RESEARCH ARTICLE

Prevalence of quality of sleeping and its determinants among Students of Kerman Razi School of nursing and midwifery

Alimirzae R, Azzizadeh Forouzi M.*, Abazari F, Haghdoost A.
Neuroscience Research Center, Kerman University of Medical Sciences, Kerman, Iran
Corresponding Author Email: **forozy@gmail.com**

ABSTRACT:
Introduction and aims: Academic students are susceptible to a variety of sleep disorders, which can result in sleep deprivation. There is little information about these problems in these populations. The current study measures the situation of the quality of sleeping and its determinants.
Method : In this descriptive analytic study, 349 students of nursing and midwifry participated in this study study, quality of sleeping and its determinants in students of Razi school of Nursing and Midwifery was examined Using Pittsburgh Sleep Quality Index (PSQI), for data collection.
Results: 74/9% of participants were females 75.1% were single and 62/8% living in dorm. Most of the participants (71%) reported poor sleep quality. Multivariate regression models showed hurmful associations among listening to music before sleelp with the quality of sleeping (P <0/05).
Conclusions: These results demonstrated a high prevalance of poor quality of sleeping in students of nursing and midwifery. It seems that implementation of strategies for development of appropriate sleep hygiene and encouraging researches to obtain effective treatments for sleep disturbances could be useful in preventing problems related to poor quality of sleeping.

KEY WORDS: Sleep quality, Determinants, college students.

1. INTRODUCTION:

Academic students are susceptible to a variety of sleep disorders, which can result in sleep deprivation and a variety of other consequences [1]. Sleep disorders include disturbances in regulation, quantity and quality of sleep, that lead to imperfect daily function of the individuals. American Psychiatric Association has defined four categories for sleep disorders that include: 1) Difficulty in starting and maintaining sleep, and early awakening, 2) excessive sleepiness, 3) disturbances in sleep and waking schedule, 4) sleep disorders known as parasomnia [2].

Sleep quality includes quantitative aspects of sleep, such as duration, latency, and number of arousals, as well as more purely subjective aspects, such as ''depth'' or ''restfulness'' [3]. Physical and cognitive symptoms of poor sleep quality include tiredness, loss of concentration, low pain threshold, anxiety, nervousness, irrational thoughts, hallucinations, loss of appetite, constipation, and being accident-prone. Sleep problems are a serious public concern because they affect quality of life [3] and well-being [4].

Poor sleep quality is very common in the general population, particularly in young people [5]. Other studies reported that the prevalence of poor sleep quality in the community has been reported to be 26–35% [2, 6, 7]. But recently Lund et al found that 60% of college students reported poor sleep quality [8]. In (2000), Hicks and Pellegrini reported that 68.3% of college students had sleep problems, which is a severe increase when compared with 26.7% found in 1982 [9]. Poor sleep quality was reported in Iranian academic students about 77.1% by Arasteh

(2008) [10]. The consequences of sleep deprivation during academic education are profound, including decreased cognitive performance (i.e., memory consolidation and recall) reduced life fulfillment , increased mood problems, increased physical complaints [11, 12]. Ka-Fai Chung (2011) asserted that students need to be more aware of the consequences of insufficient sleep and poor sleep quality, which have been found to be associated with poor academic achievement and health[13]. Huang (2010) have also indicated that chronic sleep shortage may increase daytime sleepiness, inattention, accidents, and mood and behavioral problems[14]. Olutayo (2007) reported that, a majority of university students are in late adolescence and early adulthood, and, because of the stresses of education and the academic workload, their sleep patterns and related problems could differ from non-students in the same ages [15]. Sleep deprivation is also associated with frequent lapses of attention and increased reaction time, leading to increased error rates on performance tasks [16, 17].

According to Mindell et al (1999) lack of adequate sleep can lead to chronic patterns of sleep deprivation and attempts at ''catch-up sleep'', leading to increased variability in sleep patterns. Studies have found that college students seem to be chronically sleep deprived reporting an average 7–7.5 hours of sleep per night, which is 1–1.5 hour less than their self-reported ideal of 8.5 hours per night . poor sleep may lead to adverse social, psychological, and public health consequences [18], including suicide [19], driving accidents , high risk behaviors [20], increased pain, reports of poor overall health [21, 22] inefficient academic performance [23, 24] and work. In addition to biological variables (e.g., circadian timing) [25] and genetic factors [26, 27]. Demographic and health-related variables may affect sleep duration and night to night variability[26] in addition to the college transition presents many challenges (e.g., reduced , new social opportunities, difficult studies), which can lead to irregular sleep schedules and sleep deprivation[28].

