

Impact of Anxiety on Sleep Quality and Self Esteem in Young Adults

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Abstract

Anxiety is one of the most common disorders found in today's youth and it has been observed that it has a strong impact on an individual's sleep quality and their level of self esteem as well. In this research paper we have investigated the relationship between anxiety and sleep quality and self esteem in order to establish a clinical impact of anxiety on the other two factors.

To understand the ramifications of anxiety and how it may or may not affect the quality of sleep of an individual and their self esteem too, let's try to understand the brief meaning of the three key terms -

A persistent fear or perpetual worry of everyday events can be termed as anxiety. The quality of sleep and self esteem which means how well and tranquil one's sleep is and how high one's self regard is and the way they perceive themselves and their abilities (respectively).

This study was done to demonstrate the relationship between anxiety and sleep quality and self esteem. The research was conducted with a sample of 100 young adults on whom, the questionnaires such as the - GAD 7 Test, The Sleep Quality Scale and the Rosenberg Self Esteem Inventory.

Keywords: Anxiety, Sleep Quality, Self Esteem, Young Adults, Quantitative analysis

Introduction

In India, the rate of mental health issues have been on the rise especially after the onset of covid-19. The mental health issues have been significant in the young adults aging from 18-25, thus it becomes essential to have more research and investigations on the clinical implications of various mental health disorders. This research too is an attempt to establish a significant correlation between the anxiety experienced by the young adults and its implications on their quality of sleep and their self esteem as well. So let's try to understand all the three variables as a concept and how they may be interlinked.

Anxiety

Anxiety can be defined as a perpetual feeling of worry, dread and uneasiness that can be in response to either a real threat or a perceived threat. It may cause an individual to sweat excessively when confronted with the said threat and other symptoms are also a pounding heart and heavy breathing. This is usually their body's response to unknown situations as it wants to avoid the threat by supplying more blood and oxygen to the active areas of the body.

The feeling of anxiety can not always be associated with mental health disorders but can be faced by people in many situations they are uncertain or nervous about, like times with some important events or times of decision making, it might also include times of public speaking. This anxiety can at times blow out of proportion and might hamper the day to day life of an individual by persisting even when the

stressful situation is long over. The persistent presence of anxiety can then be diagnosed as an anxiety disorder.

It was recorded by the “Anxiety and Depression Association of America” that approximately 40 million individuals in the US have been struggling with anxiety disorders. It is one of the most common mental disorders with prevalence of 55% in India when it comes to young adults.

Types of Anxiety

Generalized Anxiety Disorder

An individual with a pervasive and perpetual feeling of worry and dread that is not specific to a situation and persists even after the situation is over, he/she can be diagnosed by generalised anxiety disorders. Most were seen to be experiencing this persistent state everyday continuously for 6 months.

Panic Disorder

A panic attack is a sudden episode of anxiety with no obvious reason and may have physical symptoms too such as chills or hot flashes, nausea, heart palpitation etc.

Specific Phobia

The fear of a particular thing or a situation can be termed as a specific phobia. This particular thing could be anything- heights (acrophobia), spiders etc. While most anxiety disorders do not have a trigger, these do and come to life when the person encounters that particular thing or situation.

The person himself may realise that the extent of their fear may be irrational and disproportionate but still may not be able to control it when face to face with the trigger.

Agoraphobia

The fear of being at different places apart from their home is called agoraphobia. It can also include some events and situations where one thinks that he/she may not be able to find any help in case of emergencies. The person suffering from this phobia may be skeptical to use elevators or public transports.

Social Anxiety

This particular type of anxiety may be experienced by an individual as a result of fear of being negatively judged by others. The individual may feel that they are being critically examined or evaluated by others and thus could affect their interactions with other people. This could also lead to feelings of embarrassment and humiliation.

Causes of Anxiety

There are different causes that are attributed to anxiety and the cause of occasional anxiety could be the thoughts of the future or the worry about the things that were said and done in the past. An example of this could be the uncertainty of how a job interview might go or a fight with a friend in the past.

