

A Quantitative Analysis of Sudden Rise in Suicide Rates Among Young Doctors - An Impact created by their Sleep Quality and Occupational Stress.

Sonali Ojha

PhD Scholar, Department of Psychology
Lingayas Vidyapeeth, Haryana, India

Abstract

According to WHO, suicide is the third major cause of death in the world. A person taking an oath to save lives ends up in taking one's own. Many analysis and researches are conducted after every suicide, of a young doctor. In most of the cases depression is found to be the major cause, but factors leading to depression remain vague or not investigated enough. The impact of sleep quality and occupational stress can be considered to be the major factors, along with personal reasons leading to depression and in severe cases death by suicide. Since the health industry is overburdened and the doctor-patient ratio is almost 1:1000 (WHO) the quantitative analysis is negligible and is fueled by a preconceived notion that doctors should be available 24 by 7. This study mainly targets the age group between 30- 45 years.

Keywords: Suicide rates, young doctors, Sleep quality, Occupational stress.

I. Introduction-

“Young doctor found dead in Ernakulam”- reported by The Hindu, and many other leading media houses on 16th August 2025. On 9th July 2025, another doctor jumped off Mumbai's Attal Setu was reported by Times of India. Every other day the news channels and papers are reporting news after another. It's everywhere in the social media, many post their opinion, innumerable debates and research has been done but in this overburdened health industry everything is short lived and forgotten soon. Studies states that doctors have higher prevalence of committing suicide than the general population or any other professionals. The burden of being in a novel profession and over exaggerated self-esteem often creates a wide gap between them and the common man. This study aims to understand, evaluate and recommend suitable ways to manage the levels of occupational stress caused due to the quality of sleep a resident doctor gets due to a challenging profession. Sleep quality not only affects physically but also mentally as it affects individual performance. Sleep is one of the basic needs of human beings and it's important to their health. We see most of the doctors face this unfortunate condition but mostly remain in denial mode. Many times they know and try to compensate, but their efforts go in vain. Though the doctors are trained professionals who know how to work in a high stress environment and deal with their occupational stress, some of them fall prey to the vulnerable situation. Psychologists treating doctors suffering from anxiety, stress, and depression often report that their poor sleep quality and high level of stress are the main

components of their deteriorating mental and physical health. Doctor's stress has an impact on their health and the doctor's satisfactory level ultimately affects the care quality of patients. Most of the resident doctors try to underplay their emotional well-being. They find their occupational stress level and poor sleep quality a very natural thing and would never affect the quality of their performance but this rarely happens. Sleep quality of young doctors not only determines their career progression but is also important in determining long term effect on cognitive, psychosocial, professional behavioral as well as physical health of individuals. There are not enough studies to assess sleep quality of young doctors. It is necessary to evaluate the condition. This study aims to find out the prevalence of poor sleep quality among young doctors even though in the modern world sleep is often ignored. Another important thing is perceived stress or occupational stress affecting the emotional autonomy, which is always undermined. There is a common belief that doctors would definitely have work stress as any other profession, but is it thought that there is a difference between other professions and medicine? You will have a certain level of stress in your job, but what are the parameters that lead you to the threshold? High levels of distress leading to poor cognitive function can be disastrous for young doctors who thrive to excel in their field. It's high time that medical practitioners acknowledge and admit that poor sleep quality and occupational stress are acting as slow poison, enough to take their own life.

II. Review of Literature-

Medicine and health sector is predominantly stressful with abnormal working hours, moral dilemmas, difficult patients, their worried family members and their contradictory demands. Doctors are on 24 hrs. Duty, actually and most of the time they have almost negligible emotional autonomy and authority over their working condition. This definitely effects their craft and their outcomes. Over that effect of poor quality of sleep and occupational stress have adverse effect on their mental health and might result in frustrations, burnout and anger and in extreme cases suicide.

A study on assessment of sleep quality in postgraduate residents in a tertiary hospital and teaching institute was done by Vasantameghna Srinivasa Murthy and Ajita Sunil Nayak in January 2014. Their study found that a significant number of residents at the institute were experiencing poor sleep, more day time sleepiness, were less satisfied with life and were likely to use substances of addictive potential at some time during their residence. Sleep deprivation and drowsiness of medical residents and medical students. This study was conducted by Katia Sheylla Malta Purim and Tereza Bittencourt Guimaraes in Curitiba- Parana in the year 2013. Research shows that residents have an average of six hours of sleep per night which is lower than the average adult population. There is a reduction in the quality of life standards and raise of depression and anxiety. Sleep Quality among residents and fellows in Rajavithi Hospital. This study was carried out by Charuvan Manmee, Kanya Janpol, Krissana Arsayot and Polypassorn Ainwan for Medical research department of Rajavithi Hospital, Bangkok in the year 2015. Univariate analysis showed a significant association between poor sleep quality and second year of study, shifting work schedule, physical and environmental factors and stress. There was no association with accommodation or consumption of tea or coffee. But changing work schedules and stress were associated with poor sleep quality. The prevalence and association of stress with sleep quality among medical students. This study was published online on 16th April 2019 by Abdullah I. Almojali, Sami A. Almalki, Ali S. Alothman, Eman M. Masudi, Meeshal K. Alaqueel for Ministry of Saudi Arabia. The study documents a statistically significant association between stress and poor sleep quality. A recommendation of appointing counselors for the medical students were given to strengthen their study skills and ability to cope with their

occupational stress. Influence of work characteristics on association between doctor's stress and sleep quality. This issue was published in 2020 in European Journal of Molecular and Clinical Medicine. This was studied by Shivani P. Lanjewar, Shravani G. Deolia, Rituj N. Waghmare, Surbhi R. Kankaria, Simran D. Badki and Shivani D. Jaiswal. The study was designed with aim of assessing the influence on work characteristics of the association between doctor's stress and sleep quality. Occupational stress experienced by residents and faculty physicians on night shifts. This study was jointly conducted by Feridye Caliskan Tur, Ibrahim Toker, Cafer Tayyar Sasmaz, Serkan Hacar and Burcu Ture. This study emphasized the fact that occupational stress is an undesired factor causing discomfort for healthcare workers. Stressors can lead to dissatisfaction and in turn can affect patient care adversely. A cross-sectional study involving medical undergraduates at one medical school in the city of Botucatu, Brazil. All first- to sixth-year students were invited to complete the Pittsburgh Sleep Quality Index, which has been validated for use in Brazil. Suicide among Indian Doctors by Kishore, M, Chandran concluded that majority are reported to be depressed and use lethal methods such as hanging and medications. The Guardian reported on 6th September that US surgeons are killing themselves at an alarming rate.

III. Research Gaps-

- Depression is believed to be the major cause of suicide among young doctors but can poor sleep and occupational stress lead to depression, more researches are needed to establish the correlation.
- Poor sleep quality for a prolonged period creates mental fatigue, which rises the risk of suicide by almost 35%. Since doctors have little sleep over a long time, it becomes a high risk factor for them. It should be studied at an advanced level and a plausible solution should be found.
- There are very few studies which state the relation between complaints of poor sleep quality and high level of distress leading to suicide even when the person was not depressed.
- Mental health of young doctors are affected due to their sleep quality and perceived stress, stigmatising this fact often leads to brushing away the entire problem. More investigations are needed to state these facts.
- The quality of sleep and distress leads to many physical problems which acts as a vector for suicide ideation. More research is needed in this area.

IV. Aims and Objectives-

- To know the quality of sleep in young doctors.
- To know the quality of occupational stress in young doctors.
- To know the effect of quality of sleep on the occupational stress in young doctors.
- To understand how sleep quality and occupational stress affects the level of depression.
- To understand how depression, poor sleep and high stress raise suicide ideation among young doctors.

V. Research Methods-

A quantitative research method has been used as this is an online survey. Random sampling was done and online google forms have been sent to different medical institutions and hospitals, to doctors belonging to the age group of 30- 45 years. After obtaining the numerical data, a deductive approach has been used to

identify the patterns of suicide ideation and measure the magnitude of poor sleep quality and occupational stress. Quantitative data has also been used to make future predictions.

A. Research Design-

It is an online survey through google forms. Google forms have been sent to different medical institutions and hospitals. Samples were randomly collected from different parts of India. A quantitative research method has been used as the scales used for measurement could be calculated and compared.

B. Sample-

Random sampling was done. Online google forms were sent to different medical institutions and hospitals of India. Out of 150 targets only 80 were selected, as only 85 of them eagerly responded to both the questionnaires used. The rest of them did not respond. Finally 80 forms were selected for study and were equally divided into two genders of male and female, for an easy study. Sample age group is 30- 45 years.

Variables-

Independent Variables- Young Doctors both male and female

Dependent Variables- Quality of sleep (SQS)
Perceived Stress (PSS)

C. Tools / Questionnaire -

Two scales were used to measure the quality of sleep and occupational or perceived scale.

Quality of Sleep Scale- (SQS)

Consisting of 28 items, the SQS evaluates six domains of sleep quality-

Daytime symptoms,
Restoration after sleep,
Problems initiating and maintaining sleep,
Difficulty waking, and
Sleep satisfaction.

