

# A Study to Assess the Impact of Level of Stress and Sleeping Pattern Over Various Physical and Emotional Disturbances among Persons Associated with P P Savani University; Surat

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**Abstract:** ***Background:** As per our previous study we have found that there are some physical and mood related changes are observed in people suffering from stress. **Aim:** to identify the association of various physiological and emotional disturbances with level of stress and level of sleep satisfaction. **Sample:** 201 were purposefully selected. From which were having 20 mild stress, 162 were having moderate stress and 19 were having severe stress. **Method:** Correlation research design. Data was collected by using Google form containing details of demographic variables, Perceived Stress Scale score and level of sleep satisfaction and for assessment checklist of common physiological and emotional disturbances has been used. **Result:** high correlation positive has been found between level of stress and physical and emotional disturbances with severe level of stress (with mild stress there are more associated physical disturbances than the emotional disturbances and in severe stress there are more emotional disturbances than the physical disturbances) Overall there is more emotional symptoms has been identified in association with stress as compared to physical disturbances. It is also found that sleep helps to reduce the emotional disturbances whereas oversleeping also causes physical fatigue at some extent. And there is high significance found ( $p$  - value  $<0.0001$ ) between level of stress, level of sleep satisfaction and physical and emotional disturbances.*

**Keywords:** Stress, Sleep, Sleep satisfaction, Physical disturbance, Emotional disturbance

## 1. Significance of the study

As per study conducted by Tanveerakhatun Pathan and Bindesh Patel we have found that among 201 samples 20 were suffering from mild stress, 162 were suffering from moderate stress and 19 were having severe stress; also the negative correlation has been found between level of sleep satisfaction and level of stress that means person suffering from stress are having less sleep satisfaction and there was high significance between level of stress and level of sleep satisfaction<sup>15</sup>.

As reference to our previous study we have identified certain symptoms associated with Stress and sleep satisfaction that lead us to do research on what sorts of symptoms has been found in case when adequate amount of sleep is not taken or with increase amount of stressor how the person is suffering from various physical and emotional disturbances.

As per previous study reference we have identified that during the pandemic (COVID 19 lockdown), there were found so many lifestyles related changes in everyone's life including daily habitual pattern including sleep disturbances:

- Sleep reversal
- Lack of sleep
- Insomnia or
- Hypersomnia
- Bad dreams and
- Fearful states and night due to various news of loss of family members and disease outbreaks.

Because of these disturbed patterns it is been found that; in person's life there is increased the level of stress and amount of stressor, especially with those who were lacking in the sleep. Lack of sleep in general can lead to:

- Headache
- Nausea
- Uneasy feelings
- Decreased concentration
- Academic disturbances
- Weakness
- Fatigue etc.
- Decreased interest in work etc.

### National international scenario:

Globally 86% of overall population is suffering stress and related problems whereas in India 89% of overall population is suffering from stress and related problem. Among these peoples most of them are not ready to seek professional help which again leads to a increasing in severity of symptoms. (14)

### Statement of the problem:

A Study to Assess the Impact of Level of Stress and Sleeping Pattern Over Various Physical and Emotional Disturbances Among Persons Associated with P P Savani University; Surat.

- 1) **Stress:** In this study stress is considered as a non-specific adaptive response to a perceived threat that involves physiological, cognitive, affective and

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behavioral components, arises whenever there is any kind of demand is made up on body or mind<sup>15</sup>.

- 2) **Sleep:** In this study sleep can be considered as a resting phase of an individual's life which helps to reduce fatigue<sup>15</sup>.
- 3) **Sleep satisfaction:** In this study sleep satisfaction can be considered as level of satisfaction person gets after awakening from resting phase which includes calmness, regeneration of new energy required for working throughout the day and restoration of normal bodily functions.
- 4) **Physical disturbances:** In this study physiological disturbances are considered as any physiological symptoms like; weakness, headache, stains in the body, alterations in blood pressure, any autonomic symptoms, nausea, etc.
- 5) **Emotional disturbances:** In this study emotional disturbances are considered as any emotional symptoms like; irritability, aggression, anxiety, frustration, etc.

**Aims and Objectives:**

- **O1:** To find out find - out the physical disturbances among persons associated with P P Savani University.
- **O2:** To find out find - out the emotional disturbances among persons associated with P P Savani University.
- **O3:** To assess the impact of physical disturbances over emotional disturbances among people associated with P P Savani University.

**Assumption:**

- The severity of stress level will impact over sleeping pattern of an individual; more severe stress will lead to less satisfaction in sleep.
- There will be increase number of physical and emotional disturbances identified among person suffering from stress and lack of sleep satisfaction.

**Hypothesis:**

- **H<sub>1</sub>:** There will be significant impact of stress over physical and emotional disturbances.
- **H<sub>2</sub>:** There will be significant impact of level of sleep satisfaction over physical and emotional disturbances.
- **H<sub>3</sub>:** There will be correlation between psychical and emotional disturbances of person suffering from stress.

