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Understanding Stress in College Students: The Influence of Mindfulness and Psychological Hardiness

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ABSTRACT

College students face numerous academic, social, and personal challenges that can lead to significant stress, thereby negatively impacting their overall well-being. The study aims to explore the relationships between stress, mindfulness, and psychological hardiness among college students. Utilizing a sample of 348 university students, the Perceived Stress Scale (PSS), the Five Facet Mindfulness Questionnaire (FFMQ), and the Psychological Hardiness Scale (PHS) were used to assess these constructs. The findings of the study reveal a moderate negative correlation between stress and mindfulness (r = -0.399, p < .01), indicating that higher levels of mindfulness are associated with lower stress levels. Additionally, a weak negative correlation has been found between stress and hardiness (r = -0.118, p < .01), suggesting that psychological hardiness contributes to stress resilience, though to a lesser extent than mindfulness. The results of regression analysis further support the predictive role of mindfulness and hardiness in stress reduction, with hardiness emerging as a stronger predictor. These results highlight the potential benefits of mindfulness and psychological hardiness in mitigating stress among college students.

Keywords: Stress, Mindfulness, Psychological hardiness, college students

Introduction

College life presents a range of academic, social, and personal challenges that can cause stress among students. The academic pressure, financial concerns, and social expectations can negatively impact students' well-being (Pascoe et al., 2020). Research has consistently revealed that prolonged exposure to stress can lead to adverse physical and psychological health, including anxiety, depression, and burnout (Regehr et al., 2013). whereas, certain psychological traits and coping mechanisms, such as mindfulness and hardiness, can alleviate the effects of stress and enhance resilience among college students.

As the mental health concerns continue to rise among college students, understanding the dynamic relationship between stress, mindfulness, and hardiness is crucial for developing effective coping strategies and interventions. This study aims to examine the relationship between these variables and their implications for student well-being by exploring how mindfulness and hardiness influence stress levels.

Stress

Stress is the body's natural response to a demand or stressor, which can be either negative or positive (Syle, 1976). Stress is defined as the circumstances that are "appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus & Folkman, 1984). It is psychosomatic where 'psyche' means mind and 'soma' means body. It is the result of regulation as well as non-regulation of psychological and physiological functioning (Pestonjee, 1999).

Seyle (1965) viewed stress as a response which is internal to individual. On the contrary, Holmes & Rahe (1967) conferred stress as stimulus and external response of an individual. As per Thompson (1992) stress is not external object, rather it is an organism's reaction to events happening around it. Stress is a state or emotion a person feels when they believe that the demands placed on them surpass the personal and social resources they can access or use. It is understood as an inability to manage perceived threats or challenges to one's emotional, spiritual, mental, and physical well-being, which can trigger various physiological reactions (Oswalt and Riddock, 2007).

Stress can either be positive or negative depending upon its impact on the individual. The positive stress is termed as eustress as it helps in healthy competition and it is within the ability of an individual (Pestonjee, 1999). On the other hand, there is a negative stress termed as distress and this stress is beyond the capacity of an individual (Lefevere et al., 2006).

Mindfulness

Mindfulness is the practice of consciously attending to present experiences with openness and without judgment, viewed both as a skill and a way of being (Bishop et al., 2004). It includes the nonjudgemental observation of external and internal events as they occur (Baer, 2003). Mindfulness is regarded as an inherent trait of mind, yet it can be further developed and enhanced through techniques like meditation (Kabat-Zinn, 2015).

Mindfulness enables individuals to observe their thoughts and emotions without reacting impulsively, helping to reduce stress (Holzel et al., 2011; Zhao, 2025). Increased mindfulness may help individuals experience less stress by enabling them to act more in harmony with their surroundings, allowing them to better meet their needs and align their actions with their values (Brown & Rayens, 2003; Palmer & Rogers, 2009). Mindfulness practices alleviate stress and strengthen emotional regulation by fostering awareness and acceptance of the present moment (Garland et al., 2017; Strohmaier et al., 2021). Mindful students focus exclusively on their and others needs as well as respond with inner peace (Nooripour et al., 2022).