Developers created a simple scale that could measure the quality of sleep in persons aged between 18-59 years. It's a simple self-reporting paper-pencil test that takes hardly 5- 10 minutes to complete. A proper permission to use the scale was granted by the developers via e-mail.

Reliability and Validity: An initial psychometric evaluation conducted by Yi and colleagues found an internal consistency of .92, a test-retest reliability of .81. The SQS is strongly correlated with results obtained on the Pittsburgh Sleep Quality Index. Scores achieved by the insomnia sample were significantly higher than those of controls, indicating good construct validity.

The Perceived Stress Scale- (PSS)

The Perceived Stress Scale (PSS) is a classic stress assessment tool, developed in 1983, but is still used for the measurement of stress in individuals. The questions in this scale are about how one felt or thought in a particular way during the last month. It's best to answer the questions quickly to retain the fair chance of proper evaluation. Reliability and validity is well established in this scale as it has been used in innumerable researches for many years.

D. Statistical Analysis

Descriptive statistics- Mean & Standard deviation will be calculated for all variables.

Inferential statistics- Pearson Correlation Coefficient (r) will be used to test the relationship between quality of sleep and perceived stress among young doctors.

A ‘t-test’ will be used to compare the means of two groups (male vs female doctors) on quality of sleep and perceived stress.

E. Data Explanation-

Perceived Stress Scale-

Table-1

Tools / Measures	Variable	Levels	Range of Age
Perceived Stress Scale	1.FemaleDoctors	< 14- low	30 to 45
	2. Male Doctors	< 27- moderate = 40 -high stress	30 to 45
Sleep Quality Scale	1.Female Doctors	0 - 84	30 to 45
	2. Male Doctors	Higher the score acute the sleep problem	30 to 45

According to PSS scoring the following levels of stress are categorized

- 0- 13 Low Stress
- 14- 26 Moderate Stress
- 27-40 High Stress

Female doctors - Out of 108 entries in total 40 female doctors were selected who responded to both the measures and were in the age bracket of 30- 45.

According to PSS scoring we got the following inferences.

a) The data set - 3,3,2,2,2,2,1,2,1,2
Mean- 2

After PSS scoring it was found that
1- 4 no female resident out of 40 belonged to the low stress category.

b) The data set - 11,9,6,6,5,5,11,10,8,7
Mean- 7.5

After PSS scoring it was found that

5-11 no of female doctors out of 40 belonged to the moderate stress category

c) The data set - 23,22,26,30,31,31,21,27,28,27
Mean- 26.5

After PSS scoring it was found that
23-27 no of female doctors out of 40 belonged to the high stress
category.

Standard deviation- Female Doctors σ : 10.496030995889

Male Doctors- Out of 108 entries in total 40 male doctors were selected
who responded to both the measures and were in the age bracket of 30-45

According to PSS scoring we got the following inferences.

a) The data set - 2,3,1,2,1,2,1,3,1,1
Mean- 1.7

After PSS scoring it was found that
1-4 no of male doctors out of 40 belonged to the low stress category

b) The data set - 5,8,6,8,7,5,7,8,11,8
Mean - 7.5

After PSS scoring it was found that -
5-11 no of male doctors out of 40 belonged to the moderate stress category

C) The data set - 22,23,21,23,25,19,20,23,26,14
Mean- 21.6

After PSS scoring it was found that -
14- 26 no of male doctors out of 40 belonged to the high stress
category.

Standard Deviation, σ : 8.3563681637951

Table-2

Tools / Measures	Variables	Mean	Standard deviation
	Female Doctors	Set - 1- 2	
Perceived Stress Scale		Set -2- 7.5	σ :10.496030995889
		Set -3- 26.5	

Tools / Measures	Variables	Mean	Standard deviation
	Male Doctors	Set - 1- 1.7	
Perceived Stress Scale		Set -2- 7.5	σ :8.356368163795
		Set -3- 21.6	

Table-3

t- Test for both variables for Perceived Stress -

Groups	Group -1 (Female)	Group - 2 (Male)
Mean	12.000	10.267
SD	12.855	10.234
SEM	7.422	5.909
N	3	3

Confidence interval:

The mean of Group One minus Group Two equals 1.733

95% confidence interval of this difference: From -24.606 to 28.073

Intermediate values used in calculations:

t = 0.1827

df = 4
 standard error of difference = 9.487

P value and statistical significance:
 The two-tailed P value equals 0.8639
 By conventional criteria, this difference is considered to be not statistically significant.

Sleep Quality Scale - (SQS)

Sleep is essential for a healthy body and mind. Lack of sleep satisfaction in the long term can lead to many mental and physical disorders, which can be disastrous for anyone involved. For doctors it’s a health crisis and hazardous situation which can affect their quick thinking capability and cause emotional disturbance, which in turn may cause absolute harm to their own self and patients involved.

It is a degree to which situations in life are appraised as stressful. It is the extent to which a person perceives that their demands exceed their abilities.

Table-4

Questions	1	2	3	4
Marks	0	1	2	3

Domains - There are 28 questions evaluating six domains of sleep quality -
1. Day time Symptoms - Question no- 10,11,14,15,17,19,21,22,23,24 and 28 comes under this factor.

- 10. Poor sleep gives me a headache.
- 11. Poor sleep makes me irritated.
- 14. Poor sleep makes me lose my appetite.
- 15. Poor sleep makes it hard for me to think.
- 17. Poor sleep makes me lose interest in work or others.
- 19. Poor sleep causes me to make mistakes at work.
- 21. Poor sleep makes me forget things more easily.
- 22. Poor sleep makes it hard to concentrate at work.
- 23. Sleepiness interferes with my daily life.
- 24. Poor sleep makes me lose desire in all things
- 28. Poor sleep makes my life painful.

Female Doctors -

Out of 88 entries 40 Female doctors were selected who responded to both the measures and were in the age bracket of 30-45

According to the SQS questionnaire we got the following data -**Day Time Symptoms** -

Table- 5

Few	Sometimes	Often	Almost Always
0 - Mark	1 - Mark	2 - Marks	3 - Marks
3	7	20	10
2	7	22	9
3	8	21	11
0	9	28	3
0	15	21	4
4	10	24	2
0	14	22	4
0	10	25	5
1	15	19	5
3	14	19	4
2	22	3	3

Restoration after sleep- Question number- 4, 7, 9 and 16 comes under this factor.

- 4.I have difficulty getting back to sleep once I wake up in the middle of night.
- 7. I never go back to sleep after awakening during sleep.
- 9. I feel unlikely to sleep after sleep.

16. I feel vigorous after sleeping.
 According to the SQS questionnaire we got the following data -

Restoration after sleep -

Table- 6

Few	Sometimes	Often	Almost Always
0 - Mark	1- Mark	2 - Marks	3 - Marks
6	8	22	4
10	15	12	3
5	15	16	4
9	25	5	1

Difficulty waking up- Question number 12 and 25 comes under this factor

12. I would like to sleep more after waking up
 25. I have difficulty getting out of bed.

Table- 7

Few	Sometimes	Often	Almost Always
0- Mark	1- Mark	2- Marks	3- Marks
1	4	20	15
0	15	20	5

Problems initiating and maintaining sleep- Question number 1, 2, 3, 5, and 6

1. I have difficulty falling asleep.
 2. I fell into a deep sleep.

- 3. I wake up while sleeping.
- 5. I wake up easily because of the noise.
- 6. I toss and turn.

Table- 8

Few	Sometimes	Often	Almost Always
0- Mark	1- Mark	2- Marks	3- Marks
4	7	24	5
20	10	8	2
3	9	20	8
16	12	8	4
3	10	20	7
10	15	12	3

Sleep satisfaction - Question number - 8,13,18,20,27

- 8. I feel refreshed after sleep.
- 13. My sleep hours are enough.
- 18. My fatigue is relieved after sleep.
- 20. I am satisfied with my sleep
- 27. I have clear head after sleep

Table- 9

Few	Sometimes	Often	Almost Always
0- Mark	1- Mark	2 - Marks	3 - Marks
16	12	8	4

27	9	3	1
5	17	5	13
13	20	5	2
6	20	10	4

Male Doctors -

Out of 88 entries 40 Male resident doctors were selected who responded to both the measures and were in the age bracket of 30-45

According to the SQS questionnaire we got the following data

Day Time Symptoms- Question no- 10, 11, 14, 15, 17,19, 21, 22, 23, 24 and 28 comes under this factor.

- 10. Poor sleep gives me a headache.
- 11. Poor sleep makes me irritated.
- 14. Poor sleep makes me lose my appetite.
- 15. Poor sleep makes it hard for me to think.
- 17. Poor sleep makes me lose interest in work or others.
- 19. Poor sleep causes me to make mistakes at work.
- 21. Poor sleep makes me forget things more easily.
- 22. Poor sleep makes it hard to concentrate at work.
- 23. Sleepiness interferes with my daily life.
- 24. Poor sleep makes me lose desire in all things
- 28. Poor sleep makes my life painful.