**2. Material and methods**

**Research design:**

**Correlational research design**

**Table: A1.1:** Mean of physical and emotional symptoms associated with stress level among samples:

	N	Level of stress		Level of Sleep Satisfaction		Physical Disturbances		Emotional Disturbances	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Average levels of variables among sample	201	19.68	5.267	6.36	2.134	1.72	1.185	1.59	0.961

**Table A1.2:** Mean of physical and emotional symptoms associated with stress level among samples:

Category of Stress level	N	Level of stress		Level of Sleep Satisfaction		Physical Disturbances		Emotional Disturbances	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mild Stress	20	8.950	3.120	7.050	1.959	1.6	1.429	1.250	0.444
Moderate Stress	162	19.759	3.136	6.444	2.112	1.49	0.865	2.37	2.84
Severe Stress	19	30.32	2.437	4.89	2.052	1.65	1.116	1.342	1.214

O1	O2	O3	O4
Level of stress	Level of sleep satisfaction	Physical Disturbance	Emotional Disturbance

**Variables:**

- **Independent variable:** Level of Stress
- **Dependent variable:** Level of Sleep Satisfaction, emotional disturbances, physiological disturbances.

**Sampling:**

**Sample size:** 201 consecutively selected samples

**Sampling technique:** Purposive sampling

**Sampling criteria:**

**Inclusion criteria**

- Students and teachers who are associated with P P Savani University.
- Students and teachers who are willing to participate in the research study.
- Students and teachers who know English language.

**Exclusion criteria**

- Students and teachers who don't know English language.
- Students and teachers who are suffering from mental illness.

**Sample distribution:**

Sr. No.	Category	Sample size
1	Mild stress	20
2	Moderate stress	162
3	Severe stress	19

**Date collection:**

The data is collected by using Google form which contains details of:

- 1) Perceived Stress Scale developed by Cohen, Kamarck and Mermelstein. It is self - reported questionnaire.
- 2) Rating scale for Sleep Satisfaction (1 - 10 numbering). It is based upon subjective marking.
- 3) Based upon reviews and common observations symptoms checklist has been used to identify common physical and emotional disturbances.

**Statistical analysis:**

After finding Mean and SD Scores; correlation has been found by using Karl Pearson's product movement correlation significance by using t value.

**3. Result**

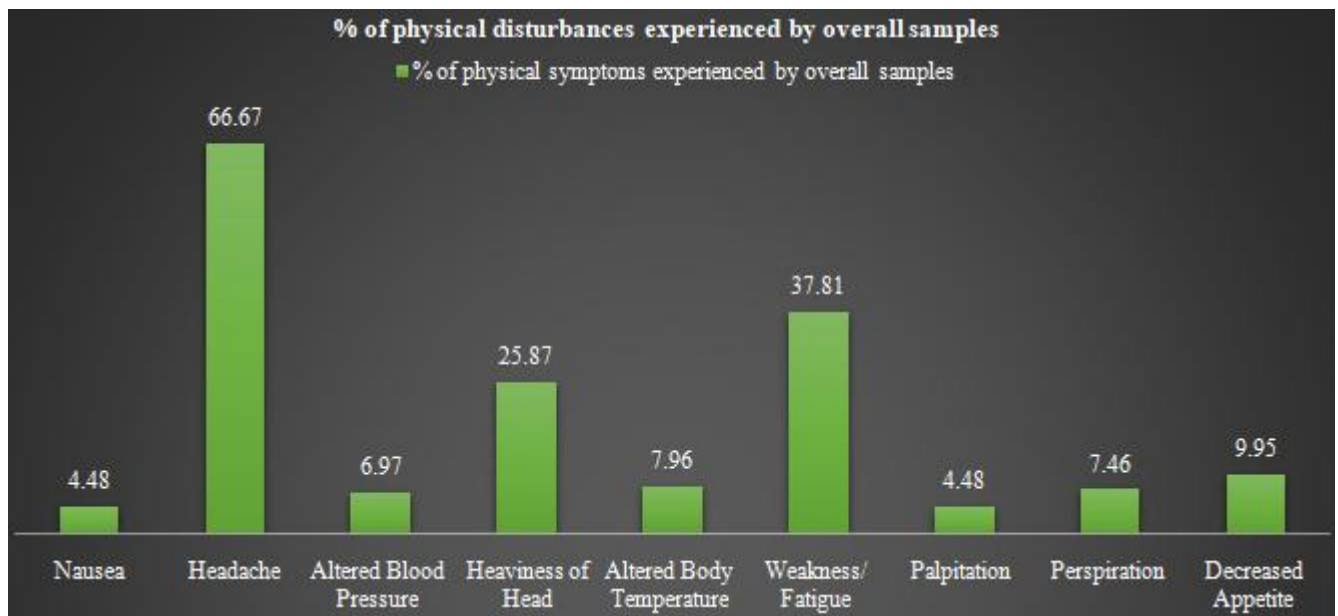
Table A1.2 shows the mean values of physical symptoms which 1.6, 1.49 and 1.65 for Mild stress, Moderate stress and Severe stress respectively and mean values of emotional symptoms which is 0.444, 2.84 and 1.214 for Mild stress, Moderate stress and Severe stress.