Hardiness

Hardiness is generally regarded as a mediating factor in the stress-coping framework (Judkins, 2001). Through positive reappraisal, hardiness can turn stress event into opportunity by minimizing negative emotions like anger or sadness (Gentry & Kobasa, 1994). Hardiness is viewed as triad of personality traits which provide existential courage to reverse threatening life events into meaningful experience (Maddi et al., 2011). Hardiness refers to a positive attitude that empowers individuals to take an active role in managing and resolving real-life challenges, rather than avoiding them, while embracing change as just another obstacle to overcome (Hamid, 2020).

Kobasa (1979) classified hardiness as a product of 3C's i.e. Commitment (commitment to actively take part in life instead of being withdrawn); control (influencing life events and choices rather than being powerless) and challenge (strive to learn and grow from every life experience rather than feeling intimidated). These personality characteristics or 3C's work together to determine one's beliefs, values and serve as buffer to stress.

Components of hardiness enabled individuals to perceive combat training as less threatening, enhance their confidence in coping abilities and prompted the use of diverse coping strategies (Lou et al., 2022). Hardy individuals demonstrate strong adaptability and resilience when faced with stressful psychological situations. Hardiness plays a crucial role in academic resilience, helping students navigate demanding situations with a positive mindset (Bartone, 2006). By fostering psychological hardiness through resilience-training programs, colleges can equip students with essential coping mechanisms to manage stress and enhance mental health.

Review

Mindfulness and stress

Mindfulness helps buffer against stress by reducing an individual's tendency to react to emotional stimuli (Keng et al., 2011) and minimizing distractions from the surrounding environment (Hayes & Feldman, 2004). Lower mindfulness levels were found to be significantly related with behavior like overeating, poor sleep quality and higher stress levels (Pacic-Turk & Pavlovic, 2020). The role of mindfulness and mindfulness-based interventions to lessen the stress among various samples has been well-reported. Mindfulness correlates strongly with lower perceived stress in a sample of health professionals (Atanes et al., 2015); amongst university students (Palmer & Rogers, 2009; Zimmaro et al., 2016; Zahra & Riaz, 2018); mooc participants (Bartlett et al., 2021) and speech language pathologists (Walters, 2023).

Mindfulness paves the way for developing acceptance which in turn may help reduce perceived stress. High level of mindfulness escalates the person's ability to respond mindfully to their daily life experience, which in turn improve a variety of mental health outcomes, especially responding adaptively to stress (Baer, 2003; Hofman et al., 2010).

Stress and Hardiness

Allerd & Smith (1989) reported that the students with high hardiness thinks more positively often than the students with lower level of hardiness. Hardy students immerse themselves more in positive thinking with increasing intensity of stress than their low hardiness counterparts. The studies exploring the relationship of hardiness with stress suggests that individuals with higher levels of hardiness are more inclined to use maladaptive coping approach than maladaptive coping to alleviate their stress (Jalali & Amarqan, 2015). The presence of high level of hardiness has a significant impact in predicting lower stress, burnout and illness (Hills & Norvel, 1991). The studies of Abdollahi et al. (2017); Bartone & Bowles (2020) showed that psychological hardiness play crucial role in reducing the negative symptoms related to stress as these two variables have negative relationship. he significant and negative relationship has been found between stress and hardiness (Rekens et al., 2018). Hardiness is a trait that can be viewed as a significant variable in buffering the negative impact of stress (Nooripour et al., 2022).

Stress, mindfulness and hardiness

The study of Vinothkumar et al. (2013) showed that mindfulness and hardiness acts as a barrier against stress. Faced with difficult and stressful situations, people become more mindful by refraining themselves from judging their experience which leads to development of hardiness (Bajaj & Pande, 2015). The hardy and more mindful person have more ability to deal with life threatening situations and thereby respond to stress, anxiety and depression in more open way and thus have better mental health and high quality of life (Zare et al., 2025).

Methodology

Research Design: The present study employs a correlational research design to evaluate the relationships between stress, mindfulness, and psychological hardiness among college students. A quantitative approach was used to collect and analyze data, allowing for objective measurement of the variables.

Participants: The study sample consisted of 348 college students enrolled in various academic disciplines. Participants were selected using convenience sampling. Inclusion criteria included active enrolment in a college and willingness to participate in the study. Participants provided informed consent before completing the questionnaires.

