosed. Disturbed sleep is a common complaint and in the United States it has been estimated to affect up to 70 million Americans [2]. Sleep problems are seen across a wide age spectrum from children to the elderly. Sleep disorders can involve a number of specialties in their management such as respiratory medicine, neurology, psychiatry and otolaryngology [3]. The prevalence of particular kinds of sleep problems may vary with age, lifestyle, shift work, co-morbid state [4]. Sleep disorders are associated with many diseases such as sleep-disordered breathing, encompasses various clinical disorders, including congenital central hypoventilation syndrome (CCHS), apnoea of infancy, sudden infant death syndrome (SIDS), obstructive sleep apnoea syndrome (OSAS), sleep-related worsening of chronic pulmonary disease, obesity-related breathing abnormalities during sleep, and many others [5,6].

This is the first study in Malaysia undertaken to determine the KAP of sleep among medical students in Malaysia and to determine the impact of socio-demographic factors on the KAP of sleep.

Methods

A cross sectional study was carried out among first, second and third year medical students IIUM. Students were explained objectives of the study and invited to

participate. Verbal consent to participate was obtained. Student responses were obtained using a questionnaire. Demographic details like gender, race, parents' marital status and residence were noted. Student knowledge about sleep was studied using a questionnaire originally developed by Sivagnanam et al (2004) [7]. The knowledge was involved 12 items and attitude had 13 items about sleep studied using a set of 25 statements. The practice of sleep was investigated using a separate set of 6 questions originally developed by (Shankar, 2008) [8].

The instrument focused on a limited set of questions pertaining to knowledge and attitude covering certain, important basic aspects of sleep physiology, pharmacology, sleep requirements, use and toxicity of hypnotics, consequences of sleep deprivation, sleep-hygiene misconceptions, and sleep practices of respondents. The responses were close-ended with 3 possibilities: "yes," "no," or "don't know." Sleep problems of respondents during the week preceding the study were noted for the Practice component. Scoring was done by awarding marks (correct response = 10, wrong = 1, don't know = 2, and not reported = 0) for each item of Knowledge and attitude. The response for items concerning practice was a frequency-based rating scale (with options, such as "not at all" = 40, "on 6-7 days" = 10, with equal gradation in-between and not reported = 0). Theoretically, maximum scores for Knowledge, attitude and Practice were 120, 130, and 240 marks, respectively, with a maximum grand total of 490. The data was analysed using t-test for univariate analysis

and multiple linear regression for multivariate analysis using SPSS version 13.0.

Results

A total of 106 medical students participated in this study. Fifty four (50.9%) were female and 52 (49.1%) were male. The mean age of the students was 20 ± 0.56 and ranged from 18 to 22 years, whereby 97 (91.5%) were Malay and 8 (7.5%) were non-Malay. The majority of the participants 103 (97.2%) reported that their parents are still married,

and two (1.9%) reported that their parent are divorced. The majority of the participants 69 (62.7%) stated that their residence was in town while 29 (26.4%) in the village. The majority of the participants are not smokers 101 (91.8%), while 5(4.5%) are smokers (Table 1). The scores were calculated according to method of Sivagnanam et al (2004)[7]. The mean \pm SD knowledge scores was 81.8 ± 16.8 , the mean \pm SD attitude scores was 65.9 ± 15.3 and the mean \pm SD practice score was 176 ± 26.3 .

Table 1: Socio-demographic characteristics of respondents

Variable	Number (percentage %)
Gender	
Male	52 (49.1%)
Female	54 (50.9%)
Age	
< 20	12 (11.3%)
\geq 20	94 (88.7%)
Race	
Malay	97 (91.5%)
Non-Malay	8 (7.5%)
Parental marital status	
Married	103 (97.2%)
Divorced	2 (1.9%)
Place of family residence	
Town	69 (65.1%)
Village	29 (27.4%)
Smoking	
Yes	5 (4.7%)
No	101 (95.3%)

Regarding knowledge, parents' marital status is the only variable to have an impact on the knowledge of the students using t-test ($p = 0.03$). Females had higher mean score of knowledge than male, but the difference

is not statistically significant. Age, race, place of residence and smoking did not show any significant differences in terms of knowledge (Table 2).

