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Investigating the Interplay Between Mindfulness and Academic Stress Among Undergraduate University Students of Peshawar

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ABSTRACT: This research delves into the link between academic stress and mindfulness among undergraduate university students in Peshawar. The study involved 200 students from various universities in Peshawar (selected sample universities were University of Peshawar, CECOS University, Islamia University, National University of Modern Languages and City University), aged 18 to 25, and chosen through a multi-stage random sampling method with age and gender stratification. The Perceived Stress Scale (PSS) gauged how situations impact emotions and disrupt academics, while the Mindfulness Attention Awareness Scale (MAAS) measured mindfulness levels alongside demographic data. Statistical Package for Social Sciences (SPSS) was utilized for data analysis, encompassing descriptive and inferential stats, psychometric properties, Pearson correlation coefficient, and independent sample t-test. Findings revealed a significant negative correlation between mindfulness and academic stress, affirming both hypotheses, indicating that higher mindfulness related to lower academic stress among undergraduate university students at university level.

KEYWORDS: Mindfulness, Academic Stress, Undergraduate, University Students

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Introduction

An undergrad's time in university is among the most sparkling and an unforgettable experience in their life. It is in university that an undergrad gets opportunities for growth, development, and adult preparation, including a vibrant campus life, the companionship of peers, and a wide range of academic and extracurricular pursuits. It is the crucial period where they are ready to enter adulthood. Beside other demands, one of the top priorities during this period is the achievement of academic goals that students have planned for themselves. As it is the point at which they think about their professional life that what they want to achieve in their lives. Due to fast mental and physical development during this phase, students may believe that their mental development is not compatible with the desired social demands which may lead to problems arising from insufficient adaptation. As these days everything moves quickly, including technology, education, culture, and society into the mix, the high expectations from society for students to tackle unclear, unpredictable, and unrealistic tasks put a lot of pressure on them. The stress caused by educational pressure can have an adverse effect on student's life and inadequate adaptation skills can leads to many physical or psychological health problems.

Self-awareness and present-moment awareness are one of the factors that can help in reducing the effect of academic stress. By enhancing cognitive processing, attention regulation, and working memory, mindfulness can enable students to improve their emotional response to academic stressors and can help them in learning and showing good academic performance (Keng et al., 2011). Awareness about the present moment contributes to stress reduction and enhances the psychological health of university students (Shapiro et al., 2007).

Mindfulness

In order to alleviate academic pressure, recent researches have shown that mindfulness can offer potential solution. Mindfulness is the consciousness that occurs via purposely paying attention to the present moment, non-judgmentally which generates a sense of stability and nonreactive awareness within an individual (Kabat-Zinn et al., 1995). For the past years, mindfulness is continuously gaining acknowledgement for its practicality in treating stress and anxiety. However, it originated over 2,500 years ago as a meditation practice employed by monastic Buddhists.

Mindfulness can help students in adapting to stressful situations. By focusing and looking at positive side of a problem, they can find better solutions which will lead to better adjustments in social settings. Practicing mindfulness helps one to deal better with daily life challenges by improving focus on the present moment instead of dwelling on the past or worrying about the future (Hayes, & Feldman, 2004). In general, when stress goes down, academic performance drops, but when students are more mindful, they can better manage stress and possibly improve their academic success. (Dvorakova et al., 2017; Prakash et al., 2015; Struthers et al., 2000). Research showed that higher level of mindfulness shows improvement in creative problem-solving activities (Stoops, 2005).

Academic Stress

Academic stress is like mental pain that comes from feeling frustrated about failing in school or not understanding why you failed (Lal, 2014). Students are required to deal with many academic demands like exams, participating in class discussions, improving in subjects, understanding how teachers teach, competing with classmates, meeting parental expectations, and more. All these demands place pressure on students due to which most of the time they face academic stress, as these all demands are related to achievement of academic goals (Bhatti et al., 2018). Gupta (2020) described academic stress as a phrase that is associated with an unproductive and harmful reaction to the challenges that occur due to the change in the task and process of learning.