Table 1: Sample Characteristics (N=348)

Category Sub-category Ν %age Male 157 45.11 Gender 191 54.88 Female 47.41 Locale Urban 165 183 52.59 Rural Stream Science 107 30.75 Commerce 115 33.05 Arts 126 36.21

Procedure: Data collection was done by survey distributing questionnaire to students Participants completed the questionnaire anonymously. Ethical approval was obtained from the college's ethics committee before data collection.

Instruments Used

Perceived Stress Scale (PSS): Perceived stress scale developed by Cohen et al. (1983) is a 10-item measure of perception of life stress and the extent to which a person perceive situation as overwhelming, unpredictable, and uncontrollable. Participants rated the severity of each item on a 5-point Likert scale (0=never to 4= very often). Higher score on PSS dictates the presence of higher stress level. The Cronbach alpha ranges from 0.84 to 0.86.

Five Facet Mindfulness Questionnaire (FFMQ): The FFMQ by Baer et al. (2006) is a 45-item questionnaire used to assess the mindfulness of students. It comprises of 5 factors namely observe, describe, act with awareness, non-judge and non-react. This is a 5-point Likert scale ranging from 1 (never true) to 5 (always true). The higher score refers to the presence of higher mindfulness.

Psychological Hardiness Scale (PHS): The Psychological Hardiness Scale (PHS) by Novak (1990) is a self-report questionnaire designed to assess an individual's level of psychological hardiness. The scale consists of 40 items and responses are measured on a Likert scale (e.g., ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree"). Higher scores indicate greater psychological hardiness. The scale has demonstrated good internal consistency, with a Cronbach's alpha of approximately 0.80.

Data Analysis: Descriptive statistics were calculated for all study variables. Pearson's correlation analysis was performed to examine the relationships between stress, mindfulness, and psychological hardiness. Regression analysis was used to determine the predictive power of mindfulness and hardiness in explaining stress levels. Statistical analyses were conducted using SPSS software.

Results

Pearson's correlation analyses were employed to examine the relationship between stress, mindfulness, and psychological hardiness. The results of correlation analysis is presented in table 2.

	Stress	Mindfulness	Hardiness		
Stress	1	-0.399**	-0.118**		
Mindfulness		1	0.135**		
Hardiness			1		
Mean	27.167	128.06	113.58		
SD	6.40	12.86	12.89		

Table 2: Correlation matrix: Stress, Mindfulness and Hardiness among college students

The correlation analysis examined the relationships between stress, mindfulness, and hardiness. A moderate negative correlation was observed between stress and mindfulness (r = -0.399, p < .01), highlighting that individuals with higher mindfulness levels tend to experience lower stress. This finding is in accordance with existing literature, which shows mindfulness as an effective strategy for stress reduction. Further, a weak negative correlation was found between stress and hardiness (r = -0.118, p < .01), indicating that higher levels of hardiness is associated with lower stress, though the relationship is not as strong as with mindfulness. This suggests that while hardiness may contribute to stress resilience, it may not be a major factor in stress reduction. Additionally, a weak positive correlation was found between mindfulness and hardiness (r = 0.135, p < .01), implying that individuals who score higher in mindfulness also tend to exhibit greater psychological hardiness. This relationship, although weak, suggests a potential overlap in the benefits of mindfulness and hardiness in promoting psychological well-being.

Overall, the findings indicate that mindfulness plays a vital role in reducing stress, whereas hardiness has a smaller but still considerable influence. The positive relationship between mindfulness and hardiness indicates that developing mindfulness practices may also contribute to greater psychological resilience. Furthermore, the regression analysis was employed to examine the relationship between dependent variable i.e. stress and independent variables namely, mindfulness and psychological hardiness and the results are presented in table 3.

Table 3: Mindfulness and hardiness as predictors of stress

	R	R ²	R ² Change	F-value	В	Beta	t-value
Constant	0.404		0.163	78.43**	55.740		21.53
Mindfulness					-0.033	-0.066	2.02*
Hardiness					-0.194	-0.390	11.97**

*p<0.05, **p<0.01

The results shows that the model is statistically significant, with an overall \mathbb{R}^2 value of 0.404, suggesting that approximately 16.3% of the variance in stress is explained by the mindfulness and hardiness. Among the predictors, both mindfulness ($\beta = -0.066$, p < 0.05) and hardiness ($\beta = -0.390$, p < 0.01) were found to have a significant negative effect on stress. The regression coefficients suggest that a one-unit increase in mindfulness leads to an estimated 0.033 unit in stress. Similarly, hardiness has a stronger effect, with a coefficient of 0.194.

