

EVERYDAY LIFE FACTORS THAT AFFECTS MEMORY

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Introduction

Working memory is the ability to maintain information in the brain for a short period while also completing complex tasks such as reasoning, learning, and comprehension (Baddeley, 1997). It is essential for everyday life and decision-making. Low levels of working memory would result in humans not being able to store long-term memories or recall those memories. High levels of working memory would result in the brain not resting as it needs to since it is kept busy. This study looked at how many words the participant can recall and whether stress, drug use, and sleep quality affect their memory.

Research has been conducted on college students' working memory, but it is still unclear how much everyday experiences affect working memory (Tariq & Noor, 2012). One question not clear is how everyday stress impacts memory performance (Klein & Boals, 2001).

The present study aims to determine college students' working memory and how everyday tasks can influence their memory. Many factors influence college students' working memory. Some key factors are stress, drug use, and sleep quality.

Hypotheses

1. Stress will be positively associated with memory performance.
2. Drug use will be negatively associated with memory performance.
3. Sleep disturbances will be negatively associated with memory performance.

Method

Participants

Fifty-four undergraduate college students enrolled at Eastern Kentucky University were recruited through the SONA system.

Materials

- Perceived Stress Scale Survey
- The Drug Abuse Screening Test Survey (20 questions)
- Pittsburgh Sleep Quality Index Survey
- Memory Task

Procedure

After signing the consent form, participants were asked to fill out the three surveys on stress, drug use, and sleep quality and perform a memory task. With the memory task, they were asked to memorize a list of 30 words for 5 minutes. After 5 minutes, they worked on basic math problems for 2 minutes. Then they were given a blank piece of paper and 5 minutes to recall as many words as possible in any order.

Memory Task

With the memory task, participants were given a list with 30 words and 5 minutes to study for memorization.

Globe	Fault	Blink	Brick	Pupil
Fight	Occur	Lower	Hotel	Labor
Screw	Dairy	Medal	Thigh	Juice
Ready	Clear	Doubt	Offer	Class
Adapt	Pause	Round	Waste	Habit
Horse	Moral	Allow	Basis	Party