Among above mentioned samples some of them were suffering from multiple physical and emotional disturbances

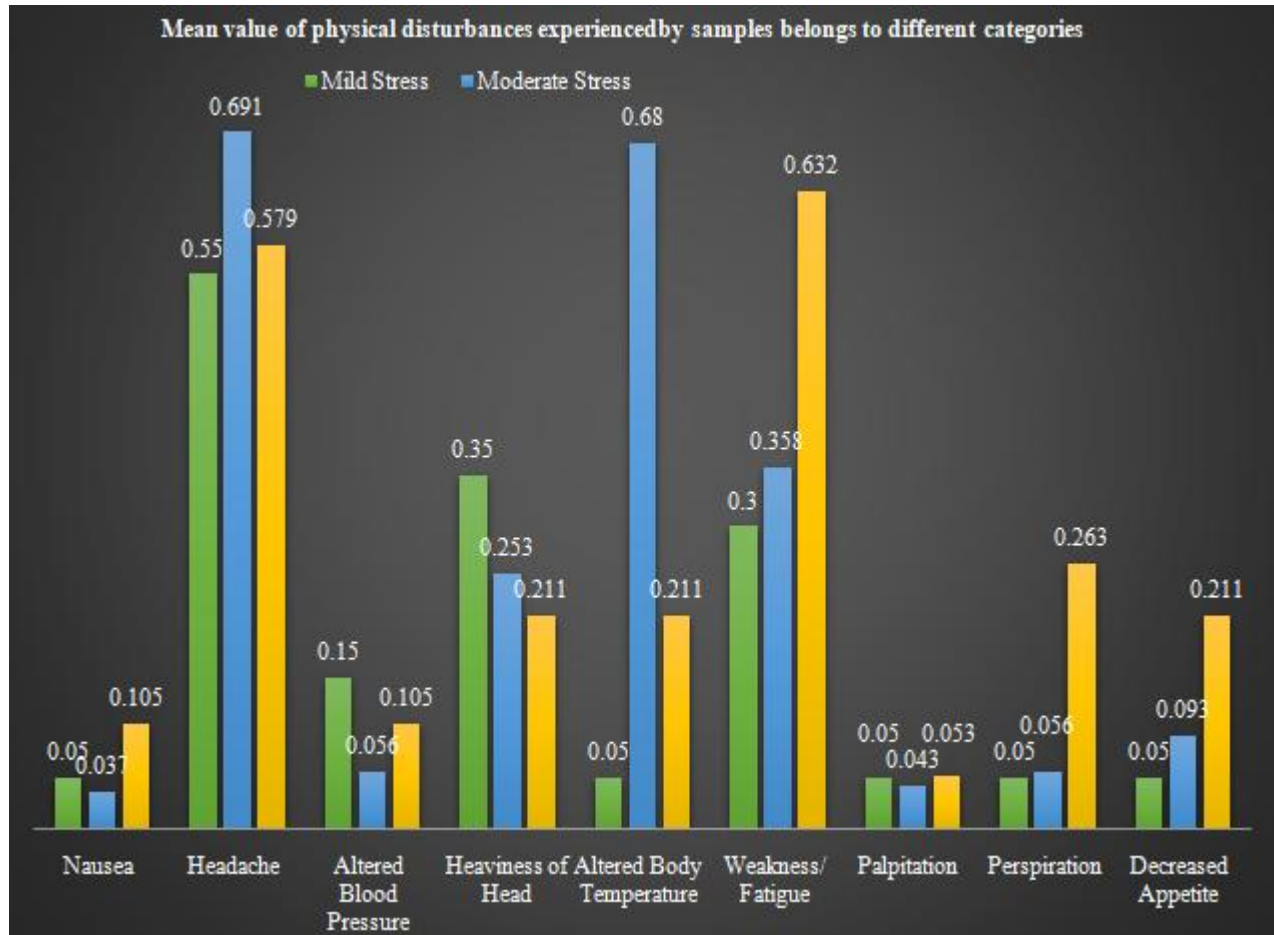
**Table A2.1:** Mean value of physical Disturbances associated with stress level found among samples:

Physical symptoms	Level of stress	N	N of samples suffering from particular Physical Symptoms	Mean	SD
Nausea	Mild Stress	20	1	0.050	0.224
	Moderate Stress	162	6	0.037	0.189
	Severe Stress	19	2	0.105	0.315
Headache	Mild Stress	20	11	0.550	0.510
	Moderate Stress	162	112	0.691	0.463
	Severe Stress	19	11	0.579	0.507
Altered Blood Pressure	Mild Stress	20	3	0.150	0.366
	Moderate Stress	162	9	0.056	0.230
	Severe Stress	19	2	0.105	0.315
Heaviness of Head	Mild Stress	20	7	0.350	0.489
	Moderate Stress	162	41	0.253	0.436
	Severe Stress	19	4	0.211	0.419
Altered Temperature	Mild Stress	20	1	0.050	0.224
	Moderate Stress	162	11	0.068	0.252
	Severe Stress	19	4	0.211	0.419
Weakness/ Fatigue	Mild Stress	20	6	0.300	0.470
	Moderate Stress	162	58	0.358	0.481
	Severe Stress	19	12	0.632	0.496
Palpitation	Mild Stress	20	1	0.050	0.224
	Moderate Stress	162	7	0.043	0.204
	Severe Stress	19	1	0.053	0.229
Perspiration	Mild Stress	20	1	0.050	0.224
	Moderate Stress	162	9	0.056	0.230
	Severe Stress	19	5	0.263	0.452
Decreased Appetite	Mild Stress	20	1	0.050	0.224
	Moderate Stress	162	15	0.093	0.291
	Severe Stress	19	4	0.211	0.419

Table A2.1 shows the mean values of particular physical disturbances associated with level of stress.



