IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 22, Issue 1 Ser.4 (January. 2023), PP 43-47
www.iosrjournals.org

A Study on Quality of Sleep In Relation To Stress In Postgradaute In Medical Institution

DR.GARLAPATI KAMAKSHI[1], DR.T.V PAVANKUMAR[2], DR.D.PHANI BHUSHAN[3],DR N ANUSHA[4] DR B DIVYA[4]

1.Postgraduate in Psychiatry,Nri medical college and general hospital, Chinakakani,Andhra Pradesh 2.Professor of Psychiatry,Nri medical college and general Hospital,Chinakakani,Andhra Pradesh.3. Professor and Head of the Psychiatry,Nri medical college and general Hospital,Chinakakani,Andhra Pradesh.4.Assistant professors of Psychiatry Nri medical college and general Hospital.

ABSTRACT

INTRODUCTION: *Postgraduate students in the medical college of various departments are often to work for long hours which leads to sleep deprivation and increase in the stress levels. This study is conducted to assess the association between sleep and stress in the postgraduates.*

AIM : *To determine the association of quality of sleep and stress in postgraduate residents.*

METHOD: *This is a cross-sectional study in which the stress and quality of sleep is determined using Perceived stress scale and Pittsburgh sleep quality index scale.*

RESULTS: *This study included 100 postgraduate residents from various specialities .This study found there was a association between stress and sleep.*

KEY WORDS: *Postgraduates, Sleep, Stress, Perceived stress scale, Pittsburgh sleep quality index scale .*

Date of Submission: 01-01-2023 Date of Acceptance: 11-01-2023

I. INTRODUCTION

Sleep is a state of decreased awareness of environmental stimuli that is distinguished from states such as coma or hibernation by its relative rapid reversibility. Medical students and residents are especially vulnerable population for sleep related disorders perhaps due to the long duration and high intensity of study, clinical duties that include overnight on-call duties, work that can be emotionally challenging and lifestyle choices. Sleep deprivation has been linked to subjective feelings of increased fatigue and decreased motivation.[1]

Stress is defined as an internal state which can be caused by physical demand on the body (disease conditions, exercise, extremes of temperature and the like) or by environmental and social situations which are evaluated as potentially harmful, uncontrollable or exceeding our resources for coping. Residency is a stressful period as residents need to work for long hours and they have high responsibility toward the lives of patients. Stress impairs decision-making, learning abilities, and skills.[2]

II.AIM

To determine the association of quality of sleep and stress in postgraduate residents.

OBJECTIVES

1. To determine sleep quality in postgraduate residents.
2. To determine stress in postgraduate residents.
3. To assess association of stress and quality of sleep in postgraduate residents.

III. MATERIAL AND METHODOLOGY

This is a cross-sectional study conducted in the NRI Medical college and hospital for a period of one month with hundred participants from all departments.

Inclusion Criteria:

Postgraduate residents from NRI Medical College and Hospital who gave the informed consent were included in this study.

Exclusion Criteria:

Post graduate residents from NRI Medical College and Hospital who did not give informed consent were not included in this study.

Tools:

The study conducted using questionnaire on stress and sleep. For stress Perceived stress scale , for sleep Pittsburgh sleep quality index scale. Questionnaire send through online Google forms including details of the participants.

Perceived stress scale is a stress assessment instrument . Total score is calculated the score less than 13 considered low stress, 14-26 considered moderate stress,27-40 considered high stress

Pittsburgh Sleep Quality Index (PSQI) is to measure the quality and pattern of sleep. A score of 5 or greater indicates poor sleeper.

IV. RESULTS

In the present study there 100 participants from various departments. Out of hundred female are 57% and males are 43%. Females are more than males in the study. Mean age of participants 27.28±2.72(TABLE 1).

In this study stress score calculated and divided into low, moderate, high that is out of 100 participants 11% low stress, 63% moderate stress, 26% high stress . Majority of participants under moderate stress that is mean stress 22.71 ± 5.8 .(TABLE 2)

In this study sleep score, were 82% are poorer sleeper, 18% are good sleeper . Majority of participants belonging to poorer sleep. Mean sleep 8.66 ± 4.57 . (TABLE 3)

In this study 82 have poor sleep that is 6(54.4%) low stress, 52(82.5%) moderate stress, 24(92.3%) high stress.(TABLE 4)

In this study 18 have good sleep that is 5(45.4%) low stress, 11(17.4) moderate stress , 2(7.6%) high stress (TABLE 5)

In this study the association between sleep and stress is seen that is the p-valve 0.02.(TABLE 6)

SEX-WISE DISTRIBUTION **(TABLE-1)**

SEX	NUMBER	PERCENTAGE
MALE	43	43%
FEMALE	57	57%
TOTAL	100	100.0

STRESS SCORE **(TABLE-2)**

Stress	Number	Percentage	Mean
Low	11	11%	22.71 ± 5.8
Moderate	63	63%	
High	26	26%	
Total	100	100.O	

