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Differential effects of mindfulness in the association between psychological distress and coping among undergraduate students

Izuchukwu L.G. Ndukaihe, and Ifenna G. Okoli
Department of Psychology, Alex Ekwueme Federal University, Ndufu-Alike, Nigeria
Corresponding Author's Email: ndukaihe.izuchukwu@funai.edu.ng

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Abstract

The outcomes of the recently concluded 2023 election in Nigeria have had a profound impact on the psychological well-being of Nigerians, especially undergraduate students who made up the largest group of voters. The study explored how mindfulness influences the relationship between psychological distress and coping among undergraduate students. Participants completed assessments of dispositional mindfulness, psychological distress, and coping. Pearson correlation and Hayes' Process Macro were used to analyze the relationships and interaction effects among the study variables. Results showed that psychological distress was not linked to coping, while mindfulness was related to coping. Additionally, mindfulness moderated the relationship between psychological distress and coping among undergraduates. These findings highlight the potential of mindfulness as a counseling intervention to help students improve their coping skills during times of distress.

Keywords: psychological distress, coping, dispositional mindfulness, undergraduates, moderation

Introduction

Mental health is a critical issue in Nigeria, and it is estimated that up to 20% of the population is affected by mental illness (Chu et al., 2022; Gureje et al., 2006). Students face increasing economic, social, and emotional pressures that may trigger various forms of illness and deterioration of psychological health (Ribeiro et al., 2018). The outcomes of the recently concluded 2023 election in Nigeria appear to have exerted a severe impact on the psychological well-being of Nigerians, especially undergraduate students who constituted the largest group of voters. This has led some students to experience risk factors such as stress, depression, anxiety, and suicidal ideation, which are particularly reported among university graduates (Tang et al., 2018).

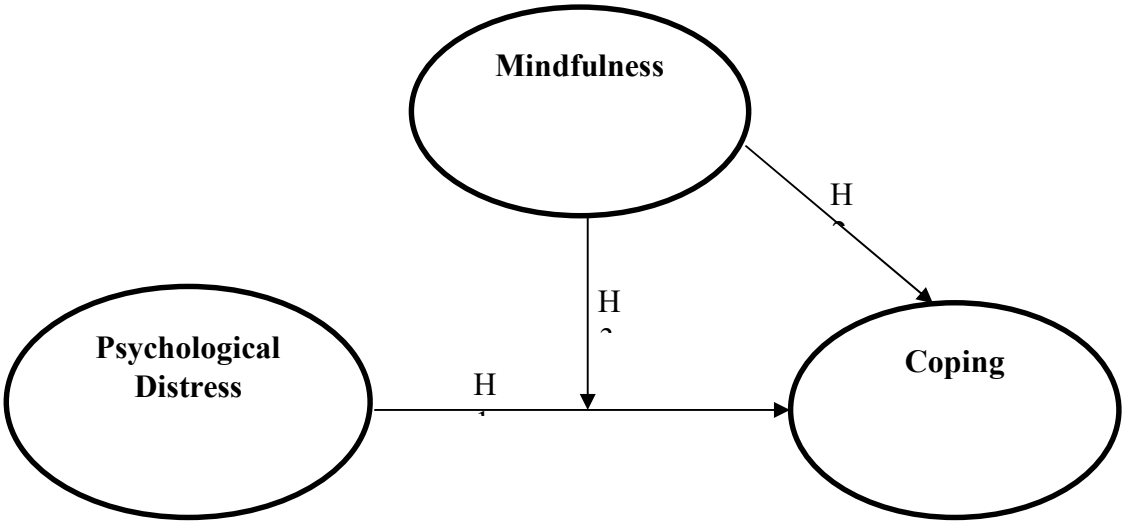
In addition to the conventional and abridged course loads that university students often face as a result of governance challenges and institutional decay, other stressors (such as economic strain, fear of career ambiguity, and labor strikes) have been identified as life-threatening (Yang et al., 2021). Psychological distress is indicative of impaired mental health and is defined as the emotional state that one experiences when coping with upsetting, frustrating, or harmful situations (Lerutla, 2000). Research has shown that distress, including anxiety and depression, is prevalent among undergraduate students and can harm academic performance (Bruffaerts et al., 2018; Stallman, 2010). Given the demanding nature of academic life, undergraduates must develop effective coping strategies to navigate these challenges. Pritchard and Wilson (2003) observed that stress and anxiety are linked to lower GPA and poorer retention, possibly because they hinder coping skills.