While the causes of anxiety disorders are more intricate than this, and we can delve into several different factors while discussing it, some of the most common factors are listed below:

Substance Abuse

Substance abuse is one of the significant causes of anxiety. Some drugs act as stimulants that can trigger the response of fear and worry in an individual, while he/she may also experience it while withdrawing from substances.

Current Situations

An individual might develop an anxiety disorder as per the life events that they are going through as well. These current situations could be estrangement from a loved one, financial problems and pressures of

work and health.

Past Trauma

The events of the past also shape an individual in huge ways and also can be one of the causes of anxiety disorders. These traumas can make an individual believe that they are under a threat that could be actual or just perceived.

Some of the physical factors that may be cause to anxiety disorders are:

Brain structure and function

Amygdala is seen to be heightened in the individuals that are suffering from an anxiety disorder. It is the part of the brain that is responsible for fight and flight when encountered with danger.

Genetics

Anxiety may also be linked to the genetic predispositions found in individuals and can be found to be running in the family.

Medical Factors

Neurological disorders and hormonal imbalances too are seen to have an impact on anxiety. anxiety can also be a product of medications and being in long term pain.

Treatment of anxiety

The treatments can include self care for manageable anxiety but for severe cases psychotherapy and medications are usually recommended.

Sometimes the comorbid disorders need to be treated before the anxiety disorders are addressed, these disorders could be substance use disorders or post traumatic stress disorder.

Self care

An individual can treat their anxiety without any clinical supervision too at home itself. This self care can include relaxation techniques and physical exercises. reducing the caffeine intake, eating healthy and getting good quality of sleep can help ease up anxiety.

Psychotherapy

Talk therapy or psychotherapy is considered to be one of the best first line treatments of anxiety. Talk therapy helps an individual to get better clarity about their thought patterns and beliefs. It can help them to change their maladaptive thoughts and to cope with them as well.

The psychotherapies usually involved in anxiety disorders are cognitive behavioural therapy, exposure therapy, sometimes psychodynamic therapy and acceptance- commitment therapy too.

Medications

The symptoms of anxiety can be reduced by some medications, thus it makes the condition a little manageable for the individual suffering from anxiety disorders. These medications can include antidepressants, benzodiazepines and beta blockers too. The antidepressants are serotonin reuptake inhibitors, citalopram, and fluoxetine that can help manage anxiety. Beta blockers on the other hand help in alleviating the physical symptoms of anxiety and benzodiazepines are the immediate action drugs that reduce anxiety.

Sleep quality

For a human body just the sleep is not important but also the quality of sleep. average adults usually need some 6 to 9 hours of sleep but this quantity in itself is not enough to make an individual work to their highest capacity. Quality of sleep usually enables an individual to gain all the physical, mental, emotional and psychological benefits that one needs from sleeping, making it an important component of sleep

health.

It is usually defined by terms like sleep latency which is the amount of time an individual takes to fall asleep after taking the bed, awakenings - the amount of times an individual wakes up at night between sleep. This also includes waking after the onset of sleep and the efficiency of sleep etc.

Measuring the quality of sleep of an individual!

Polysomnogram (psg) is one of the renowned ways to check the sleep quality and the 4 elements involved. It is an in lab test of sleep that is preferable in both clinical and research settings.

With further advancement in technology, now there are various in-home sleep screening devices that have almost the same features as a psg and can monitor the sleep quality of an individual. These are usually the wearables like a watch or a ring or a headband etc, nearables that are usually kept near the individual while sleeping to track the breathing or the movements made by them during sleep.

There are also some self report methods used to check the quality of sleep of individuals that has also been used in this research which is the sleep quality scale, a 28 item scale used to assess an individual's sleep.

Self esteem

How an individual views themselves and their abilities and limitations is a huge component of self esteem. It can also be defined as one's opinion on oneself and how much they believe in themselves and their skills and abilities.

It can be shaped by many factors such as an individual's past experiences as well as their relations with other people as well as their own thoughts.

Self esteem and its ranges

Self esteem can be further ranged into three categories: overly high self esteem, low self esteem, and a healthy self esteem. Let's discuss these in detail below:

Overly high self esteem can also be defined as the feelings of superiority. They can come across as individuals who are arrogant and have a sense of entitlement. They are also very self indulgent and may have a tendency to overlook their own shortcomings and overly criticize other people.