Table- 10

Few	Sometimes	Often	Almost Always
0-Mark	1- Mark	2- Marks	3- Marks
0	1	19	20
3	8	25	4

2	13	18	7
1	12	27	0
1	24	14	1
3	26	13	0
2	30	8	0

0	10	28	2
1	21	16	2
4	24	10	2
2	31	6	1

Restoration after sleep- Question number- 4,7,9 and 16 comes under this factor.

4. I have difficulty getting back to sleep once I wake up in the middle of night.

7. I never go back to sleep after awakening during sleep.

9. I feel unlikely to sleep after sleep.

16. I feel vigorous after sleeping.

Table-11

Few	Sometimes	Often	Almost Always
0- Mark	1- Mark	2- Marks	3- Marks
5	10	24	1
10	15	15	0
3	19	18	0
12	24	4	0

Difficulty waking up- Question number 12 and 25 comes under this factor

- 12. I would like to sleep more after waking up
- 25. I have difficulty getting out of bed.

Table- 12

Few	Sometimes	Often	Almost Always
0- Mark	1- Mark	2- Marks	3- Marks
0	2	25	13
2	14	24	0

Problems initiating and maintaining sleep- Question number 1, 2, 3, 5, and 6

- 1. I have difficulty falling asleep.
- 2. I fell into a deep sleep.
- 3. I wake up while sleeping.
- 5. I wake up easily because of the noise.
- 6. I toss and turn.

Table- 13

Few	Sometimes	Often	Almost Always
0- Mark	1- Mark	2- Marks	3- Marks
3	10	25	2
2	14	22	2
3	21	13	3
4	11	24	1
5	22	11	2
10	15	15	0

Sleep Satisfaction - Question number - 8,13,18,20,27 comes under this factor.

Table- 14

Few	Sometimes	Often	Almost Always
0- Mark	1- Mark	2- Marks	3- Marks
20	9	10	1
32	7	1	0
4	25	6	5
21	17	1	1
3	14	19	4

Means of all domains of sleep quality scale of female doctors-

Table- 15

Tools / Measures	Variables	Means of all domain	Standard deviation
SQS Day Time Sleepiness	Female Doctors	77 78 83 74 69 64 70 75 68 64 37 Mean- 69	σ: 11.59
Restoration After Sleep		56 72 61 82 Mean- 67.75	σ: 10.059
Difficulty Waking Up		89 70 Mean- 79.5	σ: 9.5
Problems Initiating And Maintaining Sleep		70 32 73 40 77 48 Mean- 56.66	σ: 17.41
Sleep Satisfaction		80 102 54 84 68	σ: 16.06

		Mean- 77.6	
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Table- 16

If we analyze the above data of 40 Female Doctors we find the following mean scores

Day Time Symptoms	69
Restoration After Sleep	67.75
Difficulty Waking Up	79.5
Problems Initiating and Maintaining Sleep	56.66
Sleep Satisfaction	77.6

As we know the score ranges from 0 to 84, with higher scores denoting more acute sleep problems. Since the score lies between **56.66 to 79.5** we can conclude that Female doctors might have acute sleep problems.

Means of all domains of sleep quality scale of male doctors-

Table- 17

Tools / Measures	Variables	Means of all domain	Standard deviation
SQS Day Time Sleepiness	Male Doctors	99	σ: 14.85
		70	
		70	
		66	
		55	
		52	
		46	
		72	
		59	
		50	
		Mean- 62.27	
		59	

Restoration After Sleep		75 65 88 Mean- 71.5	σ: 10.9857
Difficulty Waking Up		91 62 Mean- 76.5	σ: 14.5
Problems Initiating And Maintaining Sleep		66 78 56 62 50 45 Mean- 59.5	σ: 10.8282
Sleep Satisfaction		88 111 68 98 56 Mean- 84.2	σ: 19.903

If we analyze the above data of 40 Male Doctors we find the following mean scores

Table- 18

Day Time Symptoms	62.27
Restoration After Sleep	71.5
Difficulty Waking Up	76.5
Problems Initiating and Maintaining Sleep	59.5

Sleep Satisfaction	84.2
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As we know the score ranges from 0 to 84, with higher scores denoting more acute sleep problems. Since the score lies between **62.27 to 84.2** we can conclude that Male doctors might have acute sleep problems.

t- Test for both variables for Sleep Quality Scale

Table- 19

Groups	Female	Male
Mean	70.1140	70.7940
SD	9.1225	10.1611
SEM	4.0797	4.5442
N	5	5

Confidence interval:

The mean of Group One minus Group Two equals -0.6800
 95% confidence interval of this difference: From -14.7624 to 13.4024
 Intermediate values used in calculations:

t = 0.1114

df = 8

standard error of difference = 6.107

P value and statistical significance:

The two-tailed P value equals 0.9141

By conventional criteria, this difference is considered to be not statistically significant.

A. Pearson Coefficient Correlation Test between PSS and SQS

The correlation coefficient value always lies between -1 and +1. If the correlation coefficient value is positive, then there is a similar and identical relation between the two variables. Else, it indicates the dissimilarity between the two variables. The covariance of two variables divided by the product of their standard deviations gives Pearson’s correlation coefficient. It is usually represented by ρ (rho).

$$\rho(X,Y) = \text{cov}(X,Y) / \sigma_X \cdot \sigma_Y.$$

Here, cov is the covariance. σ_X is the standard deviation of X, and σ_Y is the standard deviation of Y. The given equation for the correlation coefficient can be expressed in terms of means and expectations. The correlation coefficient was found between the PSS and SQS by Pearson's correlation coefficient method. It was found to be low. **p-value = -0.38.**

VI. Major Findings-

- Abnormal sleeping hours for a very long period of time give rise to the development of general anxiety disorder which in turn gives rise to many other mental issues.
- The change in sleep timings in the long run changes the sleep- wake cycle which is not good for the cognitive functions, expected from a health care professional.
- While conducting this study it was seen that there is no major difference between the sleep quality of male and female doctors. Both genders face the same amount of sleep deprivation.
- Acute sleep problems change to mental fatigue, which affects the doctor- patient relationship, which can increase the rate of errors in treatment.
- Sleep deprivation can make the doctors impatient, irritable and develop anger issues, which does not work in the favour of their over exaggerated image in the society.
- After analysing the perceived stress scale it was found that most of the young doctors are highly stressed by the virtue of their profession.
- Long working hours, no positive feedback from seniors or patient parties, irregular lifestyle etc develops high levels of distress in young doctors.
- Unable to decide quickly or fear of making wrong decisions while treatment, also aggravate acute stress which in most cases leads to depression.
- High stress for long durations leads to many physical health issues which add to their mental woes, since doctors are not allowed to fall sick, as assumed by themselves.
- While collecting data it was found that the young doctors are not keen on sharing their problems. Due to their nature of not asking for help, many mental health issues go undetected which leads them to the verge of suicide.
- Due to lack of proper sleep and high amount of distress, most of the time doctors act like robots and rapport development between them and patients is ignored. This often creates a wide gap and dissatisfaction among both of them.
- Stigmatisation is majorly found in the health profession where mental vulnerability is termed as a sign of weakness. And to seek help and accept having problems due to poor sleep quality and high level of occupational stress becomes a taboo.
- The correlation between sleep quality and perceived stress is found to be low, but together they play havoc in the life of young doctors, which when added up with other personal problems, often leads to death by suicide.
- We have to look beyond family issues, which are often blamed for these unfortunate incidents.

VII. Conclusion and Discussion-

- A good quality of sleep is essential for sound performance of mind and body, there cannot be an alternative to it. Many serious physical ailments like heart conditions, diabetes, obesity, high blood pressure etc are related to poor sleep.
- There are many earlier findings that state that poor sleep quality and high level of stress make the doctors prone to poor coping skills which work against them.
- Patients and the society at large have to understand that the doctors are human beings and not just service providers, so they too need the same amount of sleep and rest like any of us.
- Poor sleep and high stress often give rise to low confidence levels, which creates uncertainty, burnout and mental fatigue.
- Constant pressure of performing one's best, with little or no sleep, makes them vulnerable to taking extreme steps.
- Witnessing traumas and death on a daily basis, makes them easy prey to chronic stress.
- Those who are meant to help others cant seek help for themselves, this type of mentality aids them to think about ending their life.
- Working in extremely stressful environment, constantly vouching for perfectionism, isolation from social life leads to insomnia and chronic stress, which sometimes trigger the ideation of suicide.
- Trained to avoid closeness with patients yet expected to be compassionate, dealing with the queries of patients' families adds to the stress level and makes them irritable.
- Outcome of the study shows that a proper sleep schedule and stress buster activities are must, in order to reduce the rate of suicide in young doctors.
- Doctors should feel free to ask for help whenever needed and there should be no stigma attached to it.
- Psychometric tests, proper mental check up and addressing their grievances should be made mandatory so that any form of mental issues are managed on an immediate basis.
- Proper check up and documentation of the mental health of doctors should be done with utmost priority in every institution they work.

