

KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING SLEEP AND SLEEP HYGIENE AMONG PATIENTS PRESENTING TO OUT-PATIENT AND EMERGENCY ROOM SERVICES AT A TEACHING HOSPITAL IN KARACHI

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ABSTRACT

Objectives: To study the knowledge, attitude and practices with regards to sleep and sleep hygiene among patients visiting the Out-Patient and Emergency Room services at a teaching hospital in Karachi, Pakistan.

Methodology: A questionnaire-based cross-sectional survey was conducted at the Out-Patient and Emergency Room services of Aga Khan University Hospital, Karachi, Pakistan. The questionnaire included demographic profile of the participant and questions based on the study objective. The details of the study were explained to the participants, a written Informed Consent was taken and confidentiality was assured. Those who could not read or write or understand English were assisted accordingly.

Results: Three hundred seventy six respondents were interviewed, the majority being women (57.7%) and married (62.2%). A majority 212 (56.4%) respondents were between 25 and 49 years of age. The majority of the respondents had acquired above grade X (Matriculation) education, and were either students or housewives or in private service. The mean number of hours of sleep per day was 7.03 hours. About 60.4% of the respondents sleep 6-8 hours and 23.7% of the respondents believe sedatives should be used in case of insomnia while 9.0% of the respondents actually take sleeping pills. Only 33.8% of the respondents always feel fresh on waking up in the morning. Disruptions and snoring during sleep have been reported. About 27.1% of the respondents have rated their sleep quality as five or less, based on the rating scale 1-10 with 10 being highest quality.

Conclusion: Sleep and sleep hygiene is a neglected area of clinical care requiring further research and intervention in terms of educational programs for patients.

KEY WORDS: Sleep, Sleep Hygiene, snoring, Insomnia.

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INTRODUCTION

Sleep plays an important role in our lives, allowing us to relax, restore, and revitalize our bodies, minds and emotions. It is as important as nutrition or exercise in maintaining overall health and with prolonged inadequate sleep, humans do not function well. They become

accident prone, are less productive and experience increased fatigue and health problems.¹

Sleep plays an important role in homeostatic restoration, thermoregulation, tissue repair, immune control and memory processing.² Sleep before learning also appears to be critical for brain functioning. One night of sleep deprivation clearly impairs hippocampus function, reducing the ability to subject new experiences to memory. These observations seem especially important when considering that sleep time continues to decrease across all ages throughout industrialized nations.

The relationship between good health and sleep duration has been clearly established in epidemiological studies. Sleep duration has declined over the years, and suboptimal sleep duration and poor sleep quality are becoming widespread in modern society. Suboptimal sleep duration has a strong association with mortality and morbidity.³

Complaints of sleep disturbance increase with age and many studies have reported on the relationship of sleep problems to the greater use of health services, physical and mental morbidity, functional decline, and all causes of mortality. Hence there is a need to identify high-risk individuals who are in greatest need of preventive strategies.

Sleep disorders are common and often remain undiagnosed. Common disorders include snoring, excessive daytime sleepiness, insomnia, and abnormal behaviors during sleep. Sleep disorders can be primary or secondary to medical, neurological, or psychiatric conditions, so a multidisciplinary approach to patients with sleep complaints is desirable.⁴

There is a need to study knowledge, attitude and practices with regards to sleep and sleep hygiene among Pakistani population. We have conducted this study based on this need.

METHODOLOGY

A questionnaire-based cross-sectional survey was conducted at the Out-Patient and Emergency Room Departments of Aga Khan University Hospital, Karachi, Pakistan, in 2008.

A questionnaire was developed after extensive literature search. It included data on demographic profile of the participant including age, sex, marital status, education and occupation and questions based on study objectives. A pilot study was conducted prior to the initiation of the administration of the final questionnaire.

An agreement was reached on how to administer the questionnaire in order to ensure uniformity. The questionnaire was administered only in English, hence those who could not read or write or understand English were assisted accordingly.