Academic coping refers to the strategies and behaviors employed by undergraduate students to manage academic-related stressors, such as exams, deadlines, and workload (Misra & McKean, 2000). Given these difficulties, classroom instructors may adopt mindfulness practices, such as meditation, that have shown promising positive effects on stress (Goyal et al., 2014). Mindfulness meditation refers to the practice of paying attention to the present moment, non-judgmentally and with an attitude of acceptance and openness (Kabat-Zinn, 2003). Much of the earlier mindfulness meditation research has been conducted in tightly controlled laboratory settings with long intervention periods (e.g., Jha et al., 2010; van Vugt & Jha, 2011). However, some evidence suggests that nonclinical interventions offering brief training and encouragement for home practice may produce beneficial effects without the resources required for more intensive programs (Strait et al., 2020).

Brief mindfulness interventions delivered in the classroom or through online platforms can be an effective strategy for instructors to help students manage stress and academic challenges. This study is based on the Mindfulness to Meaning Theory (MMT), which suggests that mindfulness encourages reappraisal of life and its events and helps individuals adopt a new perspective on these events (Garland & Fredrickson, 2019). The theory also indicates that the impact of distress depends on how one appraises an event in relation to their perceptions. Therefore, understanding how mindfulness meditation and distress influence academic coping is crucial for creating effective interventions for undergraduate students.

Thus, we hypothesized that: (1) psychological distress will be positively associated with academic coping. (2) Mindfulness meditation will be positively associated with academic coping. (3) Mindfulness meditation will moderate the association between psychological distress and academic coping such that the association will be stronger for those who are in a mindfulness meditation condition compared to those who are in a control condition. The conceptual model of the hypothesised association appears in Figure 1.

Figure 1: *Conceptual model of mindfulness as a moderator of the link between psychological distress and coping among undergraduates.*



Method

Participants

The participants in this study were 128 undergraduate students from Alex Ekwueme Federal University, Ndufu-Alike, Ebonyi State, Nigeria. The sample was drawn from different academic disciplines to ensure diversity in the study population. A stratified random sampling technique was employed to select participants from each academic discipline. Inclusion criteria require that participants must be currently enrolled as full-time undergraduate students and have consented to participate voluntarily in the study. The age of the participants ranged from 18 to 29 years, with a mean age of 22.05 (*SD* = 2.81) years.

Materials

Mindfulness Meditation Scale: The Five Facet Mindfulness Questionnaire (FFMQ-15) developed by Baer et al. (2012) was used to assess the level of mindfulness among participants. The FFMQ-15 consists of five subscales: observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. Participants were expected to respond to the extent each of the statements is true of them. Each item is on a five-point Likert scale from 1- never or very rarely true to 5 - very often or always true. The FFMQ-15 has shown good internal consistency and validity in previous research on mindfulness meditations, and at baseline in this sample, with a Cronbach's alpha reliability coefficient of 0.93.

Psychological Distress Scale: The Kessler Psychological Distress Scale (KPDS-10) was developed by Kessler et al. (2003) for mental health screening in a population survey. The KPDS-10 is a nonspecific scale based on 10 items about the emotional states of each individual screened with a five-point Likert response format. The measure can be used as a brief screen to identify levels of distress. The tool can be given to the patient to complete, or it can also be read to the patient by the practitioner. The KPDS-10 has shown good internal consistency and validity in previous research on psychological distress in this sample, with a Cronbach's alpha reliability coefficient of 0.92.

Brief COPE Inventory: The Brief-COPE is a shortened version of the COPE (Coping Orientation to Problems Experienced) Inventory, a self-report questionnaire developed by Carver (1997) to assess a broad range of coping responses. The Brief COPE Inventory (B-COPE-I) consists of 28 items that measure 14 factors of 2 items each, which matched to a Likert response format ranging from 0 = I have not been doing this at all to 3 = I have been doing this a lot. The B-COPE-I has shown good internal consistency and validity in previous research on coping in this sample, with a Cronbach's alpha reliability coefficient of 0.87.

Procedures

Ethical Considerations: Ethical approval was obtained from the Psychology Research Ethics Committee (PSY-REC), Alex Ekwueme Federal University, Ndufu-Alike, before the commencement of data collection. Participants were informed about the purpose of the study, the voluntary nature of their participation, and the confidentiality of their responses. Informed consent was obtained from all participants before they completed the baseline questionnaires.

Mindfulness Manipulation: Within 48 hours of completing the baseline questionnaire (FFMQ-15), participants who scored low on mindfulness were randomly assigned to two conditions: mindfulness intervention group (64) and waiting-list control group (64), using a balloting method to either start the intervention immediately (intervention condition) or to a wait-list control condition (who were offered the intervention at the end of the two weeks). Eight participants withdrew from the study before randomisation.