VIII. Limitations of the study-

- There are many limitations of this study. The major one is the sample size. The sample size for this type of study should be a large one, to get a clearer picture but in this case it was not met.
- Most of the doctors were not ready to fill up the forms due to time constraints even after repeated approaches.
- Any type of research questionnaire does not always give an accurate understanding of the problem.
- While filling the form the current state of mind was also very important. The same question can have different answers, depending upon the mood of the person.
- Suicide scale was not used due to lack of permission from higher authority.

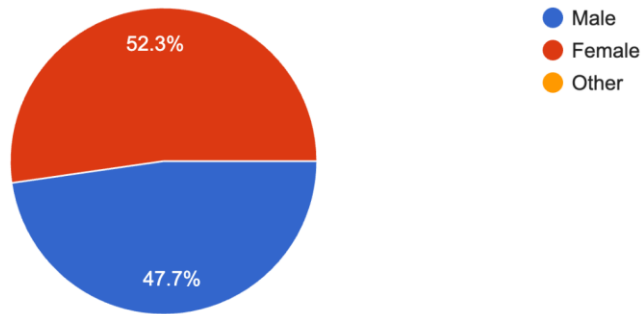
IX. Scope of future research-

There are many possibilities for future research in this area. Currently very limited data is available to state some facts, most importantly the doctors should come forward and speak about their mental health issues so that the stigma surrounding it reduces. How the poor quality of sleep and the occupational stress is acting as a slow poison, for the health care professionals needs more structured study

Appendix-

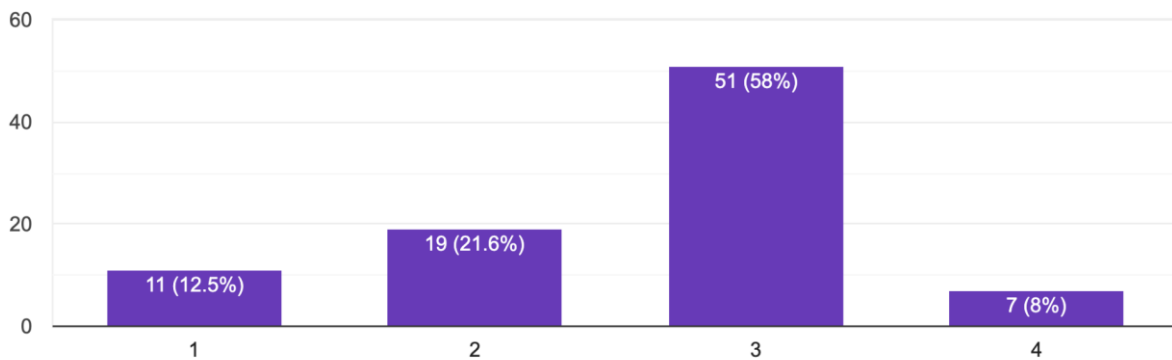
Gender

88 responses



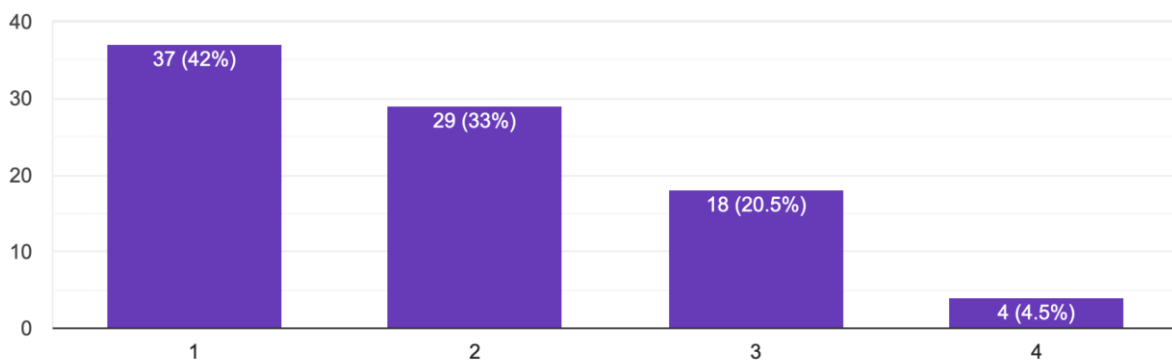
1. I have difficulty falling asleep .

88 responses



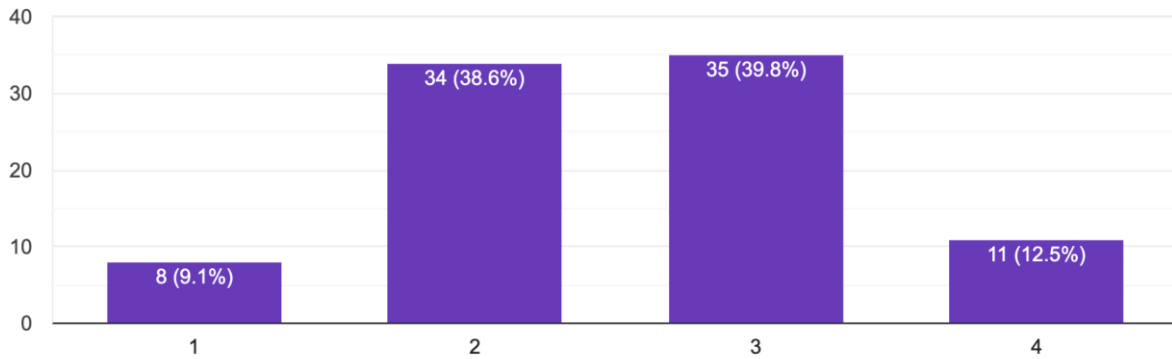
2. I fall into deep sleep

88 responses



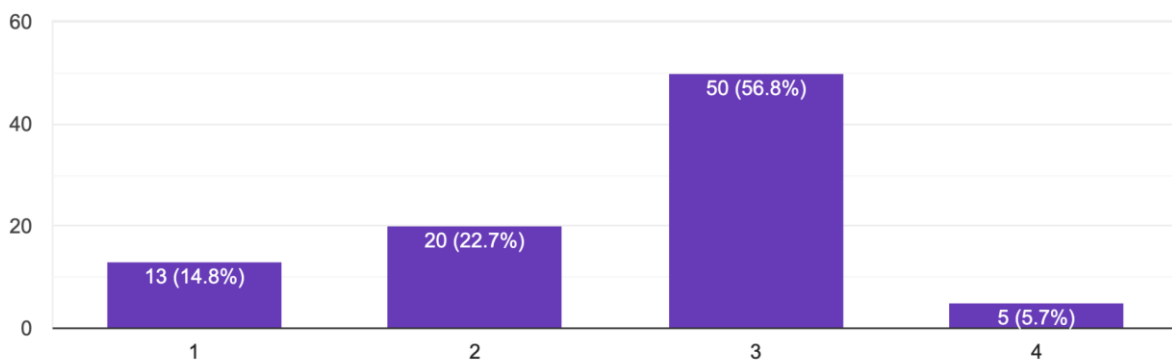
3. I wake up while sleeping

88 responses



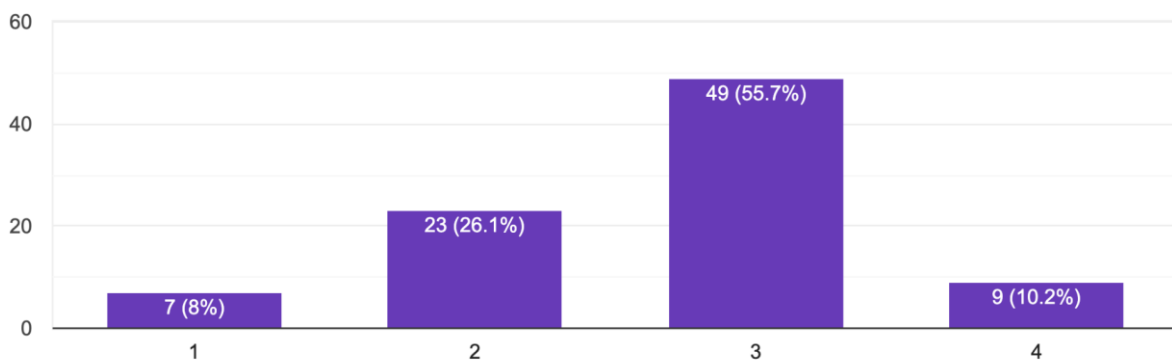
4. I have difficulty getting back to sleep once I wake up in the middle of the night .

88 responses



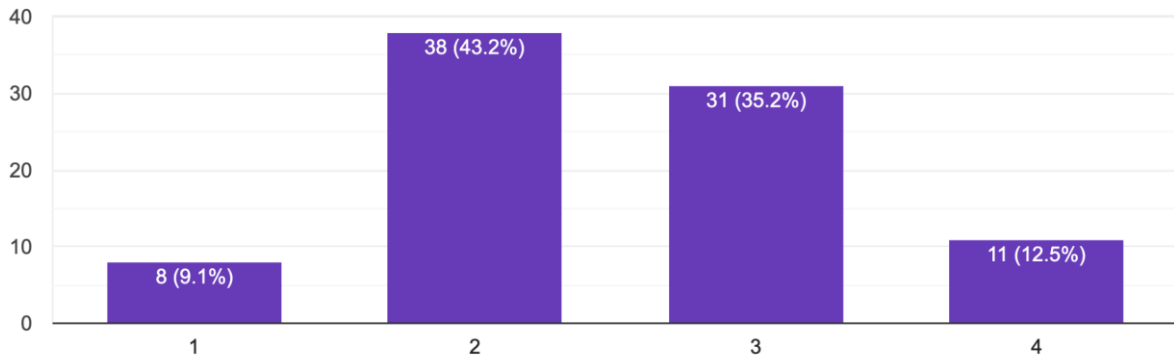
5. I wake up easily because of noise .

