PREVALENCE OF INSOMNIA AND ITS ASSOCIATED RISK FACTORS AMONG NURSING STUDENTS IN SELECTED NURSING COLLEGES OF GUWAHATI ASSAM: A DESCRIPTIVE STUDY

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ABSTRACT:
BACKGROUND OF THE STUDY
The word 'insomnia' originates from the latin "in"(no) and "somnus (sleep)."It is the first psychosomatic disorder to be described by Johan Heinroth in 1818.[1]
The term Insomnia is derived from the French word "Insomnie", insomnia clinically presents as a subjective perception of dissatisfaction with the amount and/or quality of the sleep. Difficulty in falling asleep may be primarily due to behavioural cognitive factors such as worrying in bed or having unreasonable expectations of sleep duration.as insomnia is both a symptom and a disorder in itself, detailed evaluation of the problem is imperative before reaching a clinical diagnosis[2]

In 2005, the National Institutes of Health held a state of the science conference on the manifestations of chronic insomnia in Adults, a summary of this conference can be obtained at the NIH consensus development program Insomnia is a sleep disorder where individual finds difficult to fall asleep. Sleep studies measures the body's ability to sleep while also detecting ways the body responds to certain sleep problems.when left untreated can cause serious health risks such as- High blood pressure, stroke, heart disease, diabetes, depression etc.[3]

OBJECTIVES OF THE STUDY

•   To assess the Prevalence of Insomnia among nursing students of selected Nursing colleges of Guwahati, Assam.

•   To find out the associated factors of Insomnia among nursing students in the selected Nursing colleges of Guwahati, Assam.

•   To associate the prevalence and associated factors on insomnia among nursing students of the selected Nursing colleges of Guwahati , Assam with the selected demographic variable.

METHODS AND MATERIALS:

The research approach adopted was quantitative approach. Non experimental research design was used in this study. Multistage sampling technique was used to select the samples. The study was conducted in the selected nursing colleges of Guwahati, Assam who fulfilled the inclusion criteria. The tools used for the study were standard questionnaire to assess the prevalence of insomnia.

RESULTS:

The study revealed that out 180 nursing students, 98(54.44%) had good sleep quality and 82(45.56%) had poor sleep quality. 59(32.8%) students belongs to the age group 20-22 years had insomnia, 81(45.0%) students were female, 31(17.2%) students belong to 4th year B.Sc. nursing students, 2(1.1%) were suffering from medical conditions, (52.8%)consume coffee daily before bedtime , 21(11.7%)have effects of sleep in functioning day to day life, 14(58.3%) use <1 hours mobile phone before sleep for games, 29(19.7%) students use mobile phone for social media , 44(34.1%)   students use <1hrs mobile phone for assignments, 38(21.1%) students have dinner 9-11 pm, 68(37.8%) students stays in hostel.

In the association of level of sleep quality among the nursing students with their selected demographic variables and associated factors the demographic variables such as use of mobile
phone before sleep for assignments, usual time for dinner shows statistically significant association with the level of sleep quality among nursing students at p<0.05 the demographic variables such as age, gender, educational status, any medical conditions, consumption of tea or coffee before sleep ,effect of sleep in functioning day to day life, ,place of stay did not show statistically significant association with the level of sleep quality among the nursing students with their selected demographic variables at p<0.05 level of significance

CONCLUSION:

The study concluded that out of 180 nursing students 98(54.44%) had good sleep quality and 82(45.56) had poor sleep quality .Poor sleep quality was observed among B.Sc. nursing students in all batches with different demographic factors regardless of poor sleep quality majority of the students had good sleep quality. Efforts should be made to recognize insomnia and treat at earliest.

KEYWORD: Prevalence, nursing student, insomnia ,associated factors.