Academic stress has recently emerged as one of the world's most pressing mental health challenge. According to studies, 10 to 30 percent of students experience some level of academic stress throughout their academic careers. For example, in India, a survey found that more than half of students suffer from depression (51.3%), anxiety (66.9%), and stress (53%) (Iqbal et al., 2023). According to a Canadian survey, 30% of students suffer from psychiatric disorders. Similarly, a study in the United States found that more than half of students experience academic stress that is 53% in Australia (Stallman, 2008), 41.9% in Malaysia, and 38% students in Iran faced depression and other mental health problems (Mosley et al, 1994). In Turkey, depression, anxiety, and stress were measured at 27.1%, 47.1%, and 27%, respectively (Mosley et al, 1994). Research conducted in Pakistan showed that about 48.0% of undergraduate university students faced depression, 68.54% dealt with anxiety, and 53.2% experienced academic stress while stress-related issues like suicide, drug addiction, school dropout, and other mental problems are on the rise among students in Pakistan.

Problem Statement

Academic stress is a growing issue that is negatively impacting the performance and overall wellbeing of students. Mindfulness, that involves maintain attention to the present moment is seemed helpful in overcoming stress but their relationship is not well understood. Hence, this study aims to assess how academic stress and mindfulness are linked in undergraduate university students in Peshawar to comprehend the potential influence of mindfulness on stress levels in this specific group. Additionally, the study seeks to determine the variance in mindfulness levels among male and female undergraduate university students in Peshawar.

Objectives of the Study

The main objectives of study were:

1. To find out the relationship between mindfulness and academic stress among undergraduate university students of Peshawar.
2. To find out the higher level of mindfulness which lead to lower level of academic stress among undergraduate university students.
3. To find out the level of mindfulness among undergraduate university male and female students of Peshawar.

Hypotheses

The following hypotheses were formulated for the study:

H1: There will be a significant relationship between mindfulness and academic stress among undergraduate university students of Peshawar.

H_0: There will be no significant relationship between mindfulness and academic stress among undergraduate university students of Peshawar.

H2: Higher level of mindfulness will lead to lower level of academic stress among undergraduate university students of Peshawar.

H_0: Higher level of mindfulness will not lead to lower level of academic stress among undergraduate university students of Peshawar.

H3: Undergraduate university female students have higher level of mindfulness than undergraduate university male students of Peshawar.

H_0: Undergraduate university female students will not have higher level of mindfulness than undergraduate university male students of Peshawar.

Significance of the Study

The current study may provide insight for instructors, policy makers and administration of various universities in Peshawar and also helpful for other parts of country and world on how mindfulness might assist in reducing academic stress among undergraduate university students. University students often face distractions that lead to stress, hindering their academic success. Mindfulness, a technique that boosts self-awareness and focus on the present, can decrease academic stress and anxiety, leading to enhanced psychological well-being overall. This study supports the benefits of mindfulness in reducing academic stress among undergraduate university students and may aid in understanding the advantages of incorporating the mindfulness practices. Furthermore, profound understanding about the relationship between mindfulness and academic stress levels can contribute to the field of educational psychology by providing practical evidence that can help in developing valuable strategies for enhancing and promoting supportive learning environments. This could eventually help in shaping the policy decisions, curriculum design, and mental health support programs which can lead to the betterment of student's overall wellbeing.

Limitations of the Study

The study has also some limitations:

1. A small sample size like this can make it difficult to generalize the findings to a larger population.
2. Most of the participants in the study were Pashtun which made it hard for researchers to understand how different group of students like hindko speaking, chitrali or Punjabi speaking in Peshawar feels about stress and mindfulness.
3. The study only examined stress and mindfulness once so saying that one causes the other is difficult because it did not track students for a long time.

Operational Definitions

Academic Stress

Academic stress refers to when academic strains exceed to students' internal and external coping resources (Schotanus et al, 2017).

Mindfulness

Mindfulness is a term that refers to the state of mind in which a person is well aware of his present situation (Kabat-Zinn, 2023).

Methodology

Research Design

This is descriptive research which involves collecting, organizing, analysing, and interpreting data for a specific purpose. In this study, the researchers have chosen the correlation method to investigate how mindfulness, as the independent variable, relates to academic stress, the dependent variable.