88 responses



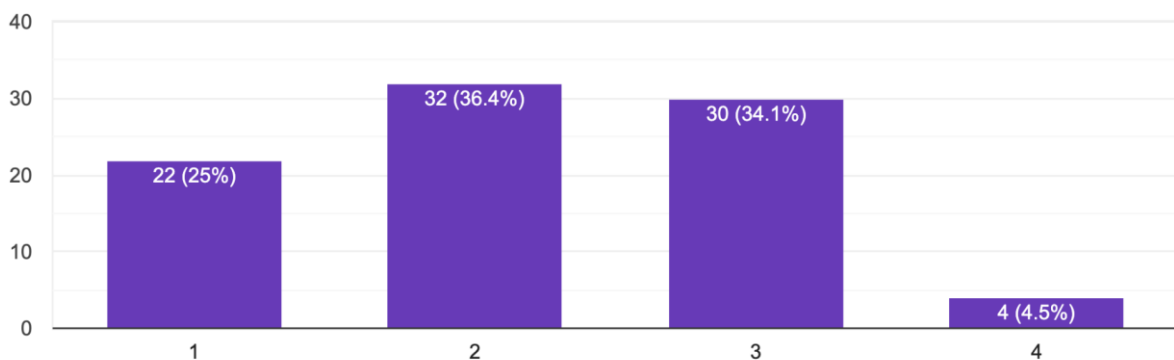
6. I toss and turn

88 responses



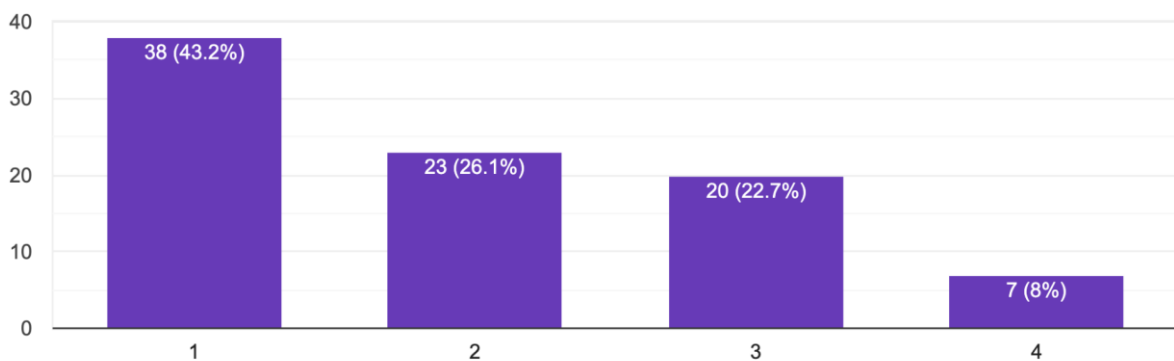
7. I never go back to sleep after awakening during sleep.

88 responses



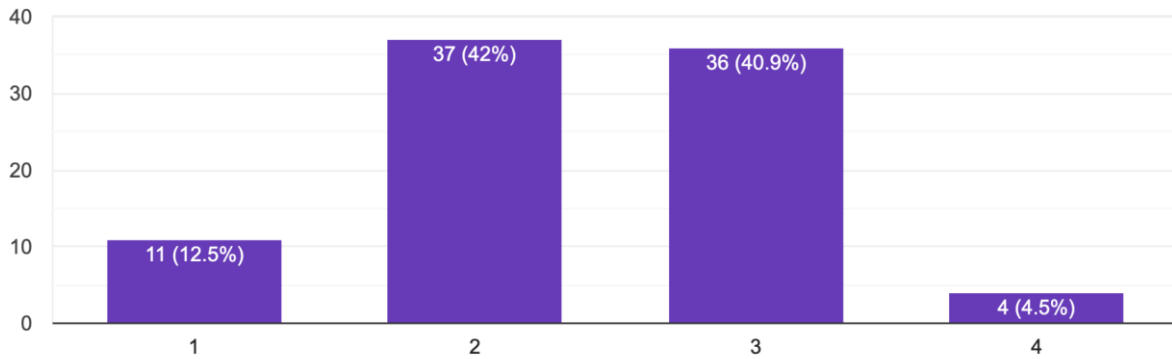
8. I feel refreshed after sleep.

88 responses



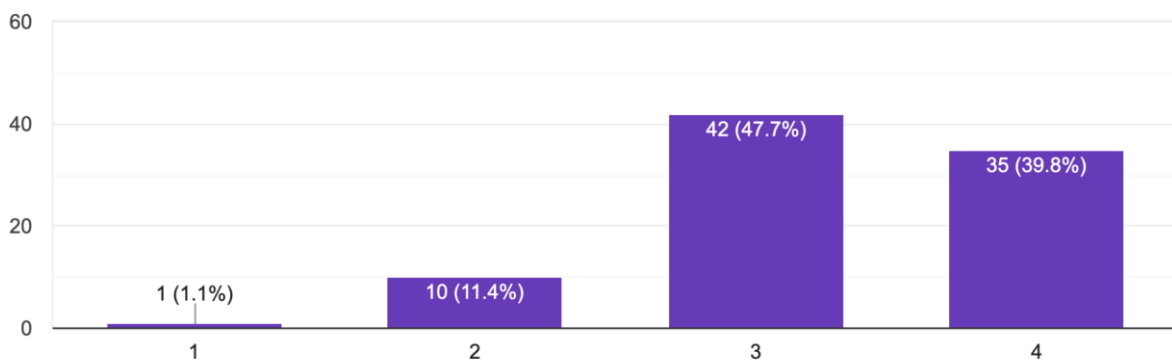
9. I feel unlikely to sleep after sleep.

88 responses



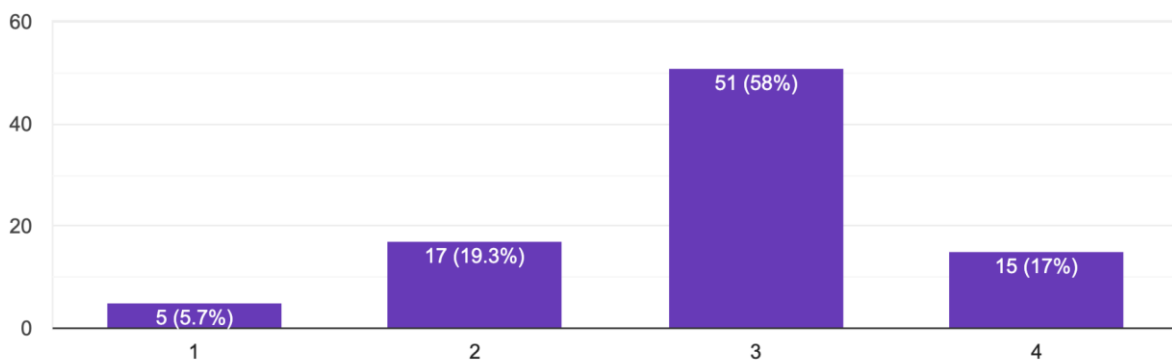
10. Poor sleep gives me headaches

88 responses



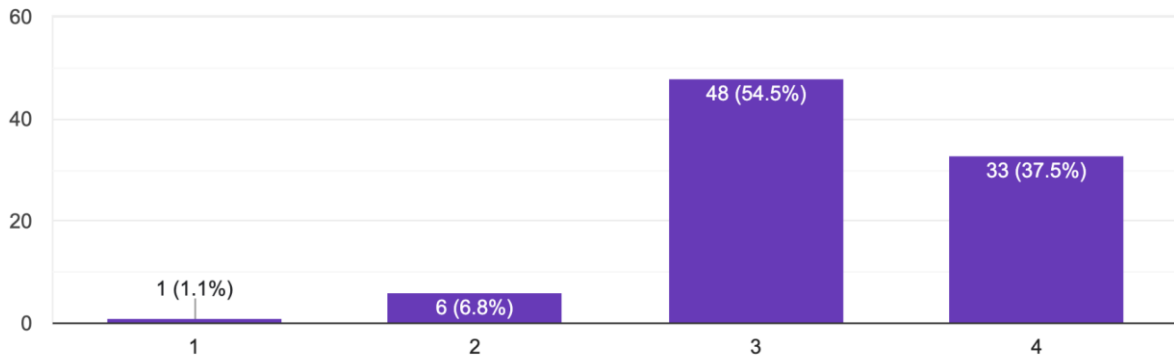
11. I would like to sleep more after waking up.

