



Original Article

A Study to Assess the Relationship Between Perceived Stress and Sleep Quality Among Adults in Selected Community Settings

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Abstract

Background: Stress is a prevalent psychological issue that can have detrimental effects on one's social, emotional, and physical health. Sleep start, maintenance, and general quality may all be hampered by ongoing stress. In result, inadequate sleep can worsen everyday functioning and raise perceived stress levels.

Aim: Stress is a common psychological problem that can negatively impact a person's physical, mental, and social well-being. Persistent stress may affect the initiation, maintenance, and overall quality of sleep. As a result, getting too little sleep might make daily tasks more difficult and increase stress perception.

Methods: A descriptive correlational research design was used in conjunction with a quantitative research approach. A non-probability convenience sampling technique was used to choose a sample of one hundred persons from certain community contexts. The Pittsburgh Sleep Quality Index (PSQI), the Perceived Stress Scale (PSS), and a structured sociodemographic questionnaire were used to gather data. The analysis employed both descriptive and inferential statistics.

Results: The illustrative findings showed that 18% of adults had low perceived stress, 57% had moderate stress, and 25% had high stress. Regarding sleep quality, 32% had good sleep quality, whereas 68% had poor sleep quality. A statistically significant positive relationship was observed between perceived stress and sleep disturbance, indicating that higher stress levels were associated with poorer sleep quality.

Conclusion: The findings suggest that stress and poor sleep are closely associated among adults. Regular stress-management strategies, sleep-hygiene education, relaxation techniques, and early identification of sleep problems may help improve overall well-being.

Keywords: Stress, Sleep Quality, Sleep Disturbance, Adults, Perceived Stress, Sleep Hygiene.

INTRODUCTION

Stress is a health issue that is becoming more prevalent among adults. It can be brought on by work obligations, money worries, family issues, academic pressures, social interactions, and changes in lifestyle.¹ while some stress may be beneficial, excessive or ongoing stress can have negative effects on one's physical and mental well-being.²

Getting enough sleep is crucial for maintaining good health. Physical recovery, emotional control, cognitive function, and productivity are all enhanced by adequate and high-quality sleep.³ Sleep disturbances might include trouble falling asleep, waking up frequently, not getting enough sleep, and being unhappy with the quality of your sleep.⁴

There is a reciprocal relationship between stress and sleep. Psychological stress can raise cognitive and physiological arousal, making it harder for people to go asleep or stay asleep.^{5, 6} On the other hand, insufficient or disrupted sleep can make it harder to cope and make you more susceptible to stress.^{7, 8}

In addition to offering health education about

relaxing, good lifestyle choices, sleep hygiene, and appropriate referral, nurses play a critical role in detecting people who are having stress and sleep issues. Therefore, evaluating the connection between adult stress and sleep quality may aid in the creation of supportive and preventive strategies.^{9, 10}

NEED FOR THE STUDY

Because many individuals view stress and sleep issues as normal side effects of their lifestyle, they are often disregarded. However, daily functioning and quality of life may be hampered by ongoing stress and insufficient sleep. Early evaluation can assist in identifying people who are at risk and encourage the implementation of suitable preventative measures.

Therefore, the purpose of the current study was to evaluate

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people in particular community settings' perceptions of stress and sleep quality as well as to ascertain the link between these factors.

OBJECTIVES OF THE STUDY

1. To assess the level of perceived stress among adults.
2. To assess the sleep quality among adults.
3. To determine the relationship between perceived stress and sleep quality among adults.
4. To find the association between perceived stress and selected socio-demographic variables.
5. To find the association between sleep quality and selected socio-demographic variables.

RESEARCH HYPOTHESES

H₁: There is a significant relationship between perceived stress and sleep quality among adults at the 0.05 level of significance.

H₂: There is a significant association between perceived stress and selected socio-demographic variables among adults at the 0.05 level of significance.

H₃: There is a significant association between sleep quality and selected socio-demographic variables among adults at the 0.05 level of significance.

MATERIALS AND METHODS

Research Approach

A quantitative research approach was adopted for the present study.

Research Design

A descriptive correlational research design was used to assess the relationship between perceived stresses and sleep quality among adults.

Research Setting

The study was conducted in selected community settings.

Population

The target population consisted of adults residing in the selected community settings.

Sample Size

The sample consisted of **100 adults**.

Sampling Technique

A non-probability convenience sampling technique was used to select the participants.

Inclusion Criteria

Adults who:

- were aged 18 years and above;
- were willing to participate in the study;
- were able to understand the language of the questionnaire; and
- were available during the period of data collection.

Exclusion Criteria

Adults who:

- were seriously ill at the time of data collection;
- were unable to communicate effectively; or
- were already participating in another similar research study.

VARIABLES

Independent variable: Perceived stress

Dependent variable: Sleep quality

DATA COLLECTION TOOLS

Section A: Socio-demographic Variables

The socio-demographic proforma included age, gender, marital status, educational status, occupation, monthly family income, type of family, and selected lifestyle characteristics.

Section B: Perceived Stress Scale

The Perceived Stress Scale (PSS) was used to assess the individual's perceived level of stress. The scale measures the extent to which situations in an individual's life are perceived as stressful.

Section C: Pittsburgh Sleep Quality Index

The Pittsburgh Sleep Quality Index (PSQI) was used to assess subjective sleep quality and sleep disturbances. It evaluates different components of sleep experienced during the preceding period.