Table 2: Knowledge and Socio-demographic

Variable	Mean ± SD	p value
Gender		
Male	79.3 ± 18.5	0.16
Female	84.0 ± 15.1	
Age		
< 20	81.7 ± 22.0	0.98
≥ 20	81.8 ± 16.2	
Race		
Malay	81.5 ± 17.1	0.69
Non-Malay	84.0 ± 15.2	
Parental marital status		
Married	81.4 ± 16.7	0.03
Divorced	106.5 ± 6.3	
Place of family residence		
Town	82.7 ± 16.3	0.38
Village	79.3 ± 19.2	
Smoking		
Yes	84.0 ± 25.4	0.79
No	81.7 ± 16.6	

Regarding attitude, gender is the only variable that has an impact on the attitude of the students using t-test ($p = 0.05$). Age,

race, parents' marital status, place of residence and smoking did not show any significant differences (Table 3).

Table 3: Attitude and socio-demographic

Variable	Mean ± SD	p value
Gender		
Male	62.9 ± 16.8	0.05
Female	68.7 ± 13.3	
Age		
< 20	60.9 ± 13.6	0.23
≥ 20	66.5 ± 15.5	
Race		
Malay	65.6 ± 15.6	0.62
Non - Malay	68.5 ± 13.9	
Parental marital status		
Married	65.9 ± 15.5	0.89
Divorced	67.5 ± 10.6	
Place of family residence		
Town	65.2 ± 15.1	0.63
Village	66.8 ± 16.2	
Smoking		
Yes	67.0 ± 23.3	0.88
No	65.8 ± 15.1	

Regarding practice, there were no significant differences in scores among different groups using t-test. (Table 4). Gender, age, race,

parents' marital status, place of residence and smoking did not show any significant differences.

Table 4: Practice and socio-demographic factors

Variable	Mean ± SD	p value
Gender		
Male	178.4 ± 31.5	0.42
Female	174.2 ± 20.4	
Age		
< 20	179.1 ± 17.8	0.96
≥ 20	175.9 ± 27.3	
Race		
Malay	176 ± 26.6	0.48
Non-Malay	170 ± 26.1	
Parental marital status		
Married	175.8 ± 26.5	0.82
Divorced	180.0 ± 14.1	
Place of family residence		
Town	174.9 ± 25.2	0.32
Village	180.7 ± 28.2	
Smoking		
Yes	194.0 ± 32.8	0.12
No	175.4 ± 25.9	

Multivariate analysis using the multiple linear regression test showed that gender of the students was significantly associated with overall knowledge, attitude and practice towards sleep. Female had an average of 15.7 points higher than males ($p = 0.05$). Interestingly, smoking status of the

students significantly associated with overall knowledge, attitude and practice towards sleep. Non smokers had an average of 44.8 point higher than smokers ($p = 0.04$). This means that smoker had higher scores than non-smokers (Table 5).

Table 5: Model building for overall (KAP)

Variable	B	SE	Beta	p value
Constant	317			
Parent marital status	40.8	26.1	0.16	0.12
Reference (Male)	Ref	Ref	Ref	
Female	15.7	7.98	0.21	0.05
Reference (smokers)	Ref	Ref	Ref	Ref
Non smokers	- 44.8	21.6	0.22	0.04

F value = 2.73, $p = 0.04$, $R^2 = 0.089$.; KAP = Knowledge, Attitude and Practice

Discussion

The results of our study confirmed that sleep medicine knowledge was generally low among medical students. Similar finding

were reported by Mahendran et al (2004)[3] that knowledge among medical students was low. In Univariate analysis, there was a significant difference between parents' marital status regarding knowledge of the

students ($p = 0.03$). Those students with divorced parents had statistically significant higher level of knowledge but this could be just an accidental finding as there is no scientific explanation on this aspect. However for attitude toward sleep, gender factor was significant in which females have significantly higher level of attitude or in other words, female students have better attitude toward sleep as compared to their male counterparts.

In multivariate analysis, gender and smoking status significantly affected the overall knowledge, attitude and practice (KAP) of sleep among medical students. A previous study showed no significant gender differences regarding KAP of sleep among medical students [4]. There are a few limitations that we can draw from this cross sectional study. Firstly the sample size of the subjects participated in this study is relatively small. Furthermore the conclusion drawn from this study could not be generalized to medical students in other centres. Another limitation is the students who participated in this study were mainly in year one and two, with a small portion from year three. The low knowledge about sleep may be due to lack of exposure in the teaching curriculum as in most universities the exposure on sleep is mainly during psychiatric posting in year 4 or 5.

Recommendations

Educational strategy to improve knowledge regarding sleep related problems and to develop proper sleep practices among medical students is needed. Another suggestion is that the future studies may look at the level of knowledge among final

year medical students who have better understanding about the issue.

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