ISSN: 2475-5435

Research Article

International Journal of Psychiatry

Prevalence of Stress and Quality of Sleep Among Employees in Selected Industries

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Submitted: 23 Nov 2019; **Accepted**: 03 Dec 2019; **Published**: 10 Dec 2019

Abstract

Background: *Every person's expectations or desire is to make their life physically and mentally strenuous. The obstacles which prevent the person from achieving them, which may be personal or environmental in nature, can make life stressful. Pressure at the workplace is unavoidable due to the demands of the contemporary work environment. Pressure perceived as acceptable by an individual, may even keep workers alert, motivated, able to work and learn, depending on the available resources and personal characteristics. However, when that pressure becomes excessive or otherwise unmanageable it leads to stress. Stress can damage an employees' work performance and also this type of work pressures affect the employees quality of sleep.*

Aim: *The main aim of the current study was to know the prevalence of stress and quality of sleep among employees.*

Materials and methods: *Quantitative research approach was used for this study. 100 samples including male and female employees in industry were selected by simple random sampling technique. The data collection was done by using Standard Process Stress Assess and Modified Pittsburgh Rating Scale. The data were analyzed by using mann whitney.*

Result: *The data reveals that out of 100 employees, 42 (42%) of them have low stress, 58 (58%) of them have moderate level of stress and there is no severe stress. 43 (43%) of them have mild sleeping disturbances, 57 (57%) of them have moderate sleeping disturbances and there is no severe sleeping disturbances.*

Conclusion: *The main study was to assess the prevalence of Stress and quality of sleep among employees working in Industry. This study revealed that the prevalence of stress and sleeping disturbances high among employees.*

Keywords: Stress, quality of sleep, employees

Introduction

Every person's expectations or desire is to make their life physically and mentally strenuous. The obstacles which prevent the person from achieving them, which may be personal or environmental in nature, can make life stressful. Employees are at high risk for developing occupational mental health complaints due to frequent exposure to risk factors such as high work demands, low work control and high emotional demand. Exposure to these risk factors may increase the chance of experiencing stress complaints and other mental health complaints.

Pressure at the workplace is unavoidable due to the demands of the contemporary work environment. Pressure perceived as acceptable by an individual, may even keep workers alert, motivated, able to work and learn, depending on the available resources and personal characteristics. However, when that pressure becomes excessive or otherwise unmanageable it leads to stress. Stress can damage an employees' work performance and also this type of work pressures affect the employees quality of sleep.

In India Highlighted statistics report: 40% of workers reported their job was very or extremely stressful. 25% view their jobs as the number one stressor in their lives. 75% of employees believe that workers have more on-the-job stress than a generation ago. 29% of workers felt quite a bit or extremely stressed at work.

A US survey reported inadequate sleep in 26% of adults – with difficulty concentrating (25%) or remembering (18%). A more recent Australian survey reported inadequate sleep, of either duration or quality, with daytime consequences in 33-45% adults.

Work-related stress and sleeping disturbances can be caused by poor work organization (the way we design jobs and work systems, and the way we manage them), by poor work design (for example, lack

of control over work processes), poor management, unsatisfactory working conditions, and lack of support from colleagues and supervisors.

Objectives of the Study

1. To assess the level of stress and quality of sleep among employees.
2. To correlate the level of sleep and quality of sleep among employees.
3. To find out the association between stress among employees with selected demographic variables.
4. To find out the association between quality of sleep among employees with selected demographic variables.

Methodology

Research Approach

The research approach used for the study was quantitative research approach.

Research Design

The research design adopted for the study was Non- experimental research design.

Study Setting

The study was conducted in selected industries, Tamilnadu.

Target Population

The target population of the study are employees in selected industries.

Sample Size

The sample size for this study was 100 employees were selected as sample.

Sampling Technique

The employees who specified the inclusion criteria during data collection period were selected by using Simple random sampling technique.

Sampling Criteria

Inclusion Criteria

a) Employees those who willing to participate the study.
b) Employees those who are in 26–57 years of age.
c) Those who are available at the time of data collection.

Exclusion Criteria

a) Employees those who are on leave during data collection.
b) Employees those who not willing to participate in this study.