Low self esteem can be defined as the feelings of inferiority. These individuals may seem to keep the opinions of others in high regard while neglecting their own. Taking a compliment too can be a difficult task for them as they might not believe in their strengths and may overly focus on their failures and weaknesses.

Healthy self esteem can be defined as a tendency to view oneself in a balanced manner. An individual with a healthy self esteem knows their strengths and is well aware of their limitations as well. This is the most ideal scenario and thus can help an individual to have realistic expectations from oneself.

Research Question

The research question pertains to the significance of the research and emphasises on why the research is supposed to be conducted.

The research questions pertaining to this study is as per the following:

1. Is there a significant relationship between anxiety and sleep quality?
2. Is there a significant relationship between anxiety and self esteem?
3. If there is a relation between the 3 given variables, how do all three of them correlate with each other?

Review of Literature

“Holly j. Ramsawh et al. Relationship of anxiety disorders, sleep quality and functional impairment in a community sample. (2009). The German health survey collected the data for this research with a sample of 4181 individuals with their ages ranging from 18-65. Pittsburgh sleep quality inventory and medical outcomes scale were used to assess the variables and it was found that really low medical outcomes were observed in people with high anxiety.”

“Arthur James and Louis collin. Locus of control and self esteem: comparative analysis. (2011). It was a qualitative analysis conducted through a structured interview setting where a bunch of predetermined questions were asked. it was found that the individuals with a low self esteem usually have an external locus of control as in they do not take responsibilities for the good or the bad happening in their life.”

“Jessica R. Conti. A pilot examination of self esteem, depression, and sleep in college women. (2014). In this study 42 junior and senior college going women were assessed in order to find the impact of above given variables on them than their male counterparts. It was a self report analysis in which the questionnaires used were the rosenberg self esteem questionnaire, pittsburgh sleep quality index and the beck's depression inventory. It was observed that self esteem is directly related to the occurrence of depression and this depression inturn can lead to poor quality of sleep”.

“Sevim Mustafa et al. Anxiety and self esteem: comparison between Albania and Kosovo. (2015). Zung self rating anxiety scale and the Rosenberg self esteem scale was used to assess the differences. it was found that the 125 student participants of the age 18 to 44 years of age. 14.3% of people in albania and 32.3% of people in kosovo had mild to moderate level of anxiety, it was found that there was no significant difference found in both the countries on the basis of self esteem.”

“Joao Dinis and Miguel braganca. Quality of sleep and depression in college students. (2018). literature reviews and self report methods were used to assess the relationship between depression and sleep. With rigorous research it was found that sleep and depression have a bidirectional nature i.e. depression can lead to loss of sleep and vice versa.”

“Zamira Hyseni Duraku et al. Associations of psychological distress, sleep, and self esteem among kosovar adolescents. (2018). The study was conducted to assess the correlation between the above given variables and how they impact adolescents. In this study 200 students of Kosovar were investigated and it was found that psychological stress and self esteem are negatively correlated.”

“Chang-myung oh et al. The effect of depression on sleep quality of individuals with high risk of insomnia. (2019). This was a population based study in which insomnia as a sleep disorder was taken into consideration and were linked to clinical disorders like depression. It was research done on Korean adults ranging from the age of 19 years to 70 years. The method of inquiry was conducting a face to face structured interview. it was thus found that the individuals with depression had worse symptoms of insomnia than the ones without it.”

“Dat tan nguyen et al. anxiety, depression and suicidal ideation in vietnamese secondary school students. (2019)”. 1194 participants of the cantho city in vietnam were a part of this cross sectional study. It was recorded that 19.4% of the students had low self esteem and the major risk factors associated were stress of education and abuse by parents.

Xiaolin Zhao et al. Perceived stress and sleep quality among the non diseased general public in China during the 2019 coronavirus disease. (2019). This research was done to investigate the impact of perceived stress on the sleep quality of the individuals who were not affected by the coronavirus. online surveys

were done on the Chinese population age ranging from 18-68. It was found that the higher the stress, lower was the quality of sleep found in the individuals.