Those who agreed to participate in the study were given the questionnaire. Since we planned a descriptive study and did not intend to subject the data to statistical tests, sample size based on statistical calculations was not considered. Ethical requirements including the administration of written Informed Consent and the provision of confidentiality were ensured.

The participants were chosen based on their age (>18 years) and signing of Informed Consent form. A systematic random selection of study subjects was not undertaken. SPSS computer software was used for data management.

RESULTS

Three Hundred seventy six (376) respondents were interviewed, the majority being women (57.7%) and married (62.2%). A majority 212 (56.4%) respondents were between 25 and 49 years of age. The majority of the respondents had acquired above grade X (Matriculation) education, and was either students or housewives or in private service (Table-I).

It is alarming that 9% of respondents take tranquilizers for sleep and that 23.7% believe that the use of sedative in case of lack of sleep is strongly recommended. Only 33.8% always feel fresh on waking up in the morning. Quite credibly, 69.1% respondents recognize that a normal, healthy person requires 6-8 hours of sleep. About 14.3% sleep during daytime and 81% sleep more than six hours daily. Around 66 % respondents reported their life has become busier than before. Around 41% respondents

Table-I: Demographic profile of respondents (n=376).

Characteristics	N	%
Gender		
Male	159	42.3
Female	217	57.7
Age Group (in years)		
18-24	101	26.9
25-49	212	56.4
50 & above	63	16.8
Marital Status		
Single	126	33.5
Currently Married	234	62.2
Others	16	4.3
Education Level		
No Schooling	17	4.5
Up to Matriculation	27	7.2
Intermediate/Diploma	96	25.5
Graduate	140	37.2
Post Graduate	96	25.5
Occupation		
Unemployed	8	2.1
Self Employed	28	7.5
Govt. Service	34	9.1
Private Service	117	31.2
Student	79	21.1
Housewife	92	24.5
Any Other	18	4.5
Total Interviewed	376	

disagree that sleeping time should be fixed even on holidays, 65% respondents believe daytime naps are good and healthy. About 18.7% and 32.5% respondents believe eating and exercise prior to going to sleep, respectively, are recommended. Moreover, 89.6% respondents, rather very convincingly, are aware of the fact that daily physical exercise brings about good quality sleep. Approximately 58.9% respondents have definitely experienced situations in which they would have fallen asleep but a TV program kept them awake on a night preceding a working day.

On a scale of 1-10 with 1=minimum and 10=maximum quality of sleep, around 21% respondents reported quality of sleep less than five. Around 47% respondents reported eight or more on quality scale.

Table-II: Respondents' answers to questions (n=376).

Questions	N	%
<i>Do you feel sleepy during the day?</i>		
Yes	98	26.1
No	278	73.9
<i>If yes, do you then sleep?</i>		
Yes	14	14.3
No	48	49.0
Do not know	36	36.7
<i>Total Sleeping Time</i>		
<6 hours	74	19.7
6-8 hours	227	60.4
>8 hours	75	19.9
<i>Do you snore while sleeping?</i>		
Yes	101	26.9
No	216	57.6
Do not know	59	15.5
<i>Have your sleeping hours increased with age?</i>		
Yes	86	22.9
No	238	63.5
Do not know	52	13.6
<i>Sleeping time should be fixed even on holidays.</i>		
Agree	196	52.3
Disagree	153	40.8
Do not know	27	6.9
<i>Day time naps are good and healthy.</i>		
Agree	245	65.3
Disagree	71	18.9
Do not know	60	15.7
<i>A glass of milk before sleep is recommended.</i>		
Agree	292	77.9
Disagree	35	9.3
Do not know	49	12.8
<i>A shower before sleep is recommended.</i>		
Agree	213	56.8
Disagree	105	28.0
Do not know	58	15.2
<i>Brushing teeth before sleep is recommended.</i>		
Agree	353	94.1
Disagree	6	1.6
Do not know	17	4.3
<i>One should go to bed only when he/she feels sleepy.</i>		
Agree	208	55.5
Disagree	138	36.8
Do not know	30	7.7

DISCUSSION

We have documented knowledge, attitude and practices with regards to sleep and sleep hygiene among selected group of patients and attendants that we interviewed. It had a reasonable sample size with respondents belonging to all strata of society. However, the results from this survey cannot be generalized because of selected population that was interviewed in a hospital setting but none the less it offers an insight into the issues involved in this neglected area of clinical practice.