Data Collection Procedure and Method

1. Permission will be obtained from concerned authorities.
2. Sample is selected by using simple random sampling method.
3. The purpose of the study will be explained and informed consent will be obtained from selected sample.
4. Data collection by using Standard Process Stress Assess and Modified Pittsburgh Rating Scale.

Plan for Data Analysis

After collection of data, the data are statistically analysed by using Mann whitney Test.

Description of Tool

It consists of two parts: Part I, Part II and Part III

Part I: Demographic variables include age, gender, religion, education, type of family, area of the work, diet pattern, intake of water per day, food habits, hours of sleep, personal habits, etc.

Part II: Standard Process Stress Assess: It consists of 20 questions and the questions were asked about the feelings and thoughts during the past month. . Each item is rated on a 5-point rating scale ranging from not at all (1) to very much (5).

Part III: Modified Pittsburgh Rating Scale: It consists of 25 questions and the questions were asked about sleep habits during the past month. Each item is rated on a 4-point rating scale ranging from not affected (0) to severely affected (3).

Research Findings

SECTION A

Table: Frequency and percentage distribution of demographic variables of employees

S.NO	Demographic Variables		Number	Percentage %
1	Age	a) 26-36 years	21	21.0%
		b) 37-47 years	59	59.0%
		c) 48-58 years.	20	20.0%
2	Gender	a) Male	37	37.0%
		b) Female	63	63.0%
3	Religion	a) Hindu	42	42.0%
		b) Christian	40	40.0%
		c) Muslim	18	18.0%
4	Highest level of educational Qualification	a) Higher secondary	24	24.0%
		b) Degree	37	37.0%
		c) Postgraduate	39	39.0%
5	Types of family	a) Nuclear	38	38.0%
		b) Joint	40	40.0%

		c) Extended	22	22.0%
6	Income of the family in rupees per month.	a) 30001-50000rs	18	18.0%
		b) 50001-70000rs	22	22.0%
		c) Above 70001rs.	60	60.0%
7	Area of work	a)Mines	24	24.0%
		b)Thermal Power Station	18	18.0%
		c)Administrative Office	37	37.0%
		d)Others	21	21.0%
8	Nature of work	a) Moderate worker	37	37.0%
		b) Heavy worker	24	24.0%
		c) Sedentary worker.	39	39.0%
9	Hours of work	a) 8 hours	37	37.0%
		b) 9hours	21	21.0%
		c) 10 hours	24	24.0%
		d) 11hours.	18	18.0%
10	Diet pattern	a) Vegetarian	22	22.0%
		b) Non-vegetarian.	78	78.0%
11	Frequency of food intake per day.	a) below 3 times per day	40	40.0%
		b) 3 times per day	42	42.0%
		c) Above 3 times per day	18	18.0%
12	Do you consume junk food	a) Yes.	60	60.0%
		b) No.	40	40.0%
13	Intake of water per day	a) 500-1000ml	21	21.0%
		b) 1001-1500ml	39	39.0%
		c) 1501-2000ml.	40	40.0%
14	Most frequently consumed source of protein	a) milk	21	21.0%
		b) fish	19	19.0%
		c) egg	2	2.0%
		d) Meat.	18	18.0%
		e)all the above	18	18.0%
		f)none	22	22.0%
15	Food habits	a) Over intake of snacking	39	39.0%
		b) Skipping break fast	19	19.0%
		c) Eating in front of the TV screens	2	2.0%
		d)all the above	22	22.0%
		e)none of the above	18	18.0%
16	Hours of sleep	a) < 5 hours	19	19.0%
		b) 5-6 hours	41	41.0%
		c) 7-8 hours	40	40.0%
17	Do you exercise regularly?	a) Yes	40	40.0%
		b) No.	60	60.0%
18	Personal habits	a) Alcoholism	19	19.0%
		b) Smoking	18	18.0%
		c) none	63	63.0%

Table 1: Describes the Frequency Distribution of Demographic Variables of employees such as Age, Gender, Education, Religion, Area of work, Types of family etc.