The quality of sleep and its determinants among kermanian nursing and midwifery students is unknown, so researchers tried to examine quality of sleeping as well as its predictors in this students. Identifying such information would enable us to implement effective interventions and to provide backgrounds and facilities for future researches.

2. METHODS:
2.1 Instruments
2.1.1 Demographic information
First, a questionnaire was developed to obtain demographic information assumed to affect the sleep quality. It included questions about Gender, age, marriage status, listening to music and so forth.

2.1.2. Pittsburgh Sleep Quality Index
The Pittsburg Sleep Quality Index (PSQI; Buysse et al.,1989) was chosen for evaluating sleep quality which consists of 19self-rated questions (seven components:

including sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medications and daytime dysfunction) related to normal sleep habits. The possible range of scores was 0–21 points and lower scores indicate better sleep quality. Each of the seven components are weighted equally on a 0-3 scale [0= Not during the past month; 1= Less than once a week; 2= Once or twice a week; 3= Three or more times a week] and the scores are summed to yield a global score between 0-21 [3].

2.1.3. Validity and reliability of instruments
In earlier studies in Iran validity and reliability of questionnaire has been evaluated by Farrahi et al (2009) they assessed its content validity and calculated alpha coefficients of internal consistency equal to 0.88 [29].

2.2. Data collection process
In this study, all students of Kerman Razi School of Nursing and Midwifery were invited to participate in the study . After obtaining informed consent, questionnaires were applied to a sample. The Questionnaires were distributed among the students in their classroom by the investigators. The investigators were available to answer the students' questions regarding the study and questionnaires; however, the students completed the questionnaires on their own and 349 questionnaires were completed. The questionnaires were presented in Persian, the mother tongue of the students (available on request from the corresponding author). study was carried out between November and January , 2011 -12 . The ethics committee of Kerman Medical University Vice Chancellor for Research approved the study protocol.

2.3. Statistical analysis:
Frequency of poor sleep quality and its association with other risk factors such as gender, age, educational and academic level, residency situation and behavioral characteristics was examines using chi2 test. Binary logistic regression models were applied to demonstrate crude and adjusted odds ratio among poor quality and other risk factors by taking account the effects of potential confounders such as : Residency , living in dormitory and listening to music . All the analyses performed using SPSS software V.16. P- Value less than 0.05 was considered as significant level.

3. RESULTS:
3.1 Demographic information
The demographic characteristics of the participants are depicted in Tables 1, 2.
Of the participants, 74.9% were females and 20.6 % were males and also 75.1% were single. 62.8% lived in dorm, 27.8% lived with her / his families, and 6.6% in rental home and 2.9% had their own home.

TABLE 1

Characteristics		No	Percent	Sleep quality (%)		P Value
				Poor	Good	
Gender	Male	72	20.6	28.4	71.6	0.9
	Female	227	79.4	29.2	70.9	
Marriage	Single	262	75.1	27.3	72.8	0.22
	Married	87	24.9	34,1	65.9	
Level of education	Bachelor	27.9	79.9	27.3	72.7	0.19
	>Bachelor	70	20.1	35.3	64.7	
Major	Nursing	264	70.5	30.1	69.9	0.48
	Midwifery	103	29.5	26.3	73.7	
Residency	Resident	143	41.0	36.2	23.9	0.014
	Nonresident	206	59.0	63.8	76.1	
Place of living	Dormitory	219	62.8	24.9	75.1	0.034
	Others	110	37.2	35.7	64.3	
Cigarette Smoking	Yes	13	3.7	25	75	0.99
	No	336	96.3	29.1	70.9	
Drinking coffee	Yes	55	25.8	25.5	74.5	0.55
	No	294	74.2	29.6	70.4	
Listening to music	Yes	100	28.7	19.4	80.6	0.013
	No	249	71.3	32.9	67.1	