**Graph A1:** Percentage of given physical Disturbances experienced by samples

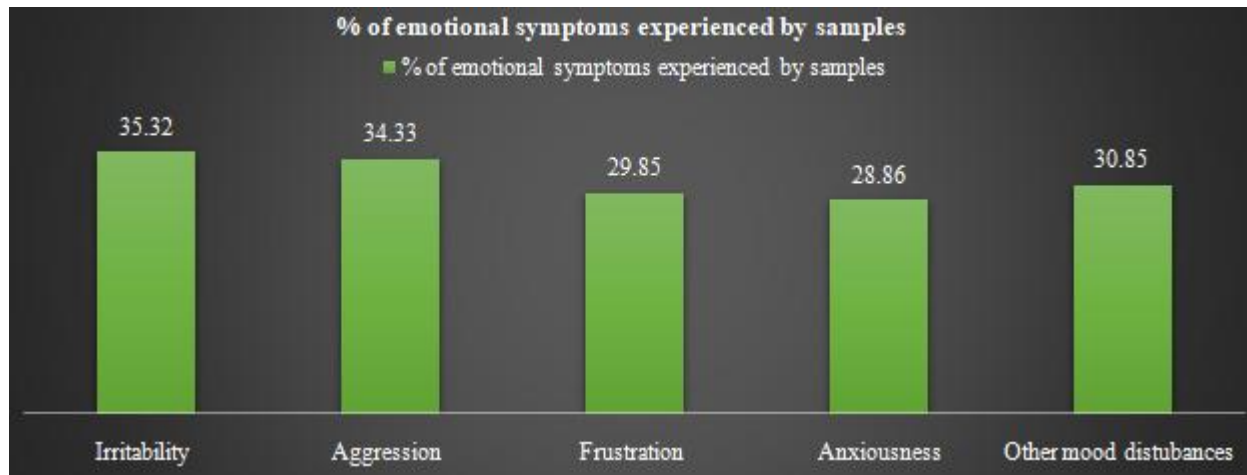


**Graph A2:** Mean value of physical disturbances associated with stress level among samples.

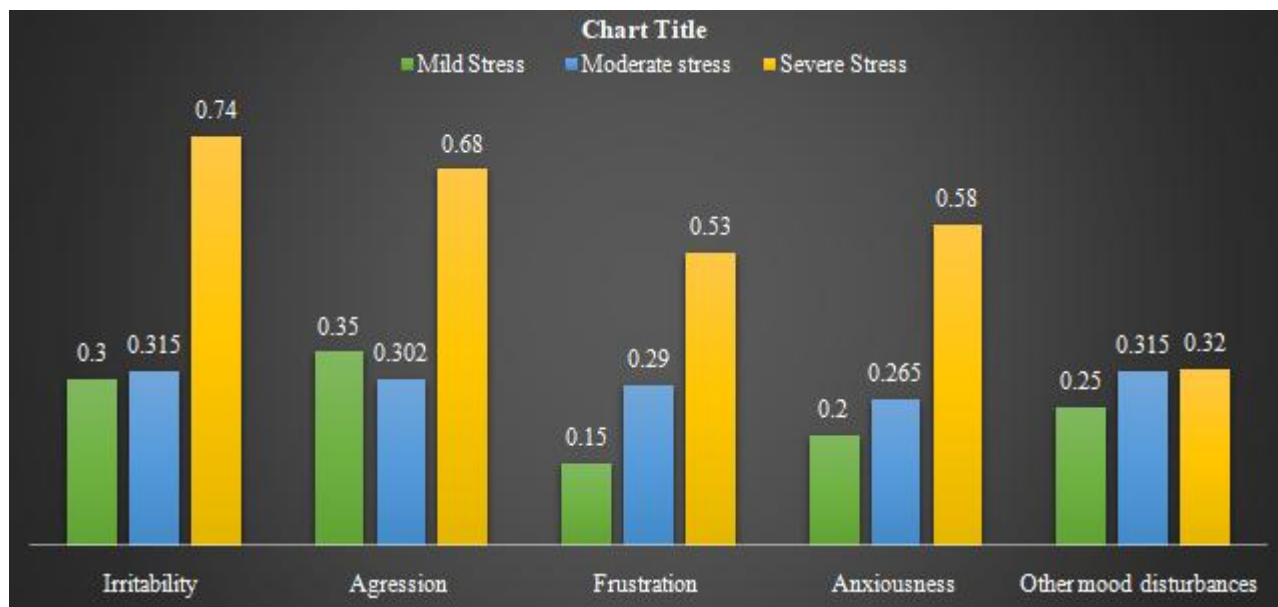
**Table A2.2:** Mean value of physical Disturbances associated with stress level found among samples:

Emotional symptoms	Level of stress	N	N of samples suffering from particular Emotional Disturbances	Mean	SD
Irritability	Mild Stress	20	6	0.300	0.470
	Moderate Stress	162	51	0.315	0.466
	Severe Stress	19	14	0.74	0.452
Aggression	Mild Stress	20	7	0.350	0.489
	Moderate Stress	162	49	0.302	0.461
	Severe Stress	19	13	0.68	0.478
Frustration	Mild Stress	20	3	0.150	0.366
	Moderate Stress	162	47	0.290	0.455
	Severe Stress	19	10	0.53	0.513
Anxiousness	Mild Stress	20	4	0.200	0.410
	Moderate Stress	162	43	0.265	0.443
	Severe Stress	19	11	0.58	0.507
Other mood disturbances	Mild Stress	20	5	0.250	0.444
	Moderate Stress	162	51	0.315	0.466
	Severe Stress	19	6	0.32	0.478

Table A2.1 shows the mean values of particular emotional disturbances associated with level of stress.