88 responses



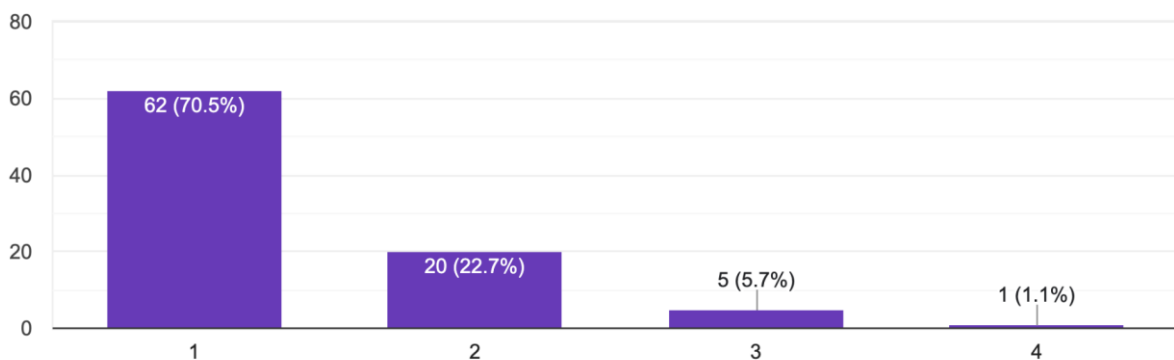
12. Poor sleep makes me irritated.

88 responses



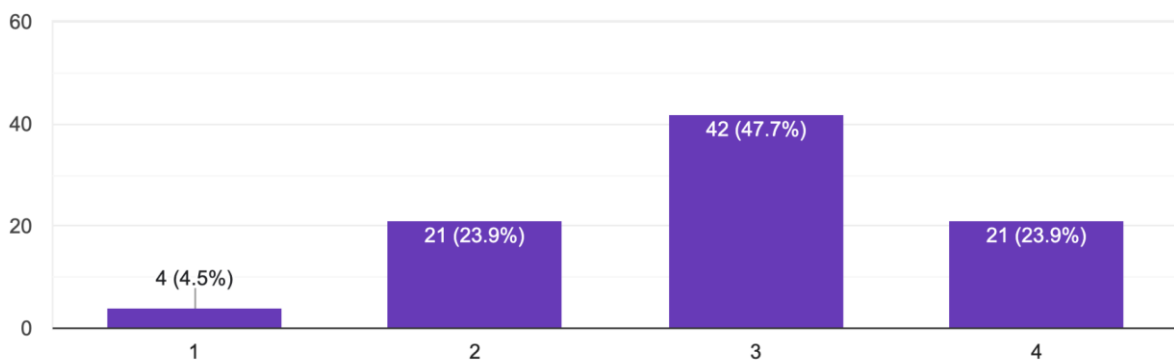
13. My sleep hours are enough

88 responses



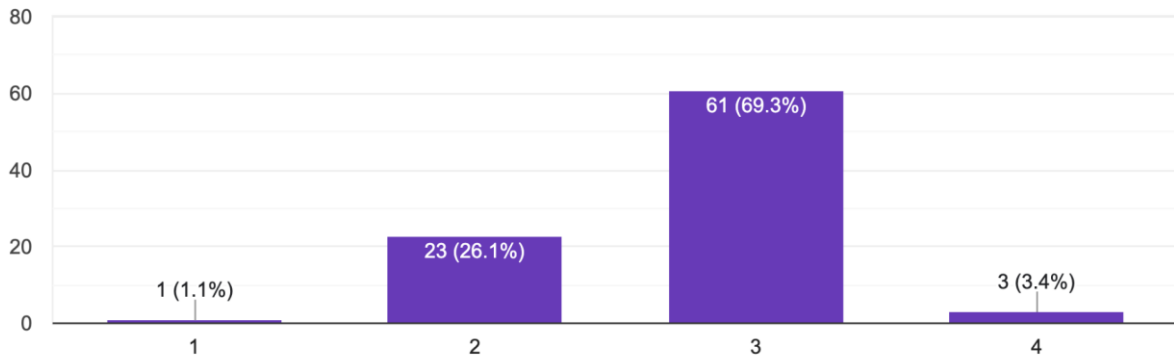
14. Poor sleep makes me lose my appetite.

88 responses



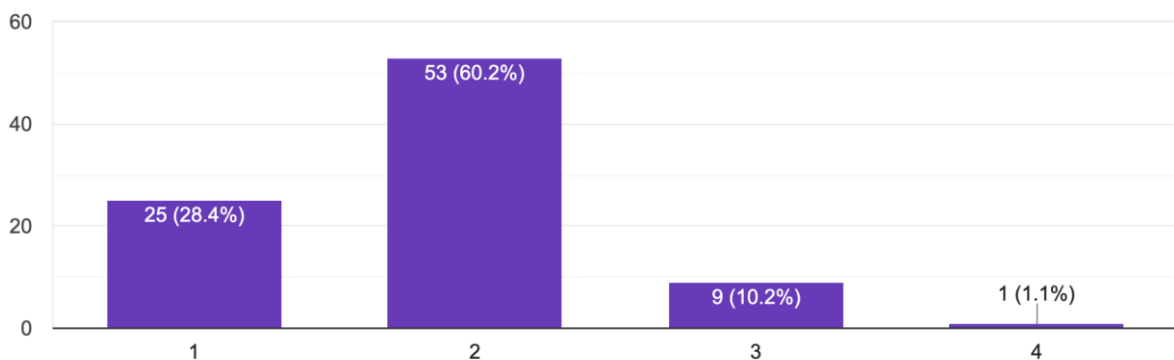
15. Poor sleep makes hard for me to think.

88 responses



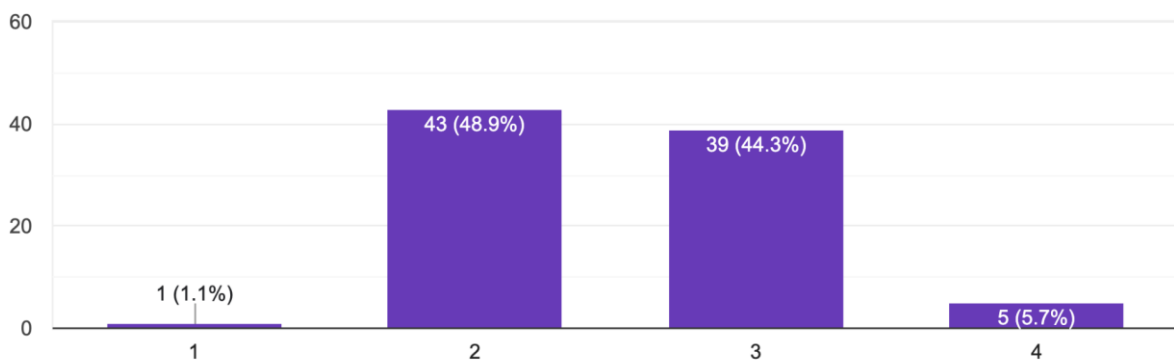
16. I feel vigorous after sleep .

88 responses



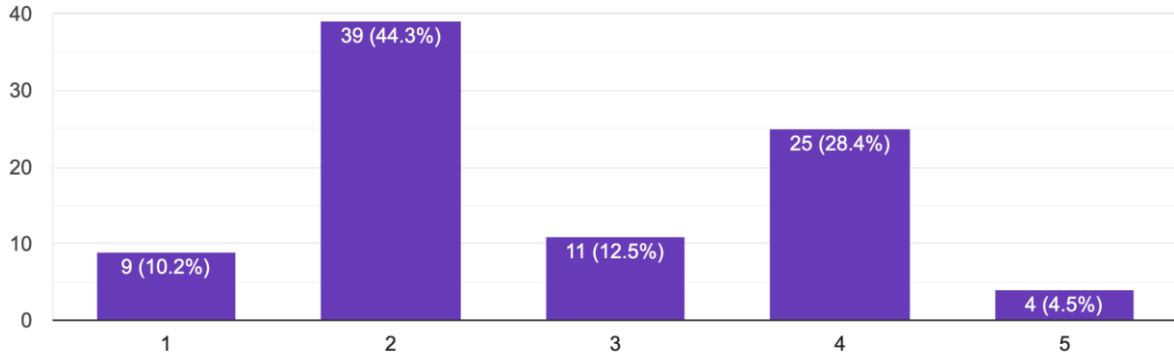
17. Poor sleep makes me lose interest in work or others.