Blossom Fernandez et al. The mediating effects of self-esteem on anxiety and emotion regulation. (2021). Participants aging from 18 to 26 years of age participated in this research. They were given an experimental task to complete with the help of the dot and probe paradigm. This paradigm usually measures the threat bias and the inhibition of response and it was found that lower self-esteem resulted in an increase in anxiety and suppression of emotions.

Sreejesh et al. Sleep quality and anxiety level among college students. (2021). The researchers took a sample of 100 students from a school and deployed the PQSI and BAI self-report questionnaires. It was found that due to study pressure the sleep was decreasing and the anxiety in students was increasing.

Atika Tewari. The effect of social anxiety on self-esteem among young adults. (2022). Self-esteem inventory by Thakur and Prasad and social anxiety semi-structured questionnaire was used to assess the social anxiety and self-esteem of 20 college students. According to the results, students suffering from low self-esteem are more prone to have high anxiety too.

Chaixin Ji et al. Anxiety and sleep quality amelioration in relation to team sports and individual sports. (2022). The research was done to better understand the impact of group and individual sports on sleep quality and anxiety. A sample of 197 sports people in college was taken and were assessed with the help of the self-rating anxiety scale and the PSQI. Individuals taking part in the sports had greater betterment in anxiety symptoms and sleep quality. It was also found that team sports were better at improving these symptoms than individual sports.

Magdalena Albrecht Bisset et al. A cross-sectional study of the association between sleep quality and anxiety in postsecondary students in Ontario. (2023). The study was conducted in the Ontario Tech University with the help of self-report methods such as the Pittsburgh Sleep Quality Index and DASS-21. It was thus concluded that students who had poor sleep quality also reported moderate to extreme anxiety symptoms.

Wenyan Li et al. Reciprocal relationship between self-esteem, coping styles, and anxiety symptoms among adolescents. (2023). The data was extracted from the longitudinal study of adolescents' mental and behaviour well-being. The participants were 1957 in number with a mean age of 13.6. They were interviewed at an interval of 1 to 3 years. It was found that low self-esteem and anxiety have a bi-directional nature and huge gender differences were also observed.

Nizamettin Burak Avcı and Betül Cicek Cinar. The correlation between self-reported sleep quality and balance confidence in university students. (2023) This research was conducted on 217 university students ranging from 18-25. It was found that the students with a higher sleep quality also had a higher balance confidence thus concluding that both the variables are directly proportional.

Amandeep Kaur and Babita Prusty. Relationship between coping styles, self-esteem and perfectionism among college students. (2024). It was a quantitative study in which a sample of 124 college students were assessed. It was found that the students who were inclined towards the problem-focused coping were more likely to have a high self-esteem and the perfectionism and coping was also found to be correlated as more of perfectionist tendencies lead to poor ways of coping.

Purnamawati Tjhin and Yoga Rizky Pratama. Self-esteem as a risk factor for anxiety in high school students. (2024). With a total of 162 high school students this study was conducted and the data was collected using the self-esteem scale and the Hamilton Anxiety Rating Scale. The result was found to be that there is no correlation between anxiety and the demographic correlates of an individual.

Jun Zhang et al. The impact of stress on sleep quality. (2024). In this study mediation analysis was done on the basis of the longitudinal data found. Three surveys were conducted on 426 students studying in universities and with the help of structural equations, it was tried to find the correlation between stress and sleep quality. It was thus found that stress impacts sleep quality both directly and indirectly.

Valerie Buzzelli et al. Sleepy university students: the relationship of anxiety and sleep quality and quantity. It was found the higher the anxiety is the more it will impact the hours of the sleep and the quality of sleep of an individual. A voluntary participation of 154 students was recorded and the researchers used mixed methods to analyse the results using the adults manifest anxiety scale and occupational therapy related survey of college students.

Research Gap Found : While the above mentioned researches were vigorously studied, it was found that most of the researches with similar variables were based out of India and thus very little evidence was found of the Indian population. Thus our research aims to target the Indian college students who have suffered from anxiety. it was also observed during the thorough review of literature that most of the studies used the different kinds of self report methods while we aim to assess the young adults with the GAD-7, the Sleep quality scale and the Rosenberg self esteem inventory to assess how anxiety, the independent variable affects sleep and self esteem, the dependent variables.