Graph B1: Percentage of given emotional disturbances experienced by samples



Graph B2: Mean value of emotional disturbances associated with stress level among samples

Table C: Correlation, t - score and p value between level of stress and Physical disturbances experienced by samples:

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.169	44.285	<0.0001
Physical disturbances experienced by samples		1.72	1.185			

p<0.0001: HS (statistically highly significant)

**C 1.1: Mild stress**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	20	8.950	3.120	0.338	9.5785	<0.0001
Physical disturbances experienced by samples		1.6	1.429			

p<0.0001: HS (statistically highly significant)

**C 1.2: Moderate stress**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	162	19.759	3.136	0.077	71.4782	<0.0001
Physical disturbances experienced by samples		1.49	0.865			

p<0.0001: HS (statistically highly significant)

**C 1.3: Severe stress**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	19	30.32	2.473	- 0.054	46.0607	<0.0001
Physical disturbances experienced by samples		1.65	1.116			

p<0.0001: HS (statistically highly significant)

Table C shows the Mean, SD, correlation, t - score and p - value of physical symptoms experienced by samples associated with level of stress.

**Symptoms wise correlation and Significant difference:**

**C 2.1: Nausea**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.081	49.4553	<0.0001
Nausea		0.04	0.207			

**C 2.2: Headache**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.045	47.7331	<0.0001
Headache		0.67	0.473			

**C2.3: Altered Blood Pressure**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.019	49.3625	<0.0001
Altered Blood Pressure		0.07	0.255			

**C2.4: Heaviness of head**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	- 0.086	48.786	<0.0001
Heaviness of head		0.26	0.439			

**C 2.5: Altered body Temperature**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.099	49.3308	<0.0001
Altered body Temperature		0.08	0.271			

**C 2.6: Weakness/ Fatigue**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.178	48.4518	<0.0001
Weakness/ Fatigue		0.38	0.486			

**C 2.7: Palpitation**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.021	49.4553	<0.0001
Palpitation		0.04	0.207			

**C 2.8: Perspiration**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.168	49.3593	<0.0001
Perspiration		0.07	0.263			

**C 2.9: Decreased Appetite**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.111	49.2676	<0.0001
Decreased Appetite		0.10	0.300			

**Table D:** Correlation, t - score and p value between level of Sleep Satisfaction and Physical Disturbances experienced by samples:

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.072	26.8518	<0.0001
Physical Disturbances experienced by samples		1.72	1.185			

p<0.0001: HS (statistically highly significant)

**D1.1: Mild stress**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	20	7.050	1.959	0.158	10.0516	<0.0001
Physical Disturbances experienced by samples		1.6	1.429			

p<0.0001: HS (statistically highly significant)

**D1.2: Moderate stress**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	162	6.444	2.112	0.005	27.6278	<0.0001
Physical Disturbances experienced by samples		1.49	0.865			

p<0.0001: HS (statistically highly significant)

**D1.3: Sever stress**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	19	4.89	2.052	- 0.530	6.0461	<0.0001
Physical disturbances experienced by samples		1.65	1.116			

p<0.0001: HS (statistically highly significant)

Table D shows the Mean, SD, correlation, t - score and p - value of physical symptoms experienced by samples associated with level of sleep satisfaction.

**Symptoms wise correlation and Significant difference:**

**D 2.1: Nausea**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	0.088	41.6044	<0.0001
Nausea		0.04	0.207			

**D 2.2: Headache**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	0.025	36.7457	<0.0001
Headache		0.67	0.473			

**D 2.3: Altered Blood Pressure**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.092	41.3081	<0.0001
Altered Blood Pressure		0.07	0.255			

**D 2.4: Heaviness of head**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	0.018	38.5218	<0.0001
Heaviness of head		0.26	0.439			

**D 2.5: Altered body Temperature**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.084	41.2052	<0.0001
Altered body Temperature		0.08	0.271			

**D 2.6: Weakness/ Fatigue**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.030	38.5693	<0.0001
Weakness/ Fatigue		0.38	0.486			

**D 2.7: Palpitation**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.048	41.6044	<0.0001
Palpitation		0.04	0.207			

**D 2.8: Perspiration**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	0.006	41.2897	<0.0001
Perspiration		0.07	0.263			

**D 2.9: Decreased Appetite**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.180	41.0012	<0.0001
Decreased Appetite		0.10	0.300			

**Table E:** Correlation, t - score and p value between level of stress and Emotional Symptoms experienced by samples:

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.421	44.943	<0.0001
Emotional Disturbances experienced by samples		1.59	0.96			

p<0.0001: HS (statistically highly significant)

**E 1.1: Mild stress**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	20	8.950	3.120	0.275	10.9269	<0.0001
Emotional Disturbances experienced by samples		1.250	0.444			

p<0.0001: HS (statistically highly significant)

**E1.2: Moderate stress**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	162	19.759	3.136	0.254	71.4782	<0.0001
Emotional Disturbances experienced by samples		1.49	0.865			

p<0.0001: HS (statistically highly significant)

**E1.3: Severe stress**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	19	30.32	2.473	0.221	43.4797	<0.0001
Emotional Disturbances experienced by samples		2.84	1.214			

p<0.0001: HS (statistically highly significant)

**Symptoms wise correlation and Significant difference:**

**E 2.1: Irritability**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.263	48.5322	<0.0001
Irritability		0.35	0.479			

**E 2.2: Aggression**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.175	48.5595	<0.0001
Aggression		0.34	0.476			

**E 2.3: Frustration**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.246	48.672	<0.0001
Frustration		0.30	0.459			

**E 2.4: Anxiousness**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	0.206	48.7006	<0.0001
Anxiousness		0.29	0.454			

**E 2.5: Other mood symptoms**

Variable	N	Mean	SD	r	t score	p value
Level of Stress	201	19.682	5.627	- 0.025	48.6441	<0.0001
Other mood symptoms		0.31	0.463			

Table E shows the Mean, SD, correlation, t - score and p - value of physical symptoms experienced by samples associated with level of sleep satisfaction.