Population and Sample

Population

The targeted population of the study consisted of undergraduate university students of all the universities in Peshawar whose age ranges from 18 to 25 years.

Sample

The sample participants were selected from the randomly chosen five universities including University of Peshawar, CECOS University, Islamia College University, National University of Modern Languages, and City University.

The total sample selected were 200 students, with 100 males and 100 females who were university students in Peshawar. The participants, aged between 18 and 25, were given questionnaires to fill out on campus. They completed two questionnaires: the Perceived Stress Scale (PSS) and The Mindful Attention Awareness Scale (MAAS) along with demographic sheet.

Research Instrument

The research instruments used for the study were Perceived Stress Scale (PSS) developed by Sheldon Cohen in (1983) and Mindfulness Attention Awareness Scale (MAAS) developed by Kirk Warren Brown & Richard 2003. The Perceived Stress Scale (PSS) was used to inquire how different situations affect our feelings and cause disruption in academics, while the Mindfulness Attention Awareness Scale (MAAS) was used to measure the level of mindfulness.

Data Analysis

In this study, statistical analysis was conducted using the IBM SPSS Version 25 software. Standard analytical methods, such as correlation and independent sample t-tests, were employed using SPSS.

Table 1

Correlation between Academic stress and Mindfulness

	N	*M*	*SD*	1	2
PSS-10	200	32.5	4.24	-	-.530**
MAAS	200	53.3	10.64	-.530**	-

**. Correlation is significant at .01 level (2- tailed).

Above table presents the Pearson Correlation, indicating the significant relationship between mindfulness and academic stress at .01 level (2-tailed). According to the table, there is a moderate to strong negative relationship between mindfulness and academic stress i.e., -.530**.

Hypothesis 3

The third hypothesis, stating that female undergraduate university students exhibit higher mindfulness levels than males, was rejected. Although females showed slightly higher mindfulness levels, the difference was not significant, supporting the null hypothesis. This finding aligns with previous research (Holzel et al., 2011), which also reported slightly higher mindfulness levels in women.

Table 2

Independent Sample t-test Result

	Male		Female				
Variables	*M*	*SD*	*M*	*SD*	*t (198)*	*P*	*Cohen's d*
MAAS	52.76	10.84	53.76	10.46	-.664	.508	0.093

Above table presents mean and standard deviation of mindfulness attention awareness scale among male and female respondents, value of t, p and Cohen's D. Results indicated no significant mean difference for mindfulness level across gender i.e., Male (M=52.76, SD=10.84) and Female (M=53.76, SD=10.46) with t =-.664, p =.508 (p>0.05). Findings revealed that females do not exhibit higher level of mindfulness in comparison to males. The value of Cohen's d is 0.093 (<0.5) which indicates small effect size.

Hypothesis 1

The first hypothesis examined the relationship between mindfulness and academic stress. Results showed a significant negative correlation ($r = -0.530$, $p < 0.01$), indicating that higher mindfulness levels are associated with lower academic stress. This finding aligns with previous studies (Lee et al., 2020), which also reported a negative correlation between mindfulness and academic stress ($r = -0.38$, $p < 0.01$).

Hypothesis 2

The second hypothesis confirmed a moderate to strong negative relationship between mindfulness and academic stress, indicating that higher mindfulness corresponds to lower academic stress, consistent with previous research (Bahl et al., 2013).

Discussion

This study analysed demographics and used standardized scales to measure stress and mindfulness levels among undergraduate university students. We examined the relationship between academic stress and mindfulness via Pearson correlation and compared mindfulness levels between males and females using an independent samples t-test.

This section is about the insights obtained from the findings. The current study aimed to explore how mindfulness and academic stress impact students and how these two factors are interconnected. Further, the study aimed to investigate the gender differences that undergraduate university female student exhibit higher level of mindfulness. Total number of participants were 200 (100 males and 100 females) the ages ranged from 18-25 years. Therefore, statistical analysis has proven that moderate to strong significant negative correlation between mindfulness and academic stress supporting both hypotheses. Specifically, increased mindfulness was associated with decreased academic stress among undergraduate university students. The third alternative hypothesis got rejected but the null hypothesis got proved on the basis that there is no mean difference between mindfulness level of undergraduate university female and male students of Peshawar.