Methodology

the study is being conducted to get an in depth knowledge about anxiety, the different types of anxiety and how it may affect the different correlates of one's life

Aim

The aim of the study is to find out the impact of anxiety on the quality of sleep and the self esteem of an individual. and if it is found that anxiety has a significant relationship with the given variables how would the three of them correlate.\

Hypotheses

A hypothesis is a tentative statement or a proposition that is derived based on the previous theoretical knowledge or the review of literature. It is usually the starting point of the research based on which the data is collected and analyzed which either proves the hypothesis right or wrong.

the hypothesis pertaining to this research are:

1. There will be a significant relationship between anxiety and sleep quality.
2. There will be a significant relationship between anxiety and self esteem
3. There will be negative correlation between anxiety and self esteem and anxiety and sleep quality
4. There will be a great possibility that there is a positive correlation between self esteem and sleep quality.

Variables

Most of the research has two variables that are being assessed, one is the independent variable and the other is the dependent variable. The independent variable remains unimpacted and usually is the one impacting the other variables while the dependent variable is the one on which the results are being observed.

In this research anxiety is the independent variable while sleep quality and self esteem are the dependent

variables as we are studying the impact of anxiety on both of the given dependent variables.

Sample

As the title suggests this research is an extensive study of the impact of anxiety on the quality of sleep and esteem on young adults, the data was collected from 46 males and 54 females studying in a university. all the individuals were ranging from the age of 18-26.

Tools

The tools that were used to collect the quantitative data in this research were the self report survey questionnaires mentioned below:

1. GAD-7, Generalised Anxiety Disorder, it is 7 item questionnaire used to assess the severity of anxiety in individuals
2. Sleep Quality Scale, it a 28 item consisting scale used to asses the six domains pertaining to one's quality of sleep
3. Rosenberg Self Esteem test, which is a 10 item questionnaire used to test the self esteem of the individual.

Result

Correlations				
		Anxiety	Sleep quality	Self esteem
Anxiety	Pearson Correlation	1	-.603**	-.549**
	Sig. (2-tailed)		.000	.000
	N	99	99	99
Sleep quality	Pearson Correlation	-.603**	1	.572**
	Sig. (2-tailed)	.000		.000
	N	99	99	99
Self esteem	Pearson Correlation	-.549**	.572**	1
	Sig. (2-tailed)	.000	.000	
	N	99	99	99
**. Correlation is significant at the 0.01 level (2-tailed).				

Overview

This chapter outlines the analysis of, if the anxiety is related to both the dependent variables ie. the sleep quality and self esteem and how it impacts both of them. MANOVA i.e. the multivariate analysis was followed up by the ANOVA along with the Pearson correlation to assess the effect and the direction of it among the variables used in this study.

Manova (multivariate analysis of variance)

This statistical analysis was used to study if anxiety as an independent variable impacts the dependent variables - sleep quality and self esteem. Thus, with the help of this manova test it was found that there is a significant impact of anxiety on both the dependent variables.

pillai trace = 1.222, $F(88,108) = 1.926$, $p=0.001$;

wilks lambda = 0.140, $F(88,104)= 2.01$, $p<0.001$

hotelling's trace= 3.548, $F(88,104) = 2.1$, $p<0.001$

roy's largest root = 2.528, $F(44,54)= 3.10$, $p<0.001$

These are the findings that clearly indicate that anxiety has a significant influence on both quality of sleep and the self esteem of an individual.

Pearson correlation

To assess the linear relationship between the variables of the study. It helps in finding the direction in which anxiety impacts both sleep quality and self esteem.