88 responses



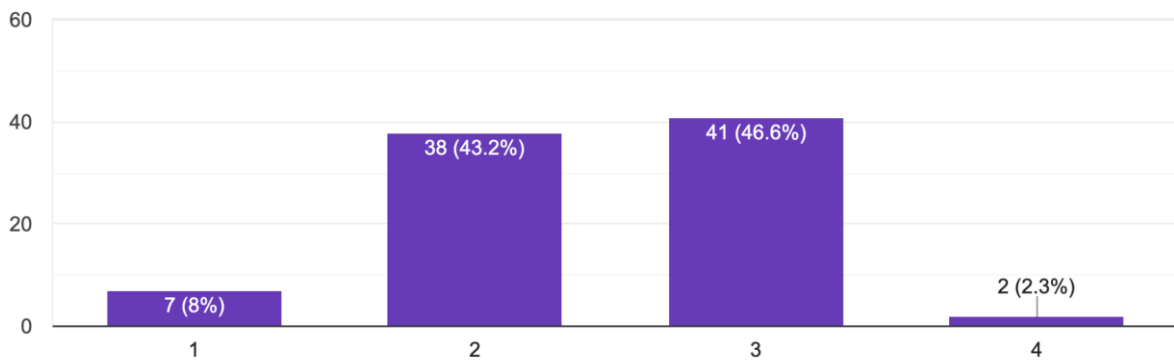
18. My fatigue is relieved after sleep.

88 responses



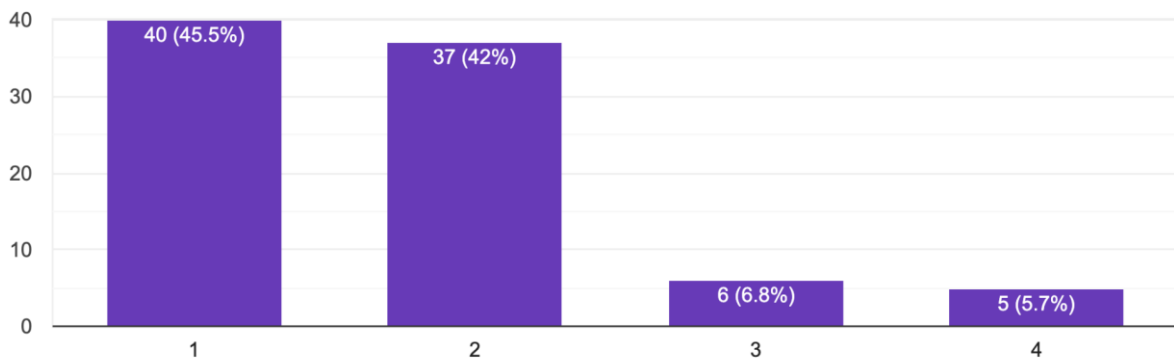
19. Poor sleep cause me to make mistakes at work

88 responses



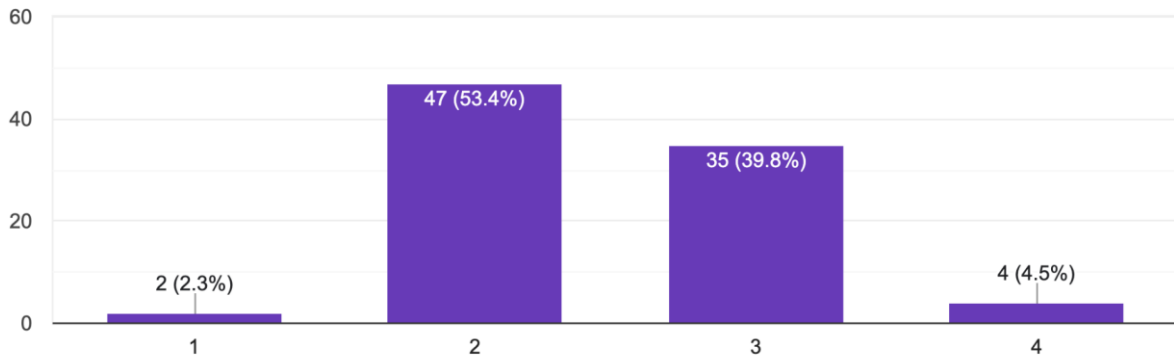
20. I am satisfied with my sleep

88 responses



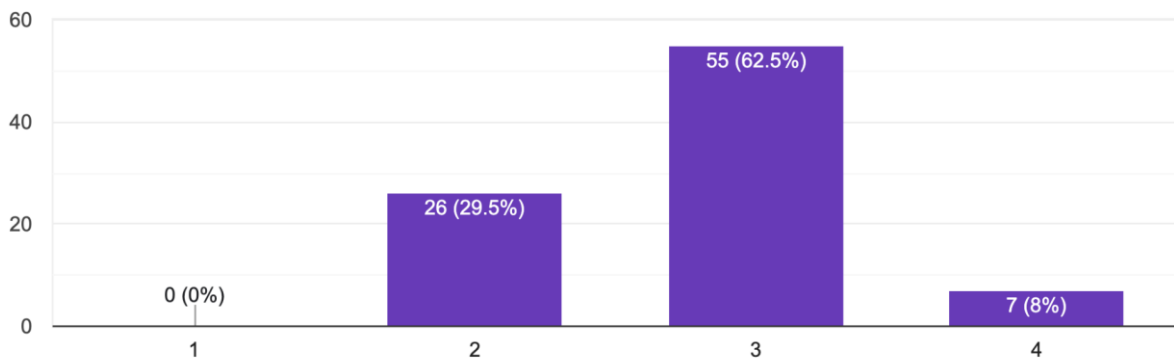
21. Poor sleep makes me forget things more easily

88 responses



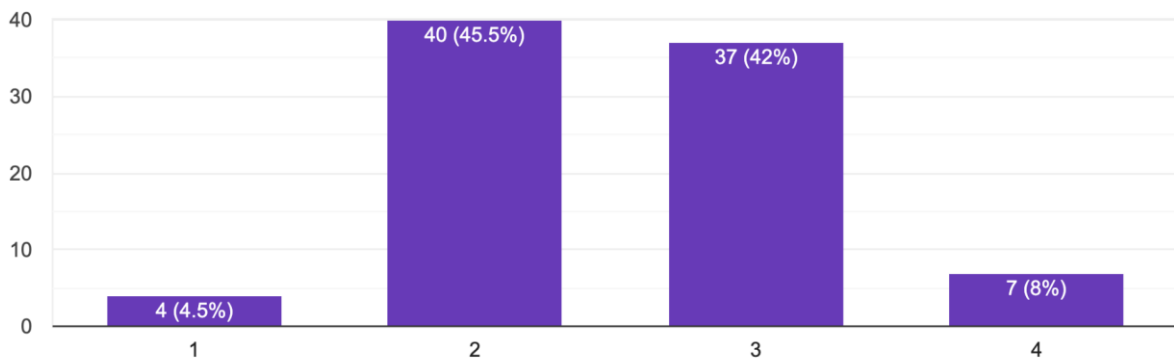
22. Poor sleep makes it hard to concentrate at work

88 responses



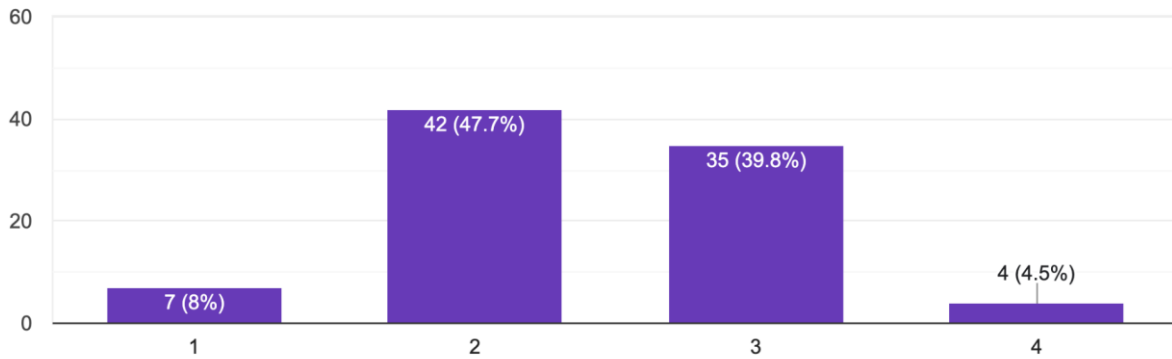
23. Sleepiness interferes with my daily life

88 responses



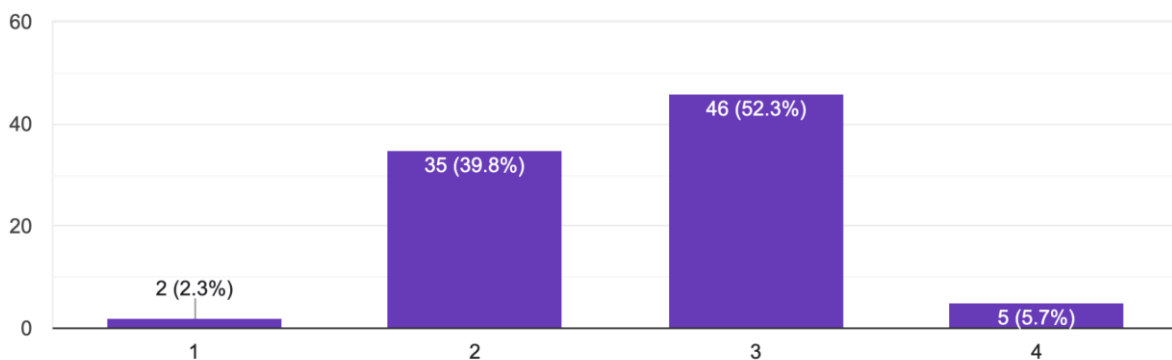
24. Poor sleep makes me loose desire in all things