The first hypothesis looked at the connection between mindfulness and academic stress. The result showed negative association between both the variables (mindfulness and academic stress) i.e., $r = -0.530^{**}$, $p<0.01$ the outcome aligns with some of the researches regarding the association between academic stress and mindfulness. The study investigated the relationship between academic stress and mindfulness on a sample of 300 undergraduate university students (Lee et al., 2022). A significant negative correlation ($r = -0.38$, $p<0.01$) was found between mindfulness and academic stress levels (PSS; Cohen et al., 1983) and mindfulness scores (MAAS; Kabat-Zinn, 2003).

Another study revealed that correlation between academic stress and mindfulness on a sample of 200 undergraduate university students (Smith et al., 2019). Results showed a significant negative correlation ($r = -0.45$, $p<0.001$) between perceived stress levels (Cohen et al., 1983) and mindfulness scores (Kabat-Zinn, 2003)

The second hypothesis stated that higher level of mindfulness lead towards the lower level of academic stress, correlation revealed that there is a moderate to strong negative relationship between both the variables which means that one increases (mindfulness) and the other (academic stress) decreases. The results of the current research are in line with the outcome of earlier studies, the study finding in Malaysia revealed that a substantial negative connection was identified between academic stress and mindfulness among undergraduate university students that when students who face academic stress have low level of mindfulness. (Bahl et al. 2013).

Another study conducted by Dvorakova et al., 2017; Prakash et al., 2015 stated that a high level of mindfulness boosts students' ability to deal with stress and may improve academic performance. Overall, while stress decreases the mindfulness increases and higher mindfulness was associated with lower academic stress supporting previous research (Hofmann et al., 2010). These findings suggest that mindfulness may be a valuable tool for mitigating academic stress in undergraduate university students.

Third hypothesis of the study was that undergraduate university female students display higher level of mindfulness as compared to undergraduate university male students. This alternate hypothesis got rejected due to slightly higher level of mindfulness women exhibit but the null hypothesis got accepted on the basis of that undergraduate university female students will not have higher level of mindfulness than undergraduate university male students. This study is in line with previous research that examined gender differences in level of mindfulness and found that women have slightly higher level of mindfulness than men (Holzel et al., 2011).

Another study conducted by Dunkley et al., (2015) revealed a significant gender difference in level of mindfulness among undergraduate university students.

Another study backed the null hypothesis of our research, indicating that in the majority of studies, gender disparities in mindfulness levels are not observed (Catak et al., 2012). Research conducted by Carmody & Baer (2008) also suggested that there is no significant difference in level of mindfulness among both the genders.

Conclusion

The study examined how academic stress relates to mindfulness among undergraduate university students in Peshawar. It found that there is a significant negative correlation between mindfulness and academic stress, meaning that higher mindfulness is linked to lower academic stress. The first two hypotheses were supported, indicating that mindfulness can help reduce academic stress. However, the third hypothesis, which suggested that female students have higher mindfulness levels than male students, was not supported, as no significant mean difference was found between the two groups. The study included 200 participants, balanced between genders, from various universities in Peshawar. In short, the researchers utilized the Perceived Stress Scale (PSS) to assess how various situations impact students' feelings and disrupt their academic performance. Meanwhile, the Mindfulness Attention Awareness Scale (MAAS) was employed to measure the participants' levels of mindfulness. These tools helped in understanding the relationship between academic stress and mindfulness among undergraduate university students.

Recommendations

Following are the recommendations of the study on the basis of findings:

1. Large scale studies using big databases on students may be considered to investigate that how stress and mindfulness are linked to improve the accuracy and reliability of research findings.
2. The targeted participants were from universities so they were not considered as a sample of the entire population thus respondents can be taken from schools, colleges and other institutes.
3. Future researchers may think about different variables that may impact stress and mindfulness, such as cultural disparities or various difficulties that students encounter.

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