However, following the procedures of previous studies (e.g., Cavanagh et al., 2013; Chadwick, 2006), the intervention group was given instant access to 'Mindfulness training via WhatsApp platforms'. Those assigned to the waiting list condition were informed that they would be invited to join the 'Mindfulness training' course in 2 weeks.

After two weeks, all participants got a standardised email from the researchers with a direct link to the end-of-study questionnaire. Participants received five reminder emails in total for the closing questionnaire. Those who completed the questionnaire received another email thanking them for their participation. All the participants in a waiting-list condition were then enrolled in the 'Mindfulness training' course and given access to identical materials to the intervention group.

Data Collection: Data were collected using a life survey to ensure accessibility for all participants. The survey includes demographic questions to gather information about participants' age, gender, and academic level. Following the mindfulness manipulation period, participants were asked to complete the KPDS-10 and B-COPE-I. The order of these questionnaires was counterbalanced to minimize any potential order effects.

Design/Statistics

A quasi-experimental between-subjects design was employed. Data were entered into the Statistical Package for the Social Sciences (SPSS) version 22©. Pearson correlation analysis was used to assess the associations between mindfulness disposition, psychological distress, and coping among undergraduate students. Additionally, multiple regression with the use of Hayes Process Macro was employed for a test of moderation analysis (Hayes, 2018).

Results

Results of the descriptive statistics and correlation analysis are presented in Table 1, while the Hayes Process Macro regression results can be found in Table 2.

Table 1: Mean, standard deviation, and inter-correlations among study variables (*n* = 128)

Variables	M	SD	1	2	3	4	5	6
1 Age	22.05	3.03	1.00	-	-	-	-	-
2 Gender	1.45	.50	.10	1.00	-	-	-	-
3 AL	240.63	117.34	.28**	.12	1.00	-	-	-
4 PD	29.70	9.25	-.13	-.13	-.01	1.00-	-	
5 MI	1.50	.50	-.04	.05	-.17*	-.10	1.00	-
6 Coping	42.24	14.31	-.04	-.04	-.12	-.13 .21*	1.00	

Note: ** = p<.05; ** = p<.01; AL-Academic Level; PD-Psychological Distress; and MI-Mindfulness.*

Results of correlational analyses revealed that among the control variables tested, none was significantly related to coping. The results of the correlational analyses showed that mindfulness intervention was significantly and positively related to coping (r = .21, p = .018), while psychological distress was not significantly related to coping (r = -.13, p = .130).

Table 2: Regression results predicting coping by psychological distress and mindfulness

Variables	*B*	*SE*	*t*	*p*	*95% CI*
Psychological Distress (PD)	-.16	.13	-1.18	.241	[-.42; .11]
Mindfulness Induction (MI)	5.67	2.46	2.31*	.022	[.80; 10.54]
PD x MI	.53	.27	1.98*	.050	[.00; 1.06]

Note: * = $p < .05$; $R^2 = .09$; $\Delta R^2 = .03$.

In Table 2, it was observed that psychological distress did not predict coping among undergraduates (B = -.16, t = -1.18, p = .242). Mindfulness predicted coping among undergraduates (B = 5.67, t = 2.31, p = .023). However, mindfulness moderated the association between psychological distress and coping among undergraduates (B = .53, t = 1.98, p = .050), given that the interaction effect between psychological distress and mindfulness on coping

among undergraduates was significant. The predictor variable accounted for 9% of the variance in coping among undergraduates, $F(3, 124) = 3.87$, $p < .01$.

Figure 2: The moderating role of mindfulness in the link between psychological distress and coping.