**Table: F -** Correlation, t - score and p value between level of sleep satisfaction and Emotional Disturbances experienced by samples:

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.14	28.7872	<0.0001
Emotional Disturbances experienced by samples		1.59	0.96			

p<0.0001: HS (statistically highly significant)



**F 1.1: Mild stress**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	20	7.050	1.959	0.045	12.9131	<0.0001
Emotional Disturbances experienced by samples		1.250	0.444			

p<0.0001: HS (statistically highly significant)

**F 1.2: Moderate stress**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	162	6.444	2.112	0.013	27.6278	<0.0001
Emotional Disturbances experienced by samples		1.49	0.865			

p<0.0001: HS (statistically highly significant)

**F 1.3: Severe stress**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	19	4.89	2.052	- 0.453	3.7479	<0.001
Emotional Disturbances experienced by samples		2.84	1.214			

p<0.001: HS (statistically highly significant)

**Symptoms wise correlation and Significant difference:**

**F 2.1: Irritability**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	0.003	38.79	<0.0001
Irritability		0.35	0.479			

**F 2.2: Aggression**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	0.095	38.8661	<0.0001
Aggression		0.34	0.476			

**F 2.3: Frustration**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.033	39.1891	<0.0001
Frustration		0.30	0.459			

**F 2.4: Anxiousness**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.168	39.274	<0.0001
Anxiousness		0.29	0.454			

**F 2.5: Other Mood Symptoms**

Variable	N	Mean	SD	r	t score	p value
Level of Sleep Satisfaction	201	6.358	2.143	- 0.188	39.1094	<0.0001
Other Mood Symptoms		0.31	0.463			

Table F shows the Mean, SD, correlation, t - score and p - value of emotional symptoms experienced by samples associated with level of sleep satisfaction.

**G: Correlation, t - score and p value between Physical disturbances and Emotional disturbances experienced by samples:**

Variable	N	Mean	SD	r	t score	p value
Physical disturbances	201	1.72	1.185	0.4777	1.208	>0.05
Emotional disturbances		1.59	0.961			

p>0.05: NS (Not significant)

Table G shows the Mean, SD, correlation, t - score and p - value of physical disturbances experienced by samples associated with emotional disturbances.

Table A2.1 and graph A1 & A2 shows the mean values of physical disturbances associated with stress level. In that it has been shown that the most common symptom identified with association of stress is headache. Headache seems to be very common problem associated with all the levels of stress. The second most common problem identified was fatigue and third most common problem was heaviness of head. There are very few evidences of nausea, altered blood pressure, altered body temperature, palpitation, perspiration

**4. Discussion**

**O1: To find out find - out the physical disturbances among persons associated with P P Savani University.**

and decreased appetite. But as compared with mild and moderate stress perspiration is seem to be common in person suffering from severe stress. With mild and moderated stress headache is highest reported symptom whereas with severe stress fatigue and headache are commonly reported symptoms.

### **O2: To find out find - out the emotional disturbances among persons associated with P P Savani University.**

Table A2.2 and graph B1 & B2 shows the mean values of emotional disturbances associated with stress level. In that it has been shown that the most common symptom identified with association of stress was irritability, aggression, other mood disturbances and then frustration and lastly anxiety respectively. It seems that with severe mood disturbances there are more emotional disturbances as compared with mild and moderate stress. In samples with severe stress irritability is most common symptom whereas with moderate stress irritability and other mood disturbances are most common and with mild stress aggression is most commonly associated symptom.

### **H<sub>1</sub>: There will be significant impact of stress over physical and emotional disturbances.**

Table C shows the mean, SD, correlational and t - test values of physical disturbances associated with level of stress. The r value is found out 0.169 which shows the positive correlation between level of stress and physical disturbances experienced by person. Although it is very low correlational value but stress level is positively associated with physical disturbances. The calculated t - value 44.285 is more than tabulated t - value for the given samples which is significant at <0.0001 level which means the physical disturbances are statistically highly significant with level of stress.

#### **Mild Stress:**

Table C1.1 shows the mean, SD, correlational and t - test values of physical disturbances associated with mild level of stress. The r value is found out 0.338 with mild level of stress which shows the positive correlation between level of stress and physical disturbances experienced by person which means as the level of stress increases the number of physical disturbances also increases. The calculated t - value 9.5785 is more than tabulated value for the given samples which is significant at <0.0001 level which means the physical disturbances are highly associated with mild level of stress.

#### **Moderate Stress:**

Table C1.2 shows the mean, SD, correlational and t - test values of physical disturbances associated with moderate level of stress. The r value is found out 0.077 which shows the positive correlation between level of stress and physical disturbances experienced by person. The correlation which is identified is very low even negligible so we can say that with moderate stress there is not much changes across physical disturbances and the physical disturbances may be present because of any other reason. The calculated t - value 9.5785 is more than tabulated t - value for the given samples which is significant at <0.0001 level which means the physical disturbances are statically highly significant with level of stress.