88 responses



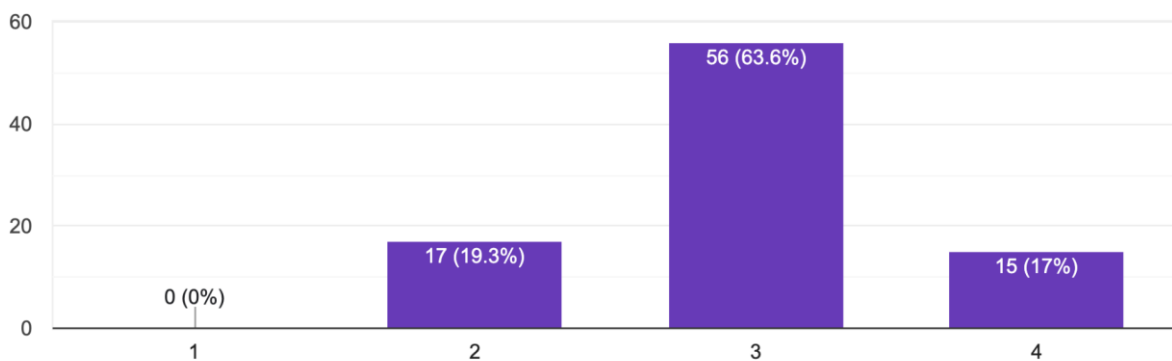
25. I have difficulty getting out of bed

88 responses



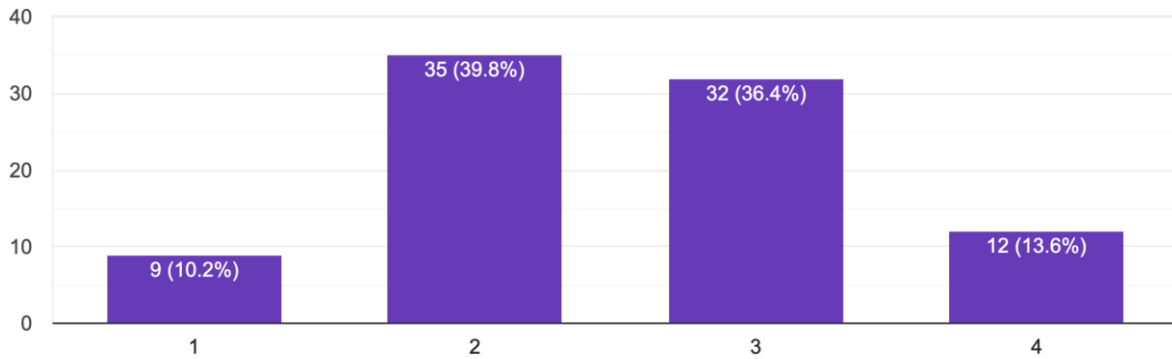
26. Poor sleep me easily tired at work

88 responses



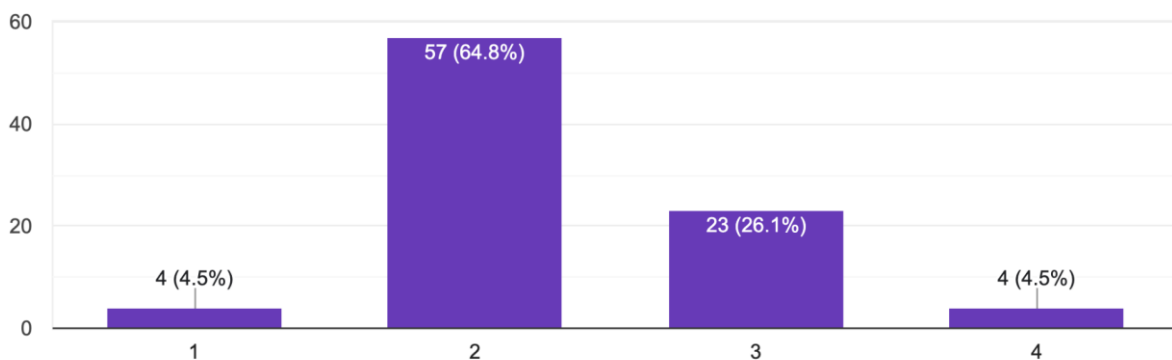
27. I have a clear head after sleep .

88 responses



28. Poor sleep makes my life painful

88 responses



For each question choose from the following alternatives:

0 - never 1 - almost never 2 - sometimes 3 - fairly often 4 - very often _

1. In the last month, how often have you been upset because of something that happened unexpectedly?

2. In the last month, how often have you felt that you were unable to control the important things in your life?

3. In the last month, how often have you felt nervous and stressed?

4. In the last month, how often have you felt confident about your ability to handle your personal problems?

5. In the last month, how often have you felt that things were going your way?

6. In the last month, how often have you found that you could not cope with all the things that you had to do?

7. In the last month, how often have you been able to control irritations in your life?

8. In the last month, how often have you felt that you were on top of things?

9. In the last month, how often have you been angered because of things that happened that were outside of your control?

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

You can determine your PSS score by following these directions: • First, reverse your scores for questions 4, 5, 7, and 8. On these 4 questions, change the scores like this:

$$0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0.$$

• Now add up your scores for each item to get a total. My total score is _.

• Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress

▶ Scores ranging from 0-13 would be considered low stress.

▶ Scores ranging from 14-26 would be considered moderate

stress. ▶ Scores ranging from 27-40 would be considered high perceived stress.

The Perceived Stress Scale is interesting and important because your perception of what is happening in your life is most important. Consider the

idea that two individuals could have the exact same events and experiences in their lives for the past month. Depending on their perception, the total score could put one of those individuals in the low stress category and the total score could put the second person in the high stress category.

Sleep Quality Scale (SQS)

Consisting of 28 items, the SQS evaluates six domains of sleep quality: daytime symptoms, restoration after sleep, problems initiating and maintaining sleep, difficulty waking, and sleep satisfaction. Developers hoped to create a scale that could be used as an all-inclusive assessment tool – a general, efficient measure suitable for evaluating sleep quality in a variety of patient and research populations.

Population for Testing - The scale has been validated in individuals aged 18–59 years.

Administration -Requiring between 5 and 10 min for administration, the scale is a simple self-report, pencil-and-paper measure.

Reliability and Validity- An initial psychometric evaluation conducted by Yi and colleagues [1] found an internal consistency of .92, a test-retest reliability of .81. The SQS is strongly correlated with results obtained on the Pittsburgh Sleep Quality Index (Chap. 67). Scores achieved by the insomnia sample were significantly higher than those of controls, indicating good construct validity.

Scoring - Using a four-point, Likert-type scale, respondents indicate how frequently they exhibit certain sleep behaviors (0 = “few,” 1 = “sometimes,” 2 = “often,” and 3 = “almost always”). Scores on items belong to factors 2 and 5 (restoration after sleep and satisfaction with sleep) and are reversed before being tallied. Total scores can range from 0 to 84, with higher scores denoting more acute sleep problems.

Sleep Quality Scale

The following survey is to know the quality of sleep you had for the last one month. Read the questions and check the closest answer.

Examples

Rarely : None or 1-3 times a month

Sometimes : 1-2 times a week

Often : 3-5 times a week

Almost always : 6-7 times a week

		Rarely	Sometimes	Often	Almost always
1	I have difficulty falling asleep.				
2	I fall into a deep sleep.				
3	I wake up while sleeping.				
4	I have difficulty getting back to sleep once I wake up in middle of the night.				
5	I wake up easily because of noise.				
6	I toss and turn.				
7	I never go back to sleep after awakening during sleep.				
8	I feel refreshed after sleep.				
9	I feel unlikely to sleep after sleep.				
10	Poor sleep gives me headaches.				
11	Poor sleep makes me irritated.				
12	I would like to sleep more after waking up.				
13	My sleep hours are enough.				
14	Poor sleep makes me lose my appetite.				
15	Poor sleep makes hard for me to think.				
16	I feel vigorous after sleep.				
17	Poor sleep makes me lose interest in work or others.				
18	My fatigue is relieved after sleep.				

		Rarely	Sometimes	Often	Almost always
19	Poor sleep causes me to make mistakes at work.				
20	I am satisfied with my sleep.				
21	Poor sleep makes me forget things more easily.				
22	Poor sleep makes it hard to concentrate at work.				
23	Sleepiness interferes with my daily life.				
24	Poor sleep makes me lose desire in all things.				
25	I have difficulty getting out of bed.				
26	Poor sleep makes me easily tired at work.				
27	I have a clear head after sleep.				
28	Poor sleep makes my life painful.				

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Acknowledgement-

I sincerely thank all the doctors who entrusted me with their opinions and took out their precious time to fill up the forms. Without their unconditional support it would have been difficult to complete this research and create the path for many future researches in accordance with this.

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