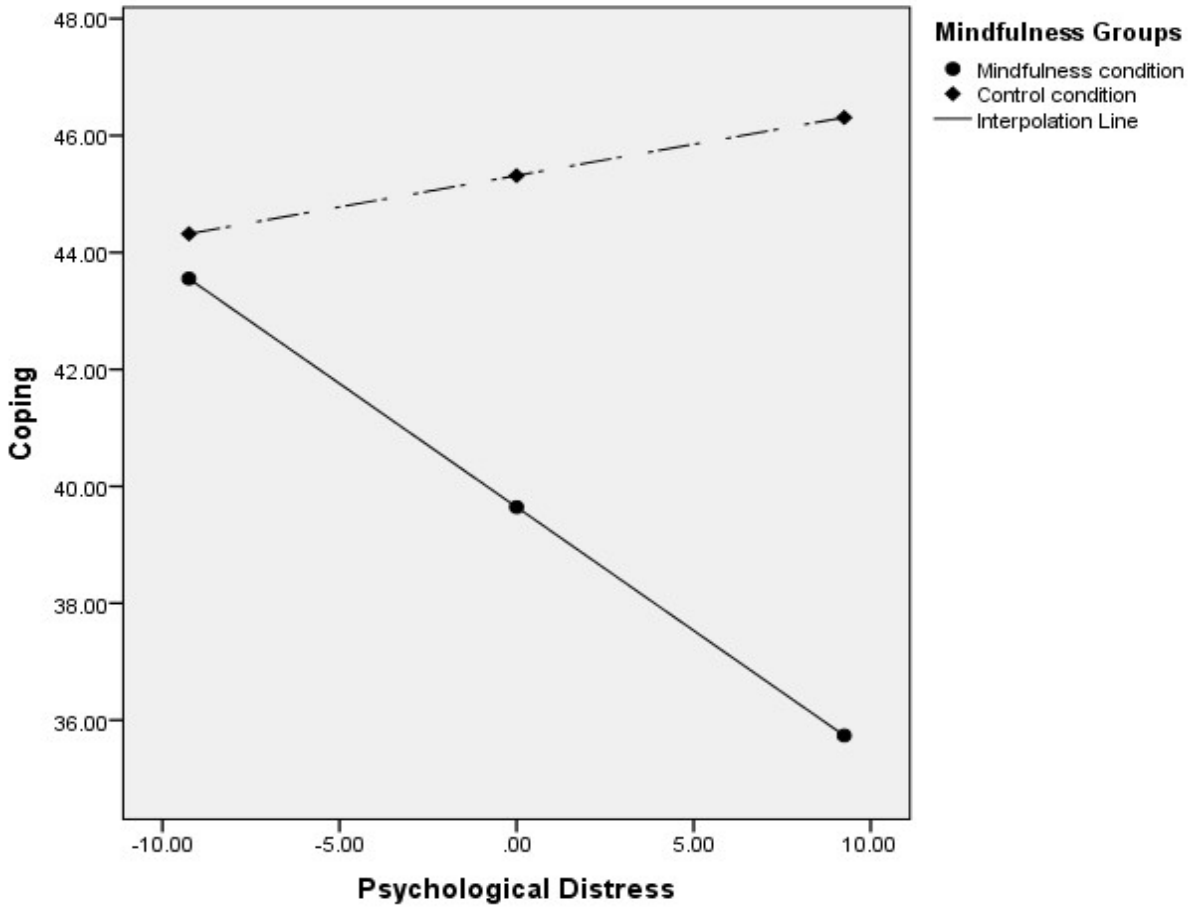


Table 3: Conditional effects of mindfulness on coping among undergraduates

MI	Effect	*SE*	*t*	*p*	LLCI	ULCI
Treatment	-.4224	.1818	-2.3235	.0218	-.7821	-.0626
Control	.1075	.1965	.5471	.5853	-.2814	.4964

The slope of the conditional interaction effect between psychological distress and mindfulness on coping among undergraduates (see Fig. 2) indicated that mindfulness induction significantly predicted coping negatively {B = -.42, t = -2.32, 95% CI = [-.78, -.06]. p = .022}, but those without mindfulness did not predict coping {B = .11, t = .55, 95% CI = [-.28, .50], p = .585}.

Discussion

Mental health in Nigeria is a critical public health concern, with prevalence estimates suggesting that as much as 20% of the population may be affected by mental illness (Chu et al., 2022; Gureje et al., 2006). Among university students, the pressures of economic hardship, social expectations, and emotional strain can intensify risk for psychological distress and its adverse consequences on academic functioning (Ribeiro et al., 2018). The 2023 Nigerian election's outcomes have been described as exerting a particularly distressing impact on the mental well-being of Nigerians, with undergraduate students (who comprise a substantial portion of the electorate) experiencing elevated risk factors such as stress, anxiety, depression, and suicidal ideation (Tang et al., 2018). This constellation of stressors underscores the urgency of identifying effective, scalable strategies to support students' mental health and academic coping.

Implications of psychological distress for university students are multifaceted. Distress, often manifested as anxiety and depression, not only affects emotional well-being but is also associated with poorer academic outcomes. Research in higher education has consistently linked elevated stress and anxiety to lower GPA, reduced retention, and impaired coping skills (Bruffaerts et al., 2018; Stallman, 2010; Pritchard & Wilson, 2003). For undergraduates navigating demanding curricula, limited institutional resources, and a volatile sociopolitical environment, developing robust academic coping strategies is essential to maintain academic performance and resilience.

Academic coping refers to the repertoire of strategies and behaviors that students deploy to manage stressors tