

# Prevalence of Insomnia and Sleep Disorders in Al-Najaf Province Doctors

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## Abstract

**Introduction:** Insomnia disorder affects a large proportion of the population on a situational, recurrent or chronic basis and is among the most common complaints in medical practice. Insomnia disorder is a condition characterized by both nocturnal and diurnal symptoms. The aim of this study was to evaluate prevalence of insomnia and quality of the sleep in doctors with different age groups and multiple grades of practitioners and specialties in Al-Najaf province doctors.

**Methods:** This cross sectional study conducted from May to July in Al-Najaf province. Made by direct focused questions, asked by a list made with an online form sent privately for each doctor in order to cover all aspects of their personal data and insomnia patterns with other sleep disorders and associated products used like stimulants and hypnotic etc. the universities' ethics committee approved the protocol.

**Results:** By using a cross sectional study, we included 369 doctors from Al-Najaf governorate. Their mean age was (33.5 years + 8.5 years), the study discussed fourteen parameters and their relationship to insomnia at each group. Regarding the discussed parameters, There is significant association between insomnia present and (caffeine use, cigarette smoking, use of hypnotic drug, tingling sensation and abnormal behavior during sleep); (40.3%) of insomniac doctors have 2-3 cup of caffeine while (21.8%) of insomniac doctors have >3 cup of caffeine. (84.8%) of insomniac doctors have no smoking histories. (74%) of insomniac doctors has no hypnotic drug use, (38.7%) of insomniac doctors with tingling or other sensation in leg. (27.2%) of insomniac doctors with or may be with abnormal behavior during sleep.

**Conclusion:** The results of the present study provide support for a clear relationship between the mentioned above factors that we asked for and troubled sleep, high insomnia prevalence and poor quality of the sleep among doctors.

**Keywords:** Prevalence •Memory •Hypnotic

## Introduction

Sleep is an essential biological function, which is crucial for neural development, learning and memory, emotional regulation, cardiovascular and metabolic purpose and cellular poisons elimination [1,2]. Sleep well defined as a partial unconscious state stimulus cause an individual to awaken. This is dissimilar from a coma in which an individual cannot aroused by some gentle of provocations. Studies have shown that sleep deprivation and circadian clock disruption may lead to altered immune function as well as an increased risk for cardiovascular disease and metabolic disorders such as weight gain, insulin resistance and diabetes [3,4]. Insomnia is a common sleep disorder that makes it difficult to fall asleep, stay asleep, or cause you to wake up too early and be unable to sleep again. When you wake up, you may still be sleepy. Insomnia can deplete your energy and mood, as well as your health, job performance, and overall quality of life. The amount of sleep required varies from person to person, but most adults require at least eight hours [5]. Temporary insomnia is troubles in sleeping that continues for a few days or up to 1 week occur due to anxiety this lead to acute situational stress, such as a job meeting, relationship difficulties or illnesses such as the flue [6]. Acute insomnia occurs as period <3 months it occur due to; economic disaster, death or disease of a precious persons or alteration of situation, it is cure without any treatment [7]. Chronic insomnia related with trouble in sleeping >3 nights or >3 months the symptoms persist [8]. The advanced chance of sleep turbulences related with age-related brain injuries. Furthermore, it activated by metabolic, respiratory or cardiovascular illnesses, which are particularly among geriatrics people [9]. The aim of this study was to evaluate prevalence of insomnia and quality

of the sleep in doctors with different age groups and multiple grades of practitioners and specialties in Al-Najaf province doctors.

## Methods

### Study design and sample collection

Cross sectional study is conducting a group of doctors at Al Najaf province, a typical sample of 369 doctors drawn from fourteens medical centers (hospitals and primary health care directories) in Najaf, Iraq. With different age groups and academic degrees including bachelor, general practitioners, diploma and master degrees and board or subspecialties from both genders. Based on three parts asked Questionnaire, first part were about age, gender, BMIs, education degrees, job titles and specialties, physical activity, caffeine ingestion, cigarette smoking, previous neurological disorders. Second part was according to (Athens insomnia scale), and the last part was about questions regarding other associated sleep disorders like: sleeping unexpectedly during the day, snoring hard, tingling sensation in legs, or strong urge to move and other look like related questions. The questionnaire also included sociodemographic information, symptoms of insomnia. The questions concerned demographic data, lifestyle, the use of hypnotics and sleep disorders other than insomnia, Hypnotics use was measured with a single question about if currently use sleeping agents or not statistical analysis done for 20 doctors by pilot study to determine validity of study. Also Chi-square used for assessed association between categorical variables. P-value less or equal to 0.05 is considered significant.