INTRODUCTION:

Insomnia, a prevalent sleep disorder characterized by difficulty in initiating or maintaining sleep, early awakenings, and nonrestorative sleep, is a significant health concern in the industrialized world . This condition, which affects the quality and quantity of sleep, is intricately linked to our circadian system, influenced by physiological functions, work schedules, and various health conditions, including genetic factors . Young adults, according to the National Sleep Foundation and the American Academy of Sleep Medicine and Sleep Research Society, are recommended to achieve 7-9 hours of sleep to maintain optimal health and cognitive function.[4]

OBJECTIVES:

➢   To assess the Prevalence of Insomnia among nursing students of selected Nursing colleges of Guwahati, Assam.

➢   To find out the associated factors of Insomnia among nursing students in the selected Nursing colleges of Guwahati, Assam.

➢   To associate the prevalence and associated factors on insomnia among nursing students of the selected Nursing colleges of Guwahati , Assam with the selected demographic variable

METHODOLOGY:

A descriptive research design was used in this study to accomplish the objectives using Multistage sampling technique for obtaining adequate sample for the study was done on 180 nursing students in selected nursing colleges of Guwahati , Assam .Respondents were selected on the basis of inclusion criteria; standard questionnaire was used to assess the prevalence of insomnia and its associated risk factors.

DESRIPTION OF THE TOOL:-

In order to meet the objectives of the study, the following tools were constructed which consist of three sections:

Section- I: Demographic Variables

Section-II: standard questionnaire

DATA COLLECTION PROCEDURE:

Data collection process was scheduled from 18th November to 30th November 2023.

Prior to data collection, A formal written permission was obtained from the respective Principal for conducting the research study by the investigator.After getting permission the investigator visited the college on the respective due date and a brief introduced was given to the participants. The participants were selected using multistage sampling technique who fulfilled the inclusion criteria. The investigator explained the purpose of the study and assured them of the anonymity and confidentiality of their data. A written informed consent was also taken from the participants. Then the investigator distributed the structured tools on Insomnia and it's associated factors which took approx 10-20 minutes to complete the tool.

RESULTS:

SECTION 1: Frequency and percentage distribution of demographic variables of mothers of school age children.

Table 1: Frequency and percentage distribution of demographic variables of nursing students.

n = 180

Demographic Variables	Frequency (f)	Percentage (%)
Age in years		
17 – 19	55	30.6
20 – 22	120	66.6
>22	6	2.8
Gender		
Male	4	2.2
Female	176	97.8
Educational status		
B.Sc. Nursing 1st year	44	24.4
B.Sc. Nursing 2nd year	43	23.9
B.Sc. Nursing 3rd year	35	19.4
B.Sc. Nursing 4th year	58	32.2
Are you suffering from any medical condition		
Yes	4	2.2
No	176	97.8
Daily coffee or tea consumption before bedtime		
Yes	8	4.4
No	172	95.6
Effect of sleep in functioning day to day life		
Yes	37	20.6
No	143	79.4
Do you use mobile phone before sleep?		
Games		
<1 hr	21	87.5
1 – 2 hrs	2	8.3
3 – 4 hrs	1	4.2
4 – 5 hrs	-	-
<6 hrs	-	-
Social media		
<1 hr	67	45.6
1 – 2 hrs	55	37.4
3 – 4 hrs	20	13.6
4 – 5 hrs	2	1.4
>6 hrs	3	2.0
Assignments		
<1 hr	79	61.2
1 – 2 hrs	33	25.6
3 – 4 hrs	12	9.3
4 – 5 hrs	4	3.1
>6 hrs	1	0.8
What time do you usually have your dinner?		

Demographic Variables	Frequency (f)	Percentage (%)
Before 6 pm	-	-
6 – 7 pm	67	37.2
7 – 8 pm	4	2.2
8 – 9 pm	26	14.4
9 – 11 pm	81	45.0
>11 pm	2	1.1
Where do you stay?		
Hostel	152	84.4
Paying guest	8	4.4
Home	9	5.0
Rented house	11	6.1

The table 1 portrays that most of the nursing students, 120(6.7%) were aged between 20 – 22 years, 176(87.8%) were female, 58(32.2%) were B.Sc. Nursing 4th year, 176(97.8%) had not suffered any medical condition, 172(95.6%) had not consumed daily coffee or tea consumption before bedtime, 143(79.4%) were not affected by sleep in functioning day to day life, 21(87.5%) played game for <1 hr, 67(45.6%) were on social media for <1 hr, 79(61.2%) were doing their assignment for <1 hr, 81(45%) used to have dinner after 11 pm and 152(84.4%) were staying in hostel.