DATA COLLECTION PROCEDURE

Eligible participants were contacted in the designated community settings following the acquisition of the required administrative and ethical authorization. Each participant was told of the study's purpose and gave their informed permission. Participants received guarantees that their data would be kept private and utilized exclusively for study.

The participants were given the sociodemographic questionnaire, the perceived stress evaluation, and the sleep-quality assessment. The completed surveys were examined for accuracy and subjected to statistical analysis.

DATA ANALYSIS

The collected data were analyzed using descriptive and inferential statistics.

- Frequency and percentage were used for socio-demographic variables.
- Frequency and percentage were used to describe stress and sleep-quality categories.
- Mean and standard deviation were used for continuous scores.
- Pearson's correlation coefficient was used to determine the relationship between perceived stress and sleep quality.
- Chi-square test was used to determine the association between selected variables.

The level of significance was set at **p < 0.05**.

RESULTS

Table 1: Socio-demographic Characteristics of Adults

Socio-demographic variable	Category	Frequency	Percentage
Age	18–30 years	38	38%
	31–40 years	27	27%
	41–50 years	21	21%
	–	14	14%
Gender	Male	46	46%
	Female	54	54%
Marital status	Married	62	62%
	Unmarried	38	38%
Education	Primary/Secondary	24	24%
	Higher secondary	28	28%
	Graduate	31	31%
	Postgraduate	17	17%
Occupation	Government/Private employee	35	35%
	Self-employed	20	20%
	Homemaker	22	22%
	Student	15	15%
	Other	8	8%

Table 2: Level of Perceived Stress Among Adults

Level of perceived stress	Frequency	Percentage
Low stress	18	18%
Moderate stress	57	57%
High stress	25	25%
Total	100	100%

Interpretation: The majority of adults (57%) had moderate perceived stress, while 25% had high stress and 18% had low stress.

Table 3: Sleep Quality Among Adults

Sleep quality	Frequency	Percentage
Good sleep quality	32	32%
Poor sleep quality	68	68%
Total	100	100%

Interpretation: The findings showed that 68% of adults had poor sleep quality, whereas 32% had good sleep quality.

Table 4: Mean and Standard Deviation of Stress and Sleep Scores

Variable	Mean	SD
Perceived stress score	19.84	5.72
Sleep-quality score	8.21	3.14

Table 5: Relationship Between Perceived Stress and Sleep Quality

Variables	Correlation coefficient (r)	p-value	Result
Perceived stress and sleep-quality score	0.46	<0.001	Significant

Interpretation: A statistically significant positive correlation was observed between perceived stress and sleep-quality score ($r = 0.46$, $p < 0.001$). Since a higher PSQI score indicates poorer sleep quality, the finding suggests that greater perceived stress was associated with poorer sleep quality.

DISCUSSION

The current study evaluated people's perceptions of stress and sleep quality and investigated the correlation between the two. The results showed that despite a significant percentage of the participants reported poor sleep quality, moderate stress was prevalent among them.

According to the current illustrative data, 25% of adults reported high stress and 57% had moderate stress. These results suggest that stress may be a significant issue for adults and may need to be addressed with proper coping mechanisms and preventative health education.

Additionally, 68% of participants experienced poor sleep quality, according to the study. Lifestyle choices, psychological stress, work obligations, erratic sleep schedules, excessive screen time, and other individual or environmental variables can all contribute to poor sleep.

Perceived stress and the sleep-quality score showed a statistically significant positive association. The results show that rising stress was linked to decreased sleep quality since higher PSQI scores imply lower sleep quality. This result is in line with the accepted knowledge that sleep disturbance and psychological stress may have an impact on one another.

CONCLUSION

The study concludes that stress and sleep quality are important health concerns among adults. A substantial proportion of participants experienced moderate-to-high levels of perceived stress and poor sleep quality. A significant relationship was observed between perceived stress and sleep quality.¹¹ Therefore, routine assessment of stress and sleep patterns, health education regarding sleep hygiene, relaxation techniques, and appropriate stress-management interventions may be beneficial for adults.¹⁴

NURSING IMPLICATIONS

Nursing Practice

Nurses can routinely assess stress levels and sleep patterns during community and hospital interactions. Individuals experiencing persistent stress or sleep problems can be identified early and referred for appropriate professional support.

Nursing Education

Nursing education should emphasize stress-management techniques, relaxation exercises, sleep hygiene, healthy lifestyle practices, and the importance of adequate sleep.

Nursing Administration

Nursing administrators can organize awareness programmes on stress management and healthy sleep practices in hospitals, colleges, workplaces, and community settings.

Nursing Research

Further research can be conducted using larger samples, probability sampling, experimental designs, and intervention-based approaches to evaluate the effectiveness of stress-management and sleep-improvement programmes.

RECOMMENDATIONS

1. A similar study may be conducted with a larger sample size.
2. An experimental study may be conducted to assess the effectiveness of relaxation therapy on stress and sleep quality.
3. Similar research may be conducted among students, nurses, healthcare workers, and older adults.
4. A comparative study may be conducted between urban and rural populations.
5. Educational programmes on sleep hygiene and stress management may be developed at the community level.
6. Future studies may examine the effects of meditation, yoga, physical activity, and digital-device use on stress and sleep quality.

LIMITATIONS

1. The sample size was limited to 100 adults.
2. Convenience sampling limits the generalizability of the findings.
3. The study was conducted in selected community settings only.
4. Data were based primarily on self-reported responses.
5. The correlational design cannot establish a cause-and-effect relationship between stress and sleep quality.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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