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## Results

Cross sectional study, we included 369 doctors from Al-Najaf governorate. Their mean age were (33.5 years + 8.5 years), the study discussed fourteen parameters and their relationship to insomnia at each group, below we will explain the responses and percentage of each group regarding the discussed parameter: according to the gender; male percentage was (49.32%) and Female percentage was (50.68%) regarding to the education level and job title; M.B.ch.B (63.76%) and board degree (24.80) and diploma degree (9.26%) and from sub specialists (2.18%). About caffeine products use; (40.60%) consuming 2-3 cups/day and about (28.61%) consuming 1 cup/day and about (17.98%) who were consuming more than 3 cups and who never use caffeine products were about (12.81%). About cigarette smoking per day, who Never smoke were about (87.47%) and who smoke more than 10 cigarette per day were about (7.90%) and who less than 10 cigarette per day were about (4.63%), The previous neurological disorder: who replied (NO) were the highest percentage about (94.82%) and who answered (YES) were about (5.18%). Regarding use of hypnotic drugs; about (80.11%) who said never, about (18.80%) who answered sometimes, and only about (1.09%) who replied always. Replies for chances of sleeping unexpectedly during the day: (NO) were about (73.02%) and who replied (YES) were (26.98%) snoring hard: replies with (NO) were about (79.56%) and with (YES) were about (20.44%). About tingling sensation in legs, strong urge to move them or you cannot lie motionless in bed; replies with (NO) were about (67.57%), and with

(YES) were (32.43%). About fall asleep very early: Replies who said (NO) were about (53.13%) and (YES) were about (46.87%). In addition, about abnormal behavior in their sleep; replies with (NO) were about (79.29%) and who replies (maybe) were (15.26%) and replies with (yes) were about (5.45%). According to the age: below 30 years were about (51.77%), and the last (48.23%) were above 30 years. According to physical activity (30 minute day walking) who replied (YES) were about (58.58%), and (NO) were (41.42%) as show in Table 1.

According to figure 1; (62.4%) of doctors are overweight to obese while (36.2%) are normal BMI.

According to figure 2; (66.2%) of doctors in Al-Najaf province have insomnia while (33.8%) are not have insomnia.

There is significant association between insomnia present and (caffeine use, cigarette smoking, use of hypnotic drug, tingling sensation and abnormal behavior during sleep); (40.3%) of insomniac doctors have 2-3 cup of caffeine while (21.8%) of insomniac doctors have >3 cup of caffeine. (84.8%) of insomniac doctors have no smoking histories. (74%) of insomniac doctors have no hypnotic drug uses (38.7%) of insomniac doctors with tingling or other sensation in leg. (27.2%) of insomniac doctors with or may be with abnormal behavior during sleep. No significant association between insomnia present and (gender, education, activity, any neurological disease, sleep during day, snoring, get up very late, BMI and age of doctors) as show in Table 2.

**Table 1.** Variables distribution.

Variables		Frequency	Percentage
Age	30 and below	190	51.8
	>30 years	177	48.2
Gender	Male	181	49.3
	Female	186	50.7
Education level	Board degree	91	24.8
	Diploma degree	34	9.3
	M.B.Ch.B	234	63.8
	Sub specialty degree	8	2.2
Activity	No	152	41.4
	Yes	215	58.6
Caffeine intake	Never	47	12.8
	1 cup	105	28.6
	2-3 cups	149	40.6
	More than 3	66	18.0
Cigarette smocking	10 cigarette and more	29	7.9
	Less than 10 cigarette	17	4.6
	Never	321	87.5
Previous neurological disorder	No	348	94.8
	Yes	19	5.2
Use of hypnotic drug	Always	4	1.1
	Never	294	80.1
	Sometimes	69	18.8
Sleep during day	No	268	73.0
Always	Yes	99	27.0
Snoring	No	292	79.6
	Yes	75	20.4
Tingling sensation during	No	248	67.6
	Yes	119	32.4
Early sleeping	No	195	53.1
	Yes	172	46.9
Abnormal behaviour during Sleep	Maybe	56	15.3
	No	291	79.3
	Yes	20	5.4