It is alarming that 9.0% respondents take medicine to help them sleep. Although sleeping pills may be safer now and the understanding of the sleep state itself has increased rapidly, diagnoses are still diffuse and treatments often poorly directed.⁵ The rational use of sleeping pills hence demands a systematic approach to the evaluation of the individual patient.⁶

Moreover, 98 (26.1%) respondents feel sleepy during the day, out of which 14 (14.3%) get daytime nap. Excessive daytime somnolence (EDS) seems to be associated with age-related changes, environment, circadian rhythm or sleep pattern disorder, insomnia, medications, lifestyle factors, depression, pain and illness.⁷

Furthermore, it is good to note that 227 (60.4%) respondents get sleep for 6-8 hours with 75 (19.9%) of them actually getting sleep for more than eight hours. However, 222 (59.2%) respondents get up during their sleep, mostly for a while, for different reasons. The reasons for getting up during sleep include drinking water/eating, visiting the toilet, attending an infant child, prayers, studying/working, power outage, checking security, attending an unwell family member, mental disturbance due to any ongoing tension and a bad dream. Clinicians need to evaluate the extent of sleep disturbance in each patient individually and educate them all regarding the mood and cognitive changes that co-occur with sleep loss.⁸

A significant 101 (26.9%) respondents reported snoring while sleeping. The association of snoring with Obstructive Sleep Apnea and its associated adverse impact on health

should be kept in mind. The prevalence and correlates of snoring in an elderly population have been reported.⁹ Many studies have reported on the relationship of sleep problems to the greater use of health services, physical and mental morbidity, functional decline and all causes of mortality. Therefore, promoting sleep hygiene education is recommended.¹⁰

On a scale of 1-10 (1 referring to the worst possible sleep and ten referring to best possible sleep), 21.4% of the respondents have rated their sleep five or less while 78.7% think the sleep they get deserves a rating of more than five. This points out towards having more emphasis on principles of sleep hygiene.

Although the elimination or restriction of napping is a common element of cognitive-behavioral therapy for insomnia, a uniform recommendation to restrict or eliminate napping (particularly evening napping) may not meet the needs of all older individuals with insomnia.¹¹ Quite convincingly, a majority of 245 (65.3%) respondents in our survey think that daytime naps are good.

A majority 262 (69.9%) respondents believe that eating before going to sleep is not recommended. People should be aware that a completely full stomach right before sleep is unhealthy. As for exercising, 122 (32.5%) respondents believe that it is recommended before going to sleep while 155 (41.3%) disagree. Principles of sleep hygiene require that one should avoid exercise prior to going to sleep.

A majority 213 (56.8%) respondents agree with taking a shower before going to sleep which is against sleep hygiene. Three hundred thirty six (89.6%) respondents are aware of how daily physical exercise brings about good quality sleep. Moderate, regular physical exercise, especially in the morning, seems to help some patients get better sleep.¹²

Watching a television program kept 221 (58.9%) respondents awake on a night preceding a working day. This is a point of concern as the addiction of watching television offers one to stay awake till late in the night despite the exhaustion at the end of a working day. Adolescents, in particular, may not receive the sleep

they need. Subsequently, their ability to stay alert and fully functional throughout the day is impaired by excessive daytime sleepiness.¹³ Moreover, the association of Internet overuse with excessive daytime sleepiness (EDS) has also been evaluated, with the conclusion that the association is strong. Clinicians should consider examining Internet addiction in adolescent cases of EDS.¹⁴

CONCLUSION

We have documented knowledge, attitude and practices with regards to sleep and sleep hygiene. This appears to be a neglected area of clinical care requiring further research and intervention in terms of educational programs for patients. It is strongly recommended that educational programs be devised for both public and health care providers in order to improve understanding and practice with regards to sleep and sleep hygiene among the masses.

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