Table 2: Crude and adjusted OR between poor sleep quality and different risk factors

Predictive variables	Crude OR (95% CI)	Adjusted* OR(95% CI)
Residency	1.81 (1.13-2.92)	1.69 (079-3.63)
Living in dormitory	1.68 (1.04-2.71)	1.09 (051-2.36)
Listening to music	2.04 (1.15-3.61)	2.3 (1.15-3.61)

3.3. Sleep Quality

A descriptive analysis indicated that most of the participants (71 %.) reported poor sleep quality. In PSQI the highest mean (standard deviation) scores belonged to "subjective sleep quality" components [1.94 ± 0.74] and the lowest one belonged to "hypnotic medication use" components [0.12 ± 0.48]. There were no significant differences between sex (p=0.9), marriage (p=0.22), level of education (p=0.19), using coffee (p=0.55), using cigarette (p=0.99), and major (p= 0.48), but there was significant differences between not being resident (p=0.014), listening to music before sleep at night(p=0.013) and living in dormitory (p =0.034). The Results of Multivariate logistic regression models showed a significant association between quality of sleeping and listening to music, Ie. Adjusting for variables such as not being resident, living in dormitory , listening to music at night , increased the odds of poor sleep quality about (OR= 2.3 P = 0.015).

4. DISCUSSION:

The prevalence of poor quality of sleeping estimated in our study, was similar to the results of most of studies which have been carried out in Iran for example 77.1% in the study of Arasteh [10] , 64.5% in the study of Nabavi and Boehiraei (2003). While some other internal studies reported lower rates varied between 19.17% and 57.5 % [30]. On the other hand, Results of studies conducted in other countries showed lower rates of poor sleep quality than those carried out in Iranian students. For instance, Lund et al (2010) reported that 60% of college students report poor sleep quality [8]. On the other hand Kang and Chen (2009) reported that 33.8% of medical school students

in Taiwan could be characterized as suffering from poor sleeps quality[31]. Feng et al. (2005) found that only 19% of college students reported poor sleep quality in China[32]. Our findings coincide with other Iranian studies about high sleep problems among students. However, due to differences in social and cultural contexts, it is difficult to compare the findings of different studies directly.

Walled et al (2011) believed that Prevalence of sleep problems vary based on ethnic and cultural beliefs [33] for example. Roberts (2000) reported that European and American youths are significantly at higher risk of sleeplessness compared to Chinese Americans [34] . Prevalence of sleep problems vary based on ethnic and cultural beliefs [35-41].

High rate of poor quality of sleeping among Iranian students may probably be due to educational planning and only 1 day weekend in compassion of other populations.

Results of Multivariate logistic regression models showed significant associations between, listening to music before sleep at night with sleep quality. It means that listening to music before sleeping developing poor quality of sleeping about (2.3).

Listening to music was a predicating factor for good sleep quality. results of the current study was in contrast to those of the other studies showed listening to the music as predicating factor for good sleep quality. For example, Harmat (2008) reported an association between listening to classical music and good sleep quality [42]. Earlier studies also showed positive effects of music on older adult s [43-45]. Maratos et al (2008) believes that music's ability to "heal the soul" is the stuff of legend in every culture [46]. Probably our participants are listening to special kinds of music that had adverse effect on sleep quality, and may be listening to music with loud sound. However further studies especially longitudinal designs should be conducted in this

issue to better examine the real association between quality of sleeping and music. This study has some limitation like the respondents were predominantly female, which limits the generalizability of the results for male ones. As this study was based on a convenient sample and the participation was voluntary, there might have been a selection bias that affected the possibility to generalize the results to all nursing students. Furthermore, use of the self report questionnaires may have led to an overestimation of some of the findings due to variance which is common in different methods. Another limitation is related to the paper's focus on the sleep quality, while the concept is a very complex term with the broad meanings.

5. CONCLUSION:

In conclusion, note that the poor quality of sleeping is a common problem in Iranian academic students compares to that in students of other regions, and considering its adverse effects on educational progression, it is necessary for policymakers to control this problem by addressing major risk factors and implementing suitable strategies especially in academic centers.

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