The F-value of 78.43 (p < .01) indicates that the overall regression model is statistically significant, signifying that the predictor variables namely, mindfulness and hardiness significantly contribute to explaining variations in stress among college students. Mindfulness had a B coefficient of -0.033 and a Beta value of -0.066, with a t-value of 2.02 (p < .05). This suggests that mindfulness has a small but significant negative association with stress, implying that higher levels of mindfulness are linked to lower stress levels. However, the weak beta coefficient indicates that mindfulness alone is not a strong predictor of stress reduction.

In contrast, hardiness emerged as a more substantial predictor of stress, with a B coefficient of -0.194, a Beta value of -0.390, and a t-value of 11.97 (p < .01), thereby indicating a stronger negative relationship between hardiness and stress, suggesting that individuals with higher levels of psychological hardiness tend to experience significantly lower stress levels. The larger beta value implies that hardiness is a stronger predictor of stress reduction compared to mindfulness.

Overall, the results of regression analysis showed that both mindfulness and hardiness contribute to explaining variations in stress among college students, with hardiness playing a more dominant role. While mindfulness has a statistically significant effect, its impact appears to be smaller than that of hardiness.

Discussion

Mindfulness and stress

The study findings revealed that stress has negative relationship with mindfulness. Mindful individuals tended to perceive stress as less threatening and were less likely to rely on avoidant coping strategies (Weinstein et al., 2008). Individuals with higher levels of mindfulness were adopted to perceived stress as compared to those with lower mindfulness level. Mindfulness aids in stress reduction by strengthening an individual's resilience (Baer et al., 2006; Zohra & Raiz, 2018). Mindfulness encourages paying full attention to the present moment, instead of getting lost in worry or rumination. This, in turn, decreases amygdala activation leading to a reduction in overall stress levels (Taren et al., 2015). Mindfulness could reduce the negative effects of stress and indirectly decreases the health issues along with adverse behaviours associated with stress (Pacic-Turk & Pavlovic, 2020). The primary mechanism may involve better attentional control and an increased ability to accept experiences as they arise, both of which are core skills taught in mindfulness training (Creswell and Lindsay, 2014). The current finding of the study is in accordance with researches which shows that mindfulness negatively predicted stress (Lau et al., 2023; Walters, 2023; Zhao, 2025).

Stress and Hardiness

Hardiness along with coping strategies decreases impact of stress among rescue workers as these were significant predictors of stress as explored by Jamal et al. (2017). This sequential development of outcomes has been identified previously by (Jamal, 2017; Vagni et al., 2020) among group of rescue workers; in nurses who work in emergency departments (Cho & Kim, 2014). The current finding of the study aligns with the study Pordanjani et al.

(2018) which highlights the negative relationship of stress with hardiness. The university students with higher levels of hardiness were better at managing stressful situations and have higher ability to use positive coping strategies.

Mindfulness, Stress and Hardiness

Mindfulness and hardiness had negative association with perceived stress among college students therefore, the hypothesis stating that mindfulness and psychological hardiness has no relationship with perceived stress among college students gets rejected. The results of Zakeri et al. (2022) revealed that mindfulness and hardiness had significant effect on stress among nurses as supporting the findings of the study. The hardy and more mindful nurses had lower level of stress. Mindfulness develops the acceptance among students and hardiness helps them to view stress as a challenge rather than considering it threat (Vinothkumar et al., 2013). Mindfulness acts as mediator in the relation of stress with hardiness among the Iranian students as the study showed that it has negative correlation with stress and positive relationship with psychological hardiness (Nooripour et al., 2022).