Correlation Matrix

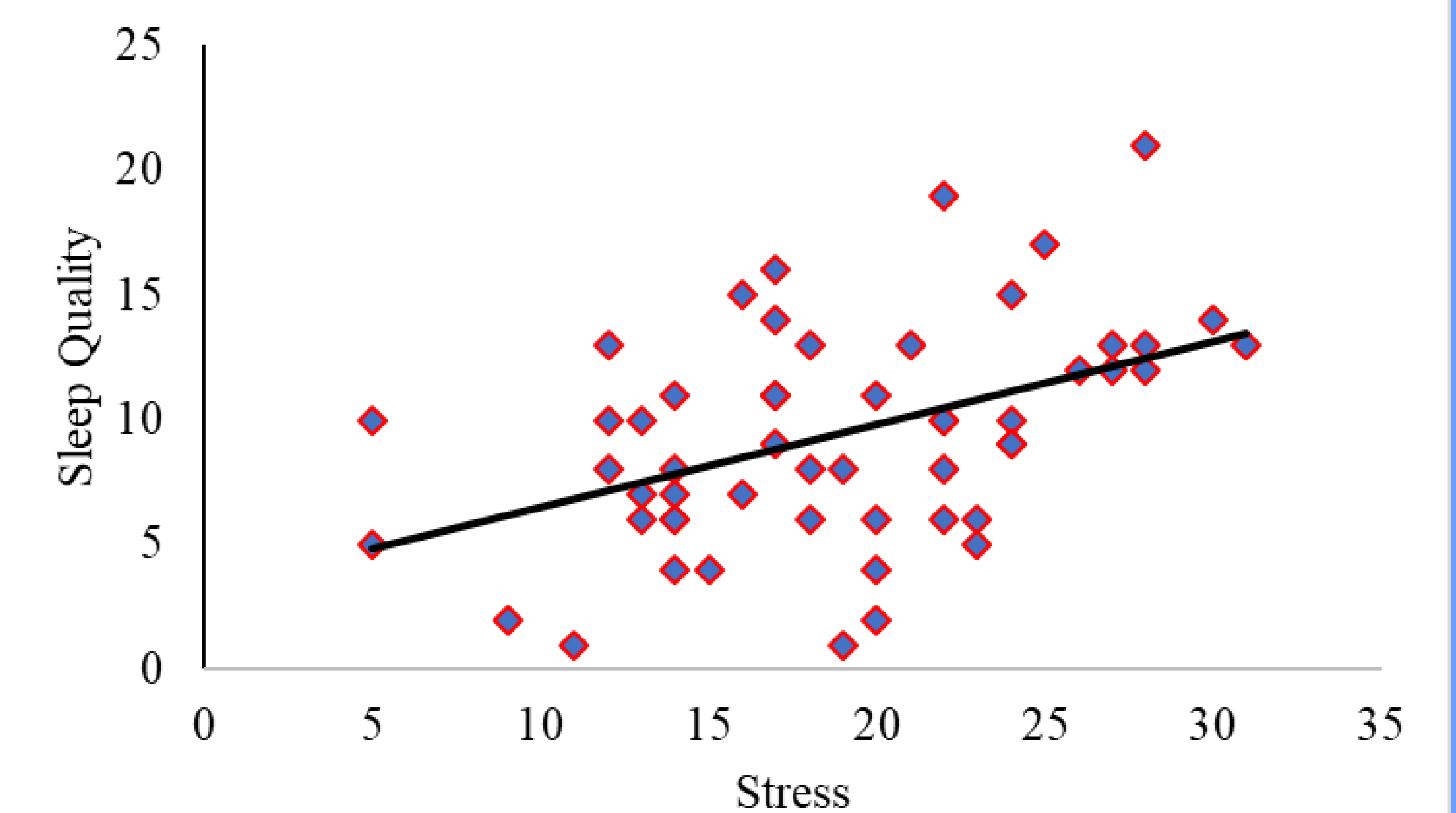
		Stress	Drug Use	Sleep Disturbances	Memory Recall
Stress	Pearson's r				
	p-value				
Drug Use	Pearson's r	-0.062			
	p-value	0.657			
Sleep Disturbances	Pearson's r	0.453	-0.019		
	p-value	< .001	0.891		
Memory Recall	Pearson's r	-0.049	0.062	-0.251	
	p-value	0.723	0.654	0.067	
Memory False Recall	Pearson's r	0.017	-0.008	0.020	-0.465
	p-value	0.903	0.956	0.888	<.001

Discussion

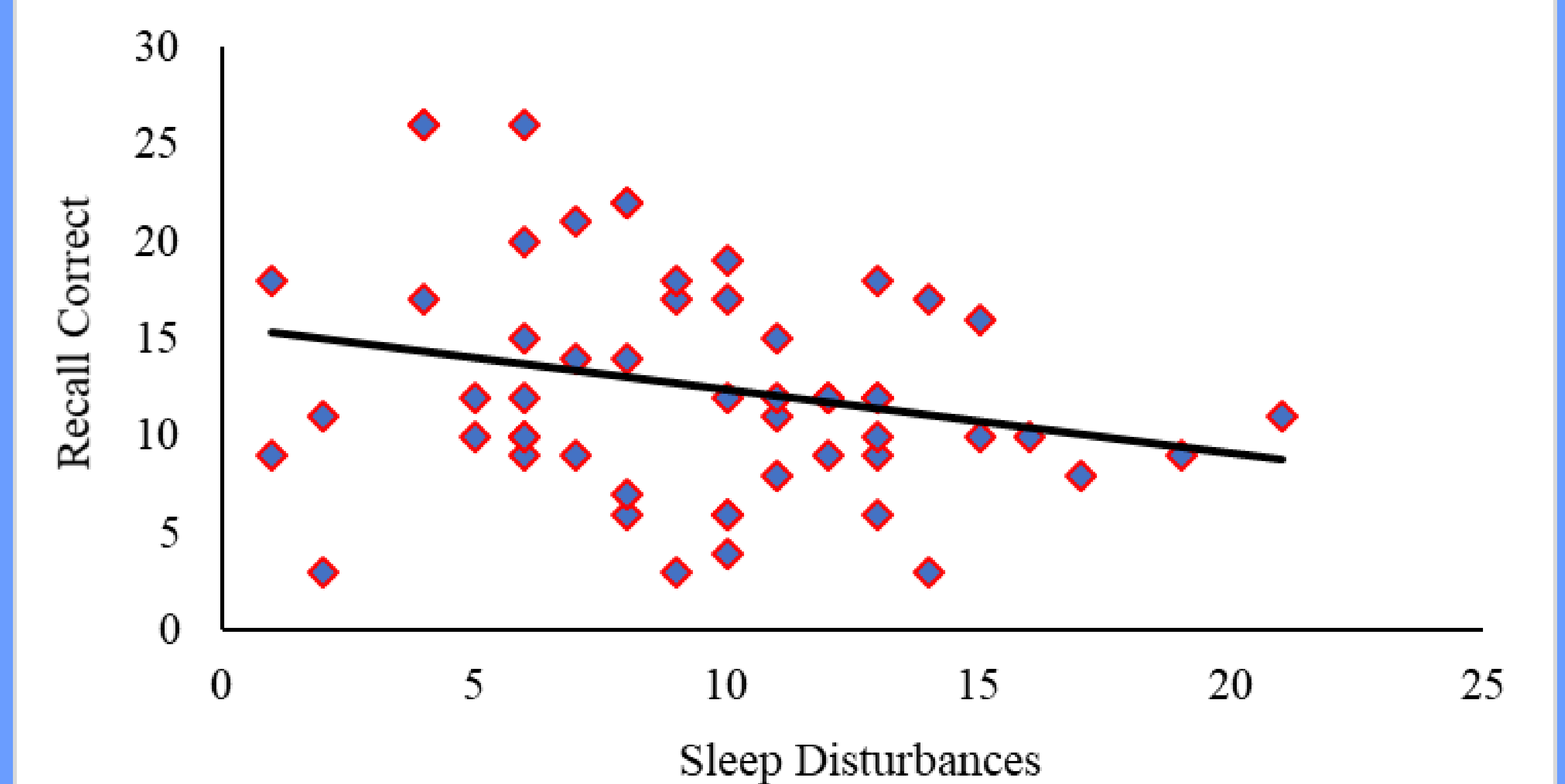
This study examined the impact of stress and sleep quality on memory. Results showed that participants with stress did have a higher chance of sleep disturbance. Participants who experienced higher sleep disturbances presented lower memory recall. One hypothesis of this study was supported in that sleep disturbances was negatively associated with memory performance.

Possible limitations for this could include: each participant had different studying techniques. Second, participants may have been tired during the memory task since they took multiple surveys. Third, there was not a large population size since the study was strictly limited to undergraduate Psychology students. Significance and importance of these findings are for those students who struggle with retaining information. However, it is still unclear how much everyday experiences affect working memory. In the future, data should be collected from different universities to get better results. The study should not only be limited to psychology students.

Stress & Sleep Disturbances



Sleep Disturbances & Recall



References

- Baddeley, A. (1997). Human Memory: Theory and Practice (Revised Ed.). Allyn & Bacon.
- Klein, K., & Boals, A. (2001). The relationship of life event stress and working memory capacity. *Applied Cognitive Psychology, 15*(5), 565-579.
- Tariq, S., & Noor, S. (2012). Impact of Working Memory on Academic Achievement of University Science Students in Punjab, Pakistan. *Journal of Education and Practice, 3*(2), 47.