SLEEP SCORE **(TABLE-3)**

SLEEP	NUMBER	PERCENTAGE	MEAN
GOOD	18	18%	8.66 ± 4.57
POOR	82	82%	
TOTAL	100	100.0	

STRESS AND POOR SLEEP **(TABLE-4)**

STRESS	POOR SLEEP	PERCENTAGE
LOW	6	54.4%
MODERATE	52	82.5%
HIGH	24	92.3%

STRESS AND GOOD SLEEP **(TABLE-5)**

STRESS	GOOD SLEEP	PERCENTAGE
LOW	5	45.4%
MODERATE	11	17.4%
HIGH	2	7.6%

ASSOCIATION BETWEEN STRESS AND QUALITY OF SLEEP **(TABLE-6)**

	SLEEP			Chi-square	p-valve
STRESS	POOR	GOOD	TOTAL	12.231	0.02(significant)
LOW	6	5	11		
MODERATE	52	11	63		
HIGH	24	2	26		
TOTAL	82	18	100		

V. DISCUSSION

In this study stress score calculated and divided into low, moderate, high that is out of 100 participants 11% low stress, 63% moderate stress, 26% high stress . Majority of participants under moderate stress.

In this study 82% are poorer sleeper, 18% are good sleeper . Majority of participants belonging to poorer sleep. In this study the association between sleep and stress is seen that is, the p-valve 0.02.

Hajare Shilpa T,Agrawal Vipasha S and Saoji Prachi A[3] study found most of the post-graduates were suffering from moderate stress (78.85%), 15.38% had severe stress and only 5.77% had low stress. The study shows that there is clear association of sleep pattern alteration with the levels of stress in medical post graduate students and the association was statistically significant p = 0.0016. Most of the medical post-graduate students suffers from altered sleep pattern and it was statistically associated with stress.

Ramya H. S., Nisar Ahamed A. R., Rajendra Prasad T. C., Muragesh Awati[4] study shows mean PSS score was found to be 22.92 (moderate stress). Stress was associated with clinical specialty, higher workload, poor sleep quality due to more working hours, marital status, harmful ideations.

DeWitt C. Baldwin, Jr,; Steven R. Daugherty [5] study found 20% of all residents reported sleeping an average of 5 hours or less per night, with 66% averaging 6 hours or less.

M Anupama, Harish Kulkarni , Vinyas Nisarga , Sushravya [6] had reported mean age of the sample was 27 ±2 years. There were more females 137 (54.6%) in the sample. Majority of the residents belonged to Hindu religion 223 (88.8%), were staying alone 177 (70.5%), were single 177 (70.5%), from urban background 168 (66.8%) and were not using any psychoactive substance 212 (83.3%) . 80% stressed and 62% had insomnia. Female and sleep- deprived residents had higher stress. Residents in clinical branches and residents with long work hours had significant insomnia than their counterparts.

Sarthak Dave, Minakshi Parikh, Ganpat Vankar, Srinivasa Kartik Valipay[7] study found out of 520 participants depression (27.71%), anxiety (36.58%), and stress (24.24%) was found among the resident doctors.

Anuradha Rajiv Joshi , Mitsha Nagpal [8] study found mean age of the subject was 25.20±4.5 years, Higher PSS scores in III year PG students (22.2±4.32) than I year (17.46±2.09) indicated increased stress in III year PG students.

VI. CONCLUSION

This study is conducted aiming to find the association between sleep and stress in postgraduates in medical college. Our study found there is a significant association between sleep and stress. Postgraduates due to long working hours results in sleep deprivation associated with stress in students.

VII. LIMITATIONS

Some of the postgraduate residents did not participate in the study.

Some of the postgraduate residents did not fill the column of department. So we could not assess the level stress and quality of sleep in relation to departments.

REFERENCES

[1]. Jay Rajesh Ajgaonkar1, Mukta Pritam Bidikar Sleep Assessment and Perceived Stress among medical Post graduate residents. https://doi.org/10.32553/ijmbs.v3i6.287.

[2]. Madhavi Bhat, Dilshana Nafisa1 , Anil Kakunje, Rajesh Mithur, Ravichandra Karkal Level of stress among postgraduate junior residents during their postgraduation in medical colleges of Coastal Karnataka – A cross-sectional study. DOI:10.4103/jcrsm.

[3]. Hajare Shilpa T, Agrawal Vipasha S and Saoji Prachi A sleep Pattern in medical post graduate students and its association with stress – a cross sectional study International Journal of Recent Scientific Research. DOI: 10.24327/IJRSR.

[4]. Ramya H. S., Nisar Ahamed A. R.*, Rajendra Prasad T. C., Muragesh Awati Prevalence of stress among postgraduate junior residents in Bangalore, Karnataka, India. DOI: http://dx.doi.org/10.18203/2349-3291.ijcp20192034.

[5]. DeWitt C. Baldwin, Jr, ; Steven R. Daugherty, Sleep Deprivation and Fatigue in Residency Training: Results of a National Survey of First- and Second-Year Residents.

[6]. M Anupama, Harish Kulkarni1, Vinyas Nisarga, Sushravya Perceived Stress and Insomnia among Medical Residents in South India: A Cross‐Sectional Study DOI**:** 10.4103/aip.aip_140_21.

[7]. Sarthak Dave, Minakshi Parikh, Ganpat Vankar, Srinivasa Kartik Valipay Depression, Anxiety, and Stress among Resident Doctors of a Teaching Hospital DOI**:** 10.4103/ijsp.ijsp_72_17.

[8]. Anuradha Rajiv Joshi , Mitsha Nagpal Assessment of Perceived Stress in Postgraduate Medical Students during Training Programme DOI: 10.7860/JCDR/2018/28300.11634. S