Conclusion

The aim of the present study is to explore the relationships between stress, mindfulness, and psychological hardiness among college students. The findings demonstrate that mindfulness serves as a significant buffer against stress, helping students in effectively managing academic and personal challenges. While psychological hardiness also contributes to stress reduction, its impact appears to be weaker compared to mindfulness. The study emphasizes the necessity of fostering mindfulness practices and resilience-building strategies in higher education institutions to support well-being of students. Future research should explore longitudinal and experimental designs to further understand the causal mechanisms underlying these relationships and assess the effectiveness of targeted interventions. By promoting mindfulness and hardiness, universities can play a crucial role in improving students' mental health and overall quality of life.

References

Abdollahi, A., Hosseinian, S., Nooripour, R., & Najafi, M. (2017). Clarifying the roles of hardiness and hopelessness in relation to suicidal ideation among Malaysian undergraduate students. *Practice in Clinical Psychology*, 5(4), 243-250. <u>http://jpcp.uswr.ac.ir/article-1-474-en.html</u>

Allred, K. D., & Smith, T. W. (1989). The hardy personality: Cognitive and physiological responses to evaluative threat. *Journal of Personality and Social Psychology*, 56(2), 257.

Atanes, A. C. M., Andreoni, S., Hirayama, M. S., Montero-Marin, J., Barros, V. V., Ronzani, T. M., et al. (2015). Mindfulness, perceived stress, and subjective well-being: A correlational study in primary care health professionals. *BMC Complementary and Alternative Medicine*, *15*, 1-7. https://doi.org/10.1186/s12906-015-0823-0

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. Assessment, 13(1), 27-45.

Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical psychology: Science and practice*, *10*(2), 125.

Bajaj, B., & Pande, N. (2016). Mediating role of resilience in the impact of mindfulness on life satisfaction and affect as indices of subjective wellbeing. *Personality and individual differences*, 93, 63-67.

Bartlett, L., Buscot, M. J., Bindoff, A., Chambers, R., & Hassed, C. (2021). Mindfulness is associated with lower stress and higher work engagement in a large sample of MOOC participants. *Frontiers in Psychology*, *12*, 1-11.

Bartone, P. T. (2006). Resilience under military operational stress: Can leaders influence hardiness? Military Psychology, 18(sup1), S131-S148.

Bartone, P. T., & Bowles, S. V. (2020). Coping with recruiter stress: Hardiness, performance and well-being in US Army recruiters. *Military Psychology*, *32*(5), 390-397. <u>https://doi.org/10.1080/08995605.2020.1780061</u>

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z.V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). Mindfulness: A proposed operational definition. Clinical Psychology: Science and Practice, 11(3), 230-241.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822-848.

Cho, H. N., & Kim, S. J. (2014). Relationship of job stress, hardness, and burnout among emergency room nurses. *Korean Journal of Occupational Health Nursing*, 11-19.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24(4), 385-396.

Creswell, J. D., & Lindsay, E. K. (2014). How does mindfulness training affect health? A mindfulness stress buffering account. *Current Directions in Psychological Science*, 23(6), 401-407. https://doi.org/10.1177/0963721414547415

Garland, E. L., Hanley, A. W., Goldin, P. R., and Gross, J. J. (2017). Testing the mindfulness-to-meaning theory: evidence for mindful positive emotion regulation from a reanalysis of longitudinal data. *PLoS One* 12. <u>https://doi.org/10.1371/journal.pone.0187727</u>

Gentry, W. D., & Kobasa, S. C. (1984). Social and psychological resources mediating stress-ilness relationships in humans. In WD Gentry (Ed.), Handbook of behavioral medicine.

Hamid, N. (2020). Study of the relationship of hardiness and hope with life satisfaction in managers. *International Journal of Psychology*, *14*(1), 310-339. <u>https://doi.org.10.22034/IJPB.2020.214143.1143</u>

Hayes, A. M., & Feldman, G. (2004). Clarifying the construct of mindfulness in the context of emotion regulation and the process of change in therapy. *Clinical Psychology: Science and Practice*, 11(3), 255–262. <u>https://doi.org/10.1093/clipsy.bph080</u>

Hills, H., & Norvell, N. (1991). An examination of hardiness and neuroticism as potential moderators of stress outcomes. *Behavioral Medicine*, *17*(1), 31-38. <u>https://doi.org/10.1080/08964289.1991.9937550</u>

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of consulting and clinical psychology*, 78(2), 169.

Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on Psychological Science*, 6(6), 537-559. https://doi.org/10.1177/1745691611419671

Jalali, S., & Amarqan, H. A. (2015). Study of the relationship between psychological hardiness and creativity with job stress in personnel of Emergency Social Services of Golestan Province. *Indian Journal of Fundamental and Applied Life Sciences*, 5(2), 1671-1679.

Jamal, Y. (2017). Coping strategies as a mediator of hardiness and stress among rescue workers. Studies on Ethno-Medicine, 11(3), 201-208.

Jamal, Y., Zahra, S. T., Yaseen, F., & Nasreen, M. (2017). Coping strategies and hardiness as predictors of stress among rescue workers. *Pakistan Journal of Psychological Research*, 32(1).

Judkins, S. K. (2001). Hardiness, stress, and coping strategies among mid-level nurse managers: Implications for continuing higher education. University of North Texas.

Kabat-Zinn, J. (2015). Mindfulness. Mindfulness, 6(6), 1481-1483. https://doi.org/10.1007/s12671-015-0456-x

Keng, S., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: A review of empirical studies. *Clinical Psychology Review*, *31*(6), 1041–1056. <u>https://doi.org/10.1016/j.cpr.2011.04.006</u>

Kobasa, S. C. (1979). Stressful life events, personality and health: An inquiry into hardiness. *Journal of Personality and Social Psychology*, 37(1), 1–11. http://doi.org/10.1037/0022-3514.37.1.1

Lau, N. S., Cheung, R. Y., Lai, C. K. S., Lau, A. Y. T., & Fung, M. C. (2023). Effects of mindfulness on stress, life satisfaction, and savoring beliefs among Hong Kong Chinese adolescents during the COVID-19 pandemic. *Frontiers in Psychology*, *14*. <u>https://doi.org/10.3389/fpsyg.2023.1118288</u>

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer.

LeFevre, M., Kolt, G. S., & Matheny, J. (2006). Eustress, distress and their interpretation in primary and secondary occupational stress management interventions: Which way first? *Journal of Managerial Psychology*, 21(6), 547-565.

Lou, K., Barnicle, S., Zizzi, S., & Follmer, D. J. (2022). the moderating effect of hardiness on the relationship between trait anxiety and performance in collegiate baseball players. *Journal for Advancing Sport Psychology in Research*, 2(2), 4-15. <u>https://doi.org/10.55743/000014</u>

Maddi, S. R., Matthews, M. D., Kelly, D. R., Villarreal, B., & White, M. (2012). The role of hardiness and grit in predicting performance and retention of USMA cadets. *Military Psychology*, 24(1), 19–28. <u>http://doi.org/10.1080/08995605.2012.639672</u>

Maddi, S. R., Khoshaba, D. M., Harvey, R. H., Fazel, M., & Resurreccion, N. (2011). The personality construct of hardiness, V: With the construction of existential meaning in life. *Journal of Humanistic Psychology*, *51*(3), 369–388. https://doi.org/10.1177/0022167810388941

Nooripour, R., Hosseinian, S., Farmani, F., Abtahi Foroshani, N., Ghanbari, N., Farkhojasteh, V. S, et al. (2022). Relationship Between Hardiness and Stress of COVID-19 Through the Mediating Role of Mindfulness in Iranian Students. *Journal of Practice in Clinical Psychology*, *10*(3), 193-202. https://doi.org/10.32598/jpcp.10.3.288.

Novak, T. (1990). Psychological Hardiness Scale Manual. Psychological Assessment Resources.

Oswalt S. B., & Riddock, C. C. (2007). What to do about being overwhelmed: Graduate students, stress and university services. *College Student Affairs Journal*, 27(1), 24-44.

Pačić-Turk, L., & Pavlović, D. (2020). Perceived stress, coping styles and mindfulness as predictors of students' self-reported health behaviors. *Archives of Psychiatry Research: An International Journal of Psychiatry and Related Sciences*, 56(2), 109-128. https://doi.org/10.20471/dec.2020.56.02.01

Palmer, A., & Rodger, S. (2009). Mindfulness, stress, and coping among university students. Canadian Journal of Counselling and Psychotherapy, 43(3).