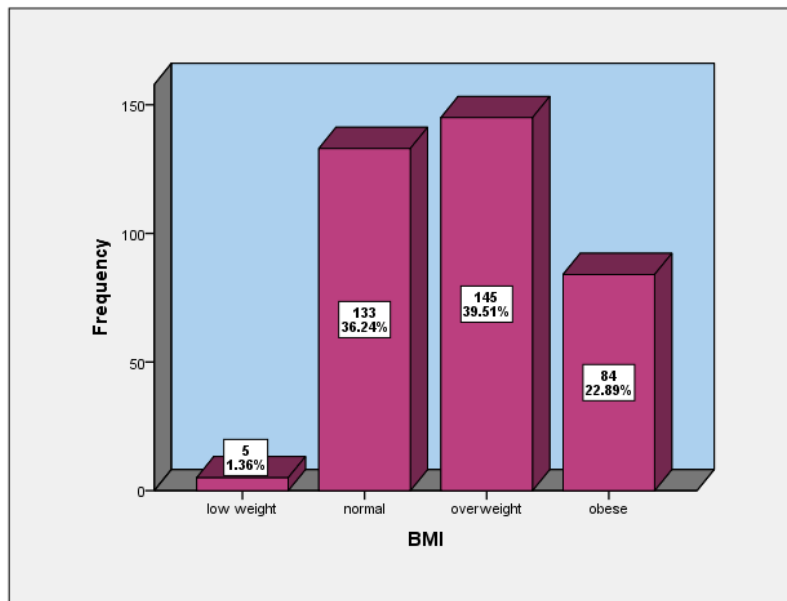


Figure 1. Distribution of BMI of doctors.

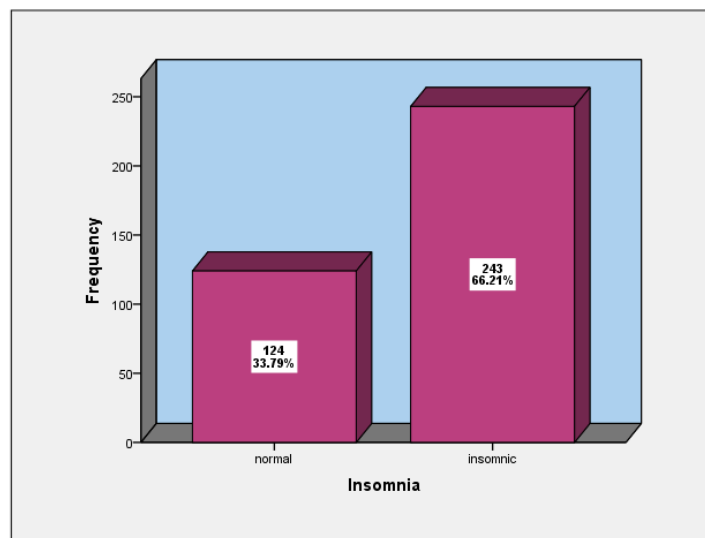


Figure 2. Prevalence of insomnia.

Table 2. Association between insomnia present and (caffeine use, cigarette smoking, use of hypnotic drug, tingling sensation and abnormal behaviour during sleep, gender, education, activity, any neurological disease, sleep during day, snoring, get up very late, BMI and age of doctors).

Variables		Insomnia		P-value
		No	Yes	
Gender	Male	58	123	0.5
	%	46.8%	50.6%	
	Female	66	120	
	%	53.2%	49.4%	
	Total	124	243	
	%	100.0%	100.0%	
Educational title	Board degree	31	60	Yes
	%	25.0%	24.7%	
	Diploma	15	19	
	%	12.1%	7.8%	
	M.B.Ch.B	74	160	
	%	59.7%	65.8%	
	Sub specialty	4	4	
	%	3.2%	1.6%	
	Total	124	243	
%	100.0%	100.0%		

Physical activity	No	45	107	0.18
	%	36.3%	44.0%	
	Yes	79	136	
	%	63.7%	56.0%	
	Total	124	243	
	%	100.0%	100.0%	
Caffeine use	Never	17	30	0.038
	%	13.7%	12.3%	
	1 cup	43	62	
	%	34.7%	25.5%	
	2-3 cups	51	98	
	%	41.1%	40.3%	
	More than 3	13	53	
	%	10.5%	21.8%	
Total	124	243		
	%	100.0%	100.0%	
Cigarette smoking	≥ 10 cigarette	5	24	0.05
	%	4.0%	9.9%	
	<10 cigarette	4	13	
	%	3.2%	5.3%	
	Never	115	206	
	%	92.7%	84.8%	
Total	124	243		
	%	100.0%	100.0%	
Any neurological disease	No	120	228	0.32
	%	96.8%	93.8%	
	Yes	4	15	
	%	3.2%	6.2%	
Total	124	243		
	%	100.0%	100.0%	
Hypnotic drug use	Always	1	3	0.001
	%	0.8%	1.2%	
	Never	113	181	
	%	91.1%	74.5%	
	Sometimes	10	59	
	%	8.1%	24.3%	
Total	124	243		
	%	100.0%	100.0%	
Sleep during day	No	94	174	0.46
	%	75.8%	71.6%	
	Yes	30	69	
	%	24.2%	28.4%	
Total	124	243		
	%	100.0%	100.0%	
Snoring hard	No	100	192	0.79
	%	80.6%	79.0%	
	Yes	24	51	
	%	19.4%	21.0%	
Total	124	243		
	%	100.0%	100.0%	
Tingling sensation	No	99	149	0.0001
	%	79.8%	61.3%	
	Yes	25	94	
	%	20.2%	38.7%	
Total	124	243		
	%	100.0%	100.0%	
Get up very late	No	72	123	0.19
	%	58.1%	50.6%	
	Yes	52	120	
	%	41.9%	49.4%	
	Total	124	243	
	%	100.0%	100.0%	