SECTION – II

FREQUENCY AND PERCENTAGE DISTRIBUTION OF LEVEL OF SLEEP QUALITY AMONG THE NURSING STUDENTS.

TABLE 2:   **n = 180**

Level of sleep quality	Frequency	Percentage (%)
Good sleep quality (<5)	98	54.44%
Poor sleep quality (≥5)	82	45.56%

SECTION III: Assessment of mean and standard deviation of sleep quality among the nursing students
TABLE 3:

                                                                                        n= 180

PREVALENCE	SCORE
MEAN	4.25
S.D	2.66
MEDIAN	4.0
MINIMUM	0
MAXIMUM	15.0

The table 3 shows that the mean score of sleep quality was 4.25±2.66. The median score was 4.0. The minimum score was 0 and maximum score was 15.0

SECTION IV: association of level of sleep quality among the nursing students with their selected demographic variables.

TABLE 4

n=180

Demographic Variables	Good sleep quality		Poor sleep quality		Chi-Square p-value / Fisher Exact test p-value
	f	%	f	%	
Age in years					
17 – 19	34	18.9	21	11.7	p=0.381 N.S
20 – 22	61	33.9	59	32.8	
>22	3	1.7	2	1.1	
Gender					p=0.627 N.S
Male	3	1.7	1	0.6	
Female	95	52.8	81	45.0	
Educational status					χ^2=2.179 d.f=3 p=0.536 N.S
B.Sc. Nursing 1st year	26	14.4	18	10.0	
B.Sc. Nursing 2nd year	25	13.9	18	10.0	
B.Sc. Nursing 3rd year	20	11.1	15	8.3	
B.Sc. Nursing 4th year	27	15.0	31	17.2	
Are you suffering from any medical condition					p=1.000 N.S
Yes	2	1.1	2	1.1	
No	96	53.3	80	44.4	
Daily coffee or tea consumption before bedtime					p=0.472 N.S
Yes	3	1.7	5	2.8	
No	95	52.8	77	42.8	
Effect of sleep in functioning day to day life					χ^2=2.356 d.f=1 p=0.125 N.S
Yes	16	8.9	21	11.7	
No	82	45.6	61	33.9	
Do you use mobile phone before sleep?					
Games					
<1 hr	7	29.2	14	58.3	p=0.662 N.S
1 – 2 hrs	2	8.3	0	0	
3 – 4 hrs	0	0	1	4.2	
4 – 5 hrs	0	0	0	0	
<6 hrs	0	0	0	0	
Social media					
<1 hr	38	25.9	29	19.7	p=0.344 N.S
1 – 2 hrs	31	21.1	24	16.3	
3 – 4 hrs	12	8.2	8	5.4	
4 – 5 hrs	1	0.7	1	0.7	
>6 hrs	0	0	3	2.0	
Assignments					
<1 hr	35	27.1	44	34.1	**p=0.043 S***
1 – 2 hrs	22	17.1	11	8.5	
3 – 4 hrs	3	2.3	9	7.0	
4 – 5 hrs	2	1.6	2	1.6	
>6 hrs	1	0.8	0	0	

Demographic Variables	Good sleep quality		Poor sleep quality		Chi-Square p-value / Fisher Exact test p-value
	f	%	f	%	
What time do you usually have your dinner?					
Before 6 pm	0	0	0	0	**p=0.014** **S***
6 – 7 pm	30	16.7	37	20.6	
7 – 8 pm	3	1.7	1	0.6	
8 – 9 pm	21	11.7	5	2.8	
9 – 11 pm	43	23.9	38	21.1	
>11 pm	1	0.6	1	0.6	
Where do you stay?					
Hostel	84	46.7	68	37.8	p=0.627 N.S
Paying guest	3	1.7	5	2.8	
Home	6	3.3	3	1.7	
Rented house	5	2.8	6	3.3	

*p<0.05, S – Significant, N.S – Not Significant

Discussion

In the present study, the Insomnia was found among the demographic variables such as usual time for dinner ,and use of mobile phone for assignments. The constructive lifestyle changes can promote the health of the participants.