Pascoe, M. C., Hetrick, S. E., & Parker, A. G. (2020). The impact of stress on students in higher education: A systematic review of interventions. *Educational Psychology Review*, 32, 1045–1066. <u>https://doi.org/10.1007/s10648-019-09521-5</u>

Pestonjee, D. M. (1999). Stress and coping: The Indian experience (2nd ed.). New Delhi: Sage Publications.

Pordanjani, T. R., Ebrahimi, A. M., & Doostkam, Z. (2018). Religious attitudes and psychological hardiness as predictors of stress in students' life. Journal of Research on Religion & Health, 4(4), 21-32.

Regehr, C., Glancy, D., & Pitts, A. (2013). Interventions to reduce stress in university students: A review and meta-analysis. *Journal of Affective Disorders*, 148(1), 1–11. https://doi.org/10.1016/j.jad.2012.11.026

Reknes, I., Harris, A., & Einarsen, S. (2018). The role of hardiness in the bullying-mental health relationship. *Occupational medicine*, 68(1), 64-66. https://doi.org/10.1093/occmed/kqx183

Selye, H. (1976). The stress of life. McGraw-Hill.

Strohmaier, S., Jones, F. W., and Cane, J. E. (2021). Effects of length of mindfulness practice on mindfulness, depression, anxiety, and stress: A randomized controlled experiment. *Mindfulness* 12, 198–214. doi: 10.1007/s12671-020-01512-5

Taren, A. A., Gianaros, P. J., Greco, C.M., Lindsay, E. K., Fairgrieve, A., Brown, K. W., et al. (2015). Mindfulness meditation training alters stressrelated amygdala resting state functional connectivity: A randomized controlled trial. *Social cognitive and affective neuroscience*, *10*(12), 1758-1768. <u>https://doi.org/10.1093/scan/nsv066</u>

Thompson, J. (1992). Stress theory and therapeutic practice. Stress Medicine, 8(3), 147-150.

Vagni, M., Maiorano, T., Giostra, V., & Pajardi, D. (2020). Hardiness and coping strategies as mediators of stress and secondary trauma in emergency workers during the COVID-19 pandemic. *Sustainability*, *12*(18), 7561. <u>https://doi:10.3390/su12187561</u>

Vinothkumar, M., Vinu, V., & Anshya, R. (2013). Mindfulness, hardiness, perceived stress among engineering and BDS students. *Indian Journal of Positive Psychology*, 4(4), 514-517.

Walters, A. (2023). *Mindfulness and Life Experiences as Predictors of Perceived Stress in Speech Language Pathologists* (Doctoral dissertation, Walden University).

Weinstein, N., Brown, K. W., & Ryan, R. M. (2009). A multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being. *Journal of Research in Personality*, 43(3), 374–385. <u>https://doi.org/10.1016/j.jrp.2008.12.008</u>

Zahra, S. T., & Riaz, S. (2018). Mindfulness and resilience as predictors of stress among university students. *Journal of Postgraduate Medical Institute*, *32*(4), 378-385.

Zakeri, M. A., Ghaedi-Heidari, F., Khaloobagheri, E., Hossini Rafsanjanipoor, S. M., Ganjeh, H., Pakdaman, H., & Dehghan, M. (2022). The relationship between nurse's professional quality of life, mindfulness, and hardiness: a cross-sectional study during the COVID-19 outbreak. *Frontiers in Psychology*, *13*, 866038.

Zare, E., Yosefvand, S. M., Karami, R., Haghnazari, E., & Mousavi, S. S. (2025). The predictive role of psychological hardiness and mindfulness on the psychological well-being in patients with breast cancer. *Middle Eastern Journal of Disability Studies*. https://jdisabilstud.org/browse.php?mag_id=11&slc_lang=en&sid=1

Zhao, L. (2025). Personality traits, mindfulness, and perceived stress in Chinese adults: a sequential explanatory mixed-methods approach. *Frontiers in Psychology*, *15*, 1-16. <u>https://doi.org/10.3389/fpsyg.2024.1498458</u>

Zimmaro, L. A., Salmon, P., Naidu, H., Rowe, J., Phillips, K., Rebholz, W. N., et al. (2016). Association of dispositional mindfulness with stress, cortisol, and well-being among university undergraduate students. *Mindfulness* 7, 874–885. <u>https://doi.org/10.1007/s12671-016-0526-8</u>.