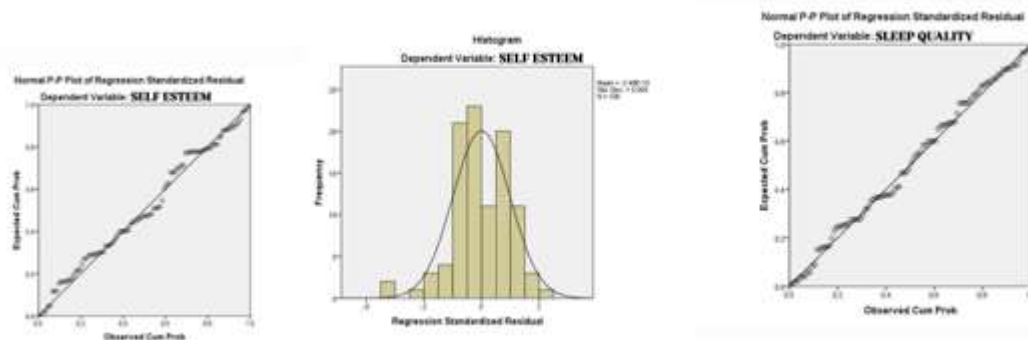
anxiety with sleep quality: $r = - 0.603$, $p<0.001$

anxiety with self esteem: $r = - 0.549$, $p<0.001$

sleep quality and self esteem : $r = 0.572$, $p<0.001$

With these results we can understand that the correlation between anxiety and sleep quality and self esteem is negative and is significant at $p<0.001$, suggesting that the relationship found between the given variables is very unlikely to be because of a chance.

In contrast, we also found that there is a positive correlation between sleep quality and self esteem with $r=0.572$, $p<0.001$.



Discussion

The key motive of the research was to assess the impact of anxiety on psychological correlates, especially quality of sleep and self esteem while also aiming to establish what kind of a relationship do all of these variables share.

As we had earlier established our hypothesis that - anxiety is a significant predictor to both self esteem and sleep quality, the results of this study established it to be true. This study also established the other hypothesis that anxiety is negatively correlated to both sleep quality and self esteem.

The results found are also consistent with a lot of the findings of the literature review that we did, especially the study of 2019, which suggested that anxiety disrupts the sleeping process of an individual and can impact their self image too which is yet another correlate of self esteem.

Through Pearson correlation we found that, the higher the anxiety of an individual the lower their quality of sleep and self esteem would be. It was also found that both sleep quality and self esteem share a positive correlation as if the person is getting enough quality of sleep it might directly or indirectly affect their perception of themselves in a positive way.

Limitations

Just like every research, we also want to highlight the limitations that surfaced during this study as well and some of the difficulties and limitations are mentioned below:

Self Report Bias

As the research used quantitative self report questionnaires to assess the directionality of anxiety and sleep quality and self esteem, there is a huge room for self report biases. Individuals with a concern to judges can succumb to social desirability and thus might not answer the questions of the test with utmost honesty and relatability, rather they would check the choices they think would please the tester

Limited generalisability

The sample population chosen were from the same economic backgrounds considering they go to the same university which may not be able to accurately asses the qualities of a broader population.

Uncontrolled variables

There are other factors that impact all the variables chosen for the research, these could be academic stress, other comorbid disorders like depression, relationship problems etc. there is a possibility that the results found may be highly influenced by atleast one of the factors mentioned above

Future Implications

This research highlights the incessant need for techniques such as CBT- cognitive Behavioral therapy to be incorporated in the academic facilities like colleges so that an individual's maladaptive beliefs related to themselves do not over power their abilities to fully express themselves or work to the best of their potentials.

This also helps us to understand both the physical and psychological impacts of anxiety, its impacting sleep can lead to many detrimental effects like poor memory and cognition and how it affects self esteem can lead to an individual's internalising fear and failure.

Thus it gives a broader understanding of how anxiety can impact a spectrum of things and not just the variables that are mentioned and might even affect alot of other things

Conclusion

This study explored the impact of anxiety on sleep quality and self-esteem among young adults, offering valuable insights into the interconnected nature of mental health and overall well-being in this population. The findings revealed significant negative correlations between anxiety and both sleep quality and self-esteem, indicating that higher levels of anxiety are associated with poorer sleep and lower self-worth. These results align with existing psychological literature, reinforcing the idea that anxiety not only affects emotional functioning but also influences key aspects of daily life, such as rest and self-perception.

By using validated self-report measures, this research highlights the importance of early identification and intervention in managing anxiety to promote better psychological outcomes. Although the study had limitations—including its cross-sectional design and reliance on subjective data—the findings underscore

the need for integrated mental health approaches that target multiple areas of functioning.

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