#### **Severe stress:**

Table C1.3 shows the mean, SD, correlational and t - test values of physical disturbances associated with severe level of stress. The r value is found out - 0.054 which shows the negative correlation between level of stress and physical disturbances experienced by person. The correlation which is identified is very low even negligible so we can say that with moderate stress there is not much changes across physical disturbances and the disturbances may be present because of any other variables. The calculated t - value 46.0607 is more than tabulated t - value for the given samples which is significant at <0.0001 level which means the physical disturbances are highly associated with level of stress.

#### **Stress level associated with particular physical disturbances:**

Table C2 shows the mean, SD, correlational and t - values of given samples for a specific symptom which shows the very low or very negligible correlation with vomiting, headache, altered blood pressure, altered body temperature which means the presence of particular symptoms can be because of any other factors and not the stress but very low and negligible negative correlation with heaviness of head and low but considerable positive correlation with weakness/fatigue, palpitation, perspiration and decreased appetite which means stress is having particular impact over the bodily functions specific impact related to autonomic symptoms including perspiration and palpitation and appetite related issues.

Table E shows the mean, SD, correlational and t - test values of emotional disturbances associated with level of stress. The r value is found out 0.421 which shows the positive correlation between level of stress and emotional disturbances experienced by person. The correlation between level of stress and emotional disturbances is found high positive correlation which means as the level of stress increases the amount of emotional disturbances also increases that means stress shows the high impact over emotional disturbances. The calculated t - value 44.943 is more than tabulated t - value for the given samples which is significant at <0.0001 level which means the emotional disturbances are statistically highly significant with level of stress.

#### **Mild Stress:**

Table E1.1 shows the mean, SD, correlational and t - test values of emotional disturbances associated with mild level of stress. The r value is found out 0.275 with mild level of stress which shows the considerable positive correlation between level of stress and physical disturbances experienced by person which means as the level of stress increases the number of emotional disturbances also increases. The calculated t - value 10.9269 is more than tabulated t - value for the given samples which is significant at <0.0001 level which level which shows the high significance of the study.

#### **Moderate Stress:**

Table E1.2 shows the mean, SD, correlational and t - test values of emotional disturbances associated with moderate level of stress. The r value is found out 0.254 which shows

the considerable positive correlation between level of stress and emotional disturbances experienced by person. The correlation which is identified is considerable so we can say that with moderate stress as the level of stress increases the number of emotional disturbances also increases. The calculated t - value 71.4782 is more than tabulated t - value for the given samples which is significant at  $<0.0001$  level which shows the high significance of the study.

#### Severe stress:

Table E1.3 shows the mean, SD, correlational and t - test values of emotional disturbances associated with severe level of stress. The r value is found out 0.221 which shows the positive correlation between level of stress and emotional disturbances experienced by person. The correlation is considerable so we can say that with moderate stress there are changes across emotional disturbances. The calculated t - value 46.0607 is more than tabulated t - value for the given samples which is significant at  $<0.0001$  level which shows the high significance of the study.

#### Stress level associated with particular emotional disturbances:

Table E2 shows the mean, SD, correlational and t - values of given samples for a specific symptom which shows the very considerable positive correlation with emotional disturbances like; irritability, aggression, frustration and anxiousness which means the level of stress affects person's emotions and there is very low and negligible negative correlation with other mood symptoms that shows very few people can have other emotional disturbances apart from above mentioned disturbances.

#### H<sub>2</sub>: There will be significant impact of level of sleep satisfaction over physical and emotional disturbances.

Table D shows the mean, SD, correlational and t - test values of physical disturbances associated with level of sleep satisfaction. The r value is found out - 0.072 which is very low and even negligible negative correlation which means the physical symptoms may present because of any other factors and not because of level of sleep satisfaction. The calculated t - value 26.851 is more than tabulated t - value for the given samples which is significant at  $<0.0001$  level which means the physical disturbances are statistically highly significant with level of sleep satisfaction.

#### Mild Stress:

Table D1.1 shows the mean, SD, correlational and t - test values of physical disturbances associated with level of sleep satisfaction. The r value is found out 0.158 which is low but considerable positive correlation which means with the mild stress as the level of sleep satisfaction increases the emotional symptoms are also increasing which means over sleeping with low level of stress can impact person's physiological disturbances. The calculated t - value 10.0516 is more than tabulated t - value for the given samples which is significant at  $<0.0001$  level which means the physical disturbances are statistically highly significant with level of sleep satisfaction.

#### Moderate Stress:

Table D1.2 shows the mean, SD, correlational and t - test values of physical disturbances associated with level of sleep

satisfaction. The r value is found out 0.005 which is very low and even negligible positive correlation which means with moderate stress level the physical symptoms may present because of any other factors and not because of level of sleep satisfaction. The calculated t - value 27.6278 is more than tabulated t - value for the given samples which is significant at  $<0.0001$  level which means the physical disturbances are statistically highly significant with level of sleep satisfaction.

#### Severe stress:

Table D1.3 shows the mean, SD, correlational and t - test values of physical disturbances associated with level of sleep satisfaction. The r value is found out - 0.53 which is high negative correlation which means with the severe stress level physical disturbances and increasing and as the level of sleep satisfaction decreases; the more physical fatigue is seen with increasing stress level. The calculated t - value 6.0461 is more than tabulated t - value for the given samples which is significant at  $<0.0001$  level which means with severe stress level the physical disturbances are statistically highly significant with level of sleep satisfaction.