The findings of the study was also in inconsistent with the similar studies done by Dhamodharan.M, Arockiaraj (2017) where results revealed that sleep disorder very much prevalent and their lifestyles such as involvement in social networking, stress and peer influence are the predominant factors causing poor sleep disorders. It also has cause poor health and fatigue and need for creating awareness on insomnia and its consequences. Constructive life style education will enhance the wellbeing of students.[5]

In the present study , Chi-Square p-value / Fisher Exact test p-value was found to be significant for the demographic data use of mobile phone for assignments (p =0.043) and usual time for dinner (p=0.014) respectively.

Other researcher also states that their study reveals support that there was no significant association between insomnia and academic performance (p value=0.53,β=-0.04).Insomnia explained 1.3%(r=0.012) of the difference in academic performance between students. (Haile.Y.G, Alemu S.M and Habewold .T .D 2017)[6]

Conclusion:

The findings of this study shows that the majority nursing students has good sleep quality also numerous researcher also found that majority participants had good sleep quality significant with demographic datas.so based on the findings In the present study and other supporting literature review, shows Insomnia assessing recommended daytime functioning domains (i.e. fatigue, quality of life, depression, anxiety, stress, academic performance ,caffeine intake) during the academic year.

 INTERPRETATION

The table 4 depicts the association of prevalence of insomnia and its associated risk factors

1. Age: The table shows that the obtained chi-square/fisher extract calculated p value is 0.381 .since the p value is more than 0.05 level of significance there was no significant association between age and factors of insomnia.

2.Gender: The table shows that the obtained chi-square/fisher extract calculated p value 0.627 , since then value is more than 0.05 level of significant there was no association between gender and factors of insomnia.

3.Educational status: the table shows that the obtained chi-square/fisher extract calculated p value 0.536 , since then value is more than 0.05 level of significant there was no association between educational status and factors of insomnia.

4.**Medical conditions:** the table shows that the obtained chi-square/fisher extract calculated p value 1, since then value is more than 0.05 level of significant there was no association between medical condition and factors of insomnia.

5.Daily coffee or tea consumption before bedtime: the table shows that the obtained chi-square/fisher extract calculated p value 0.472   , since then value is more than 0.05 level of significant there was no association between daily consumption of tea or coffee and factors of insomnia.

6.Effect of sleep in functioning day to day life : the table shows that the obtained chi-square/fisher extract calculated p value   0.125 ,since then value is more than 0.05 level of
significant there was no association between effect of sleep in functioning day to day life and factors of insomnia.

7.Use of mobile phone before sleep for games : the table shows that the obtained chi-square/fisher extract calculated p value 0.662 ,since then value is more than 0.05 level of significant there was no association between use of mobile phone before sleep for games and factors of insomnia.

8.Use of mobile phone before sleep for social media : the table shows that the obtained chi-square/fisher extract calculated p value 0.344   , since then value is more than 0.05 level of significant there was no association between use of mobile phone before sleep for social media and factors of insomnia.

9.Use of mobile phone before sleep for assignments : the table shows that the obtained chi-square/fisher extract calculated p value **0.043**   ,since then value is less than 0.05 level of significant there was association between use of mobile phone before sleep for assignments and factors of insomnia.

10.Time of dinner : the table shows that the obtained chi-square/fisher extract calculated p value 0.695,since then value is less than **0.014** level of significant there was association between time of dinner and factors of insomnia.

11.**Place of stay**: the table shows that the obtained chi-square/fisher extract calculated p value is 0.627 ,since then value is more than 0.05 level of significant there was no association between place of stay and factors of insomnia.

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