Abnormal behavior during sleep	May be	7	49	0.0001
	%	5.6%	20.2%	
	No	114	177	
	%	91.9%	72.8%	
	Yes	3	17	
	%	2.4%	7.0%	
	Total	124	243	
	%	100.0%	100.0%	
BMI	low weight	3	2	0.45
	%	2.4%	0.8%	
	normal	49	84	
	%	39.5%	34.6%	
	overweight	46	99	
	%	37.1%	40.7%	
	obese	26	58	
%	21.0%	23.9%		
	Total	124	243	
	%	100.0%	100.0%	
Age	30 and below	62	128	0.66
	%	50.0%	52.7%	
	>30 years	62	115	
	%	50.0%	47.3%	
	Total	124	243	
	%	100.0%	100.0%	

## Discussion

Insomnia is the best usually sleep illness and happens in 10% to 50% of the people international. Studies display that insomnia destructively disturbs work act, weakens decision-making, can harm relations, increase probabilities of car accidents [10], and lead to general deterioration in class of life. In current study, more than a half of the members practiced have at least one of the insomnia attacks. (66.21%) of participant doctor have insomnia if compared with current studies in general population which described 9%-15% [11,12]. Finding entitles that insomnia is common among those who bring health care; maybe due to of related comorbidities like medical or psychiatric illnesses that lead to symptoms of insomnia. The mean age of our study in our research was about (33.5+8.5 years), while in the current comparative study the mean age was (30.7 ± 7.8) years represents young adult working population (Chen x, et al.) [13]. According to the gender in our study, female ratio who suffers insomnia was 49.4% and male ratio was about 50.6%, while in the current comparative study, male ratio was about 66.3% and female ratio was 33.7%. Current study did not show any association between insomnia and gender. Some studies recommend that Asian countries have less (female) tendency to insomnia than western countries. Regarding the educational level and academic degree discussed in our study, there was no correlation between insomnia and it. Also in the current study, it did not reveal any association between insomnia and marital status or education level [14]. In our study we also discussed cigarette smoking and found that doctors who had never smoke had a significant association with insomnia with a ratio of about 87.5%. So the p value will stand for about (0.05), also regarding the current study, smoking had similar rate in both groups according to chi-square test and through p-value (p value was 0.054). A study in Japanese found that smoking have significantly advanced odds ratio for insomnia [15]. In addition, another current study found a higher prevalence of insomnia in smokers than non-smokers have reported by Janson c, Gislason t et al. [16]. regarding caffeine products use in our study, it was found a good association between caffeine products use and insomnia and who are drinking more than 3 cups/day were about 40.6%, so these products considered as an important lifestyle factors that are associated with insomnia, that also similar to what mentioned in the current study, In current study asked about hypnotic drugs use and it's found that there is respectable association with insomnia. While in the current study, the use of hypnotic agents in older people with chronic insomnia has long been viewed as problematic because

of tolerance, dependence, and adverse side effects. Emerging evidence that newer hypnotic agents may not offer the benefits initially anticipated has led to further calls for vigilance [17]. Current result that insomnia is significantly related with daytime sleepiness (26.98%) and falling asleep at the same time as driving may lead to a advanced danger of road traffic accidents, agrees with other studies [18], and is of severe public health apprehension. Insomnia and daytime sleepiness, accounts of personality alteration in patients with insomnia and related to cognitive illness could also contribute to traffic accidents.

## Conclusion

The results of the present study provide support for a clear relationship between the mentioned above factors that we asked for and troubled sleep, high insomnia prevalence and poor quality of the sleep among doctors. The increased risk of sleep disturbances associated with age-related brain injuries. The goal of this study was to determine the prevalence of insomnia and the quality of sleep in Al-Najaf province doctors of various ages and grades of practitioners and specialties.

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