#### Level of sleep satisfaction associated with particular physical disturbances:

Table D2 shows the mean, SD, correlational and t - values of given samples for a specific symptom which shows the very low positive correlation with physical disturbances like; nausea, headache, heaviness of head and perspiration; and it shows very low negative correlation with altered blood pressure, altered body temperature weakness/ fatigue, palpitation and decreased appetite which shows in general sleep satisfaction is not much correlated and these symptoms are mainly present because of stress level.

Table F shows the mean, SD, correlational and t - test values of emotional disturbances associated with level of sleep satisfaction. The r value is found out - 0.14 which shows the considerable negative correlation between level of sleep satisfaction and emotional disturbances experienced by person. The considerable negative correlation between level of stress and emotional disturbances shows that as the level of sleep satisfaction increases the level of emotional disturbances decreases that means a good sleep can reduce emotional burden. The calculated t - value 28.787 is more than tabulated t - value for the given samples which is significant at  $<0.0001$  level which means the emotional disturbances are statistically highly significant with level of sleep disturbances.

#### Mild Stress:

Table F1.1 shows the mean, SD, correlational and t - test values of emotional disturbances of people with mild stress associated with level of sleep satisfaction. The r value is found out 0.045 which shows the very low even negligible correlation between level of sleep satisfaction and emotional disturbances experienced by person which the sleep satisfaction does not improve emotional disturbances in person with mild level of stress. The calculated t - value 12.9131 is more than tabulated t - value for the given samples with mild stress which is significant at  $<0.0001$  level which means the emotional disturbances are

statistically highly significant with level of sleep disturbances.

#### **Moderate Stress:**

Table F1.2 shows the mean, SD, correlational and t - test values of emotional disturbances of people with moderate stress level associated with level of sleep satisfaction. The r value is found out 0.013 which shows the very low even negligible correlation between level of sleep satisfaction and emotional disturbances experienced by person which means the sleep satisfaction does not improve emotional disturbances in person with mild level of stress. The calculated t - value 27.6278 is more than tabulated t - value for the given samples with moderate stress which is significant at <0.0001 level which means the emotional disturbances are statistically highly significant with level of sleep disturbances.

#### **Severe stress:**

Table F1.3 shows the mean, SD, correlational and t - test values of emotional disturbances of people with severe stress associated with level of sleep satisfaction. The r value is found out - 0.453 which shows the high negative correlation between level of sleep satisfaction and emotional disturbances experienced by person which means the sleep satisfaction helps to improve emotional disturbances in person with severe level of stress. The calculated t - value 3.7479 is more than tabulated t - value for the given samples with severe stress which is significant at <0.001 level which means the emotional disturbances are statistically highly significant with level of sleep disturbances.

#### **Level of sleep satisfaction associated with particular emotional disturbances:**

Table F2 shows the mean, SD, correlational and t - values of given samples for a specific symptom which shows the very low positive even negligible with irritability and aggression, low negative and negligible with frustration and considerably negative with anxiety and other mood disturbances. This shows increase amount of sleep satisfaction helps to improve the symptoms like anxiety and other mood disturbances but that does not found effective with other emotional disturbances.

As per the study it is found that with mild level of stress there is increase in physical disturbances as compared to emotional disturbances and there is found comparatively more sleep satisfaction as increase in physical disturbances but there is no correlation between emotional disturbances and stress level. With moderate level of stress there not much impact over physical disturbances but there is positive correlation between level of stress and emotional disturbances but no correlation with sleep satisfaction. Lastly with severe stress it is found that there are major physical as well as emotional disturbances and sleep satisfaction helps to improve the physical as well as emotional disturbances. A good sleep can improve physical and emotional health.

**O3: To assess the impact of physical disturbances over emotional disturbances among people associated with P P Savani University.**

**H<sub>3</sub>: There will be correlation between psychical and emotional disturbances of person suffering from stress.**

Table G shows the mean value, standard deviation, correlation and significant association of physical and emotional disturbances faced by sample which shows positive correlation between physical and emotional disturbances which means as there is increase in physical disturbances that leads to increase in emotional disturbances. There is no significant difference between physical disturbances and emotional disturbances which means they are closely related with each other.

## **5. Conclusion**

During this study it has been found that level of stress can affect the level of sleep satisfaction. As well as level of stress increases there is closer association of emotional and physical disturbances has identified, and amount of sleep satisfaction helps to reduce certain emotional symptoms. There is found more prevalence of physical symptoms in starting but as the level of stress increased the emotional disturbances also increases as compared to the physical disturbances.

#### **Practical implications:**

- This study will be further useful for students, clinicians and academicians in correlating various factors associated with sleeping disturbances and level of stress faced by person belonging to different demographical variables.
- This study will helpful for leaders and managers in assigning task to person and organizing various stress management coping strategies related programs in corporate sectors and also associate the physical and emotional symptoms so that management of stress can be done easily on early basis.
- Further it will use to correlate early physical and emotional symptoms associated with stress level.
- It will also use to know how sleep satisfaction helps to reduce the stress and how over sleeping can lead to fatigue.
- Further this study will act as a base for new research studies focuses upon treatment measures.

## **6. Future Suggestions**

- This study has conducted over small group of population and is limited to the people working in P P Savani University. The study can be conducted over expansive group of population.
- The study can be further done by using various treatment measures.
- This study can be used as a base of identifying various causes and symptoms associated with stress and related conditions.
- The study will help to guide the students

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