SECTION-B: The first objective was to assess the level of stress and quality of sleep among employees

Table 2: To assess the level of stress among employees

LEVEL OF STRESS	NUMBER	PERCENTAGE
Low stress	42	42%
Moderate stress	58	58%
TOTAL	100	100%

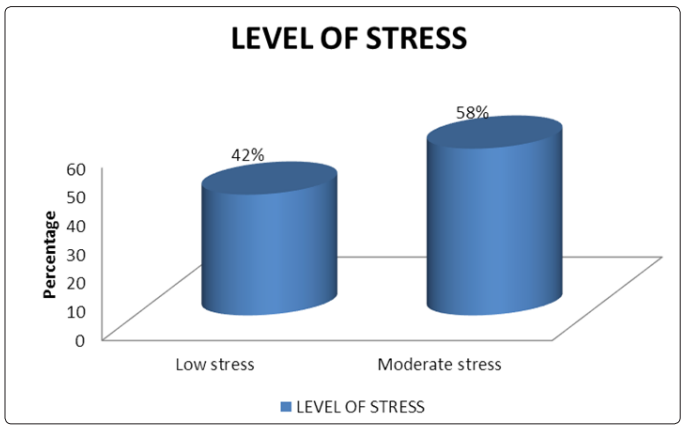

Figure 1: Percentage distribution of Level of stress among employees

The above Table: 2 & Figure 1: reveals that out of 100 employees, 42 (42%) of them have low stress, 58 (58%) of them have moderate level of stress and there is no severe stress.

Table 2: To assess the Quality of sleep among employees

LEVEL OF STRESS	NUMBER	PERCENTAGE
Low stress	42	42%
Moderate stress	58	58%
TOTAL	100	100%

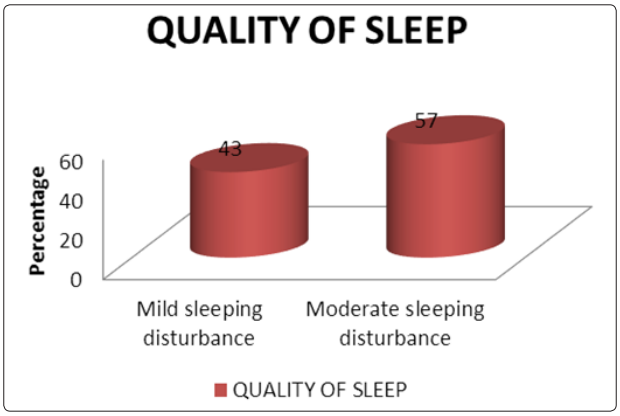

Figure 2: Percentage distribution of Quality of sleep among employees

The above Table 3: & Figure 2: reveals that out of 100 employees, 43 (43%) of them have mild sleeping disturbances, 57 (57%) of them have moderate sleeping disturbances and there is no severe sleeping disturbances.

SECTION-C: To correlate the level of sleep and quality of sleep among employees

Table 4: Correlate the level of sleep and quality of sleep among employees

Spearman's rho for stress Vs QOS	Correlation Coefficient	p-value
	0.649	<0.001

Table-4 shows that high positive correlation exists between stress and quality of sleep with correlation coefficient r= 0.649 and p-valve (<0.001), highly significant.

SECTION-D: To find out the association between stress among employees with selected demographic variables

Table 5: Association between stress among employees with selected demographic variable

Demographic Variables		N	Stress		MW/KW test	p-value
			Mean	Median		
Age	a) 26-36 years	21	51	51	9.7591	0.7631 NS
	b) 37-47 years	59	48.05	55		
	c) 48-58 years.	20	40.7	40		
Gender	a) Male	37	53.86	67	13.3151	0.0231 S
	b) Female	63	43.29	51		
Religion	a) Hindu	42	58.05	51	8.5127	0.8011 NS
	b) Christian	40	39.05	26		
	c) Muslim	18	40	40		
Highest level of educational Qualification.	a) Higher secondary	24	27.75	26	1.6073	0.4477 NS
	b) Degree	37	61.16	67		
	c)postgraduate	39	45.92	51		
Types of family	a) Nuclear	38	47.47	47	0.1232	0.4024 NS
	b) Joint	40	58.6	51		
	c) Extended	22	26	26		
Income of the family in rupees per month.	a) 30001-50000rs	18	55	55	4.7124	0.0942 NS
	b) 50001-70000rs	22	26	26		
	c) Above 70001rs.	60	52.63	51		
Area of work	a)Mines	24	27.75	26	2.0482	0.4120 NS
	b)Thermal Power Station	18	55	55		
	c)Administrative Office	37	53.86	67		
	d)Others	21	51	51		
Nature of work	a) Moderate worker	37	53.86	67	4.5709	0.2061 NS
	b) Heavy worker	24	27.75	26		
	c) Sedentary worker.	39	52.85	51		
Hours of work	a) 8 hours	37	53.86	67	4.1865	0.2423 NS
	b) 9hours	21	51	51		
	c) 10 hours	24	27.75	26		
	d) 11hours.	18	55	55		
Diet pattern	a) Vegetarian	22	26	26	14.8145	**0.0020 S**
	b) Non-vegetarian.	78	53.18	51		
Frequency of food intake per day.	a) below 3 times per day	40	58.6	51	4.5732	0.2031 NS
	b) 3 times per day	42	33	26		
	c) Above 3 times per day	18	55	55		
Do you consume junk food	a) Yes.	60	52.63	51	2.0452	0.0882 NS
	b) No.	40	39.05	26		
Intake of water per day	a) 500-1000ml	21	51	51	7.7554	0.6001 NS
	b) 1001-1500ml	39	60.44	55		
	c) 1501-2000ml.	40	32.3	26		

Most frequently consumed source of protein	a) milk	21	51	51	8.3298	0.0832 NS
	b) fish	19	67	67		
	c) egg	2	47	47		
	d) Meat.	18	40	40		
	e) all the above	18	55	55		
	f) none	22	26	26		
Food habits	a) Over intake of snacking	39	52.85	51	8.7551	0.8112 NS
	b) Skipping break fast	19	67	67		
	c) Eating in front of the TV screens	2	47	47		
	e) all the above	22	26	26		
	f)none of the above	18	40	40		
Hours of sleep	a) < 5 hours	19	67	67	9.3132	0.0232 NS
	b) 5-6 hours	41	52.56	51		
	c) 7-8 hours	40	32.3	26		
Do you exercise regularly?	a) Yes	40	32.3	26	1.8078	0.4237 NS
	b) No.	60	57.13	55		
Personal habits	a) Alcoholism	19	67	67	9.5127	0.6311 NS
	b) Smoking	18	40	31		
	c) none	63	43	51		

NS- Non Significant KW- Kruskal Wallis

S - Significant MN- Mann Whitney

Table-5 reveals that there was significant association between the gender and the level of stress at (0.0231) $p<0.05$ and with the Diet pattern and the level of stress at (0.0020) $p<0.05$ .Hence the data reveals that stress associated with gender and diet pattern.

SECTION E: To find out the association between quality of sleep among employees with selected demographic variables

Table 6: Association between quality of sleep among employees with selected demographic variable

Demographic Variables		N	QOS		MW/KW test	p-value
			Mean	Median		
Age	a) 26-36 years	21	22	22	13.7291	0.0331 S
	b) 37-47 years	59	31.58	33		
	c) 48-58 years.	20	30.6	31		
Gender	a) Male	37	35.11	39	10.6531	0.3023 NS
	b) Female	63	26	24		
Religion	a) Hindu	42	29.93	24.5	9.4142	0.7321 NS
	b) Christian	40	28.05	24		
	c) Muslim	18	31	31		
Highest level of educational Qualification.	a) Higher secondary	24	24.25	24	8.6073	0.5281 NS
	c) Degree	37	36.08	39		
	d)postgraduate	39	26.15	22		
Types of family	a) Nuclear	38	31.74	31	1.1232	0.0024 NS
	b) Joint	40	30.08	22		
	c) Extended	22	24	24		
Income of the family in rupees per month.	b) 30001-50000rs	18	33	33	4.6343	0.0842 NS
	c) 50001-70000rs	22	24	24		
	d) Above 70001rs.	60	30.25	31		

Area of work	a)Mines	24	24.25	24	30.0482	0.0040 S
	b)Thermal Power Station	18	33	33		
	c)Administrative Office	37	35.11	39		
	d)Others	21	22	22		
Nature of work	a) Moderate worker	37	35.11	39	7.5821	0.2061 NS
	b) Heavy worker	24	24.25	24		
	c) Sedentary worker.	39	27.08	22		
Hours of work	a) 8 hours	37	35.11	39	9.1045	0.1804 NS
	b) 9hours	21	22	22		
	c) 10 hours	24	24.25	24		
	d) 11hours.	18	33	33		
Diet pattern	a) Vegetarian	22	24	24	14.9701	0.0825 NS
	b) Non-vegetarian.	78	30.88	31		
Frequency of food intake per day.	a) below 3 times per day	40	30.08	22	4.2107	0.2075 NS
	b) 3 times per day	42	27.14	24		
	c) Above 3 times per day	18	33	33		
Do you consume junk food	a) Yes.	60	30.25	31	2.1437	0.0807 NS
	b) No.	40	28.05	24		
Intake of water per day	a) 500-1000ml	21	22	22	6.7554	0.2500 NS
	b) 1001-1500ml	39	35.62	33		
	c) 1501-2000ml.	40	27.15	24		
Most frequently consumed source of protein	a) milk	21	22	22	8.0204	0.1832 NS
	b) fish	19	39	39		
	c) egg	2	27	27		
	d) Meat.	18	31	31		
	e)all the above	18	33	33		
	f)none	22	24	24		
Food habits	a) Over intake of snacking	39	27.08	22	8.7551	0.8112 NS
	b) Skipping break fast	19	39	39		
	c) Eating in front of the TV screens	2	27	27		
	e)all the above	22	24	24		
	f)none of the above	18	31	31		
Hours of sleep	a) < 5 hours	19	39	39	9.3132	0.0232 S
	b) 5-6 hours	41	27.07	22		
	c) 7-8 hours	40	27.15	24		
Do you exercise regularly?	a) Yes	40	27.15	24	1.8078	0.4237 NS
	b) No.	60	30.85	33		
Personal habits	a) Alcoholism	19	39	39	9.5127	0.6311 NS
	b) Smoking	18	31	31		
	d) none	63	26	24		

NS- Non Significant KW- Kruskal Wallis

S - Significant MN- Mann Whitney

Table-6 reveals that there was significant association between the age and the quality of sleep at **(0.0331)** $p<0.05$ and with the area of work and the quality of sleep at (0.002) $p<0.01$ and with the hours of sleep and the quality of sleep at (0.0232) $p<0.05$. Hence the data reveals that the quality of sleep associated with age, area of work and hours of sleep.

Discussion

The first objective is assess the level of stress and quality of sleep among employees. The data reveals that out of 100 employees, 42 (42%) of them have low stress, 58 (58%) of them have moderate level of stress and there is no severe stress. 43 (43%) of them have mild sleeping disturbances, 57 (57%) of them have moderate sleeping disturbances and there is no severe sleeping disturbances.

The second objective is correlate the level of sleep and quality of sleep among employees

The data shows that high positive correlation exists between stress and quality of sleep with correlation coefficient $r= 0.649$ and p-valve (<0.001), highly significant.

The third objective is association between stress among employees with selected demographic variable

The data reveals that there was significant association between the gender and the level of stress at (0.0231) $p<0.05$ and with the Diet pattern and the level of stress at (0.0020) $p<0.05$ .Hence the data reveals that stress associated with gender and diet pattern.

The forth objective is association between quality of sleep among employees with selected demographic variable

The data reveals that there was significant association between the age and the quality of sleep at (0.0331) $p<0.05$ and with the area of work and the quality of sleep at (0.002) $p<0.01$ and with the hours of sleep and the quality of sleep at (0.0232) $p<0.05$. Hence the data reveals that the quality of sleep associated with age, area of work and hours of sleep.

Conclusion

The main study was to assess the prevalence of stress and quality of sleep among employees in selected industries. This study revealed that the prevalence of stress and sleeping disturbances high among employees working in industries.

References

1. Anthony DL, Tessa K (2018) Stress related claims among working Victorians. BMC public health 156-167.
2. Daniel C Cranster (2000) "Coping the job stress". Occupational Medicine 659.
3. Paul AL (1988) Occupational stress among health care workers, journal of organizational behaviour 217-239.
4. Jung JC, Jiyk, Assess the occupational stress predict depression among Korean workers. International archieves of occupational and environmental health 45-47.
5. https://www.betterhealth.vic.gov.au/health/healthyliving/work-related-stress
6. https://www.personneltoday.com/hr/supporting-employees-with-sleep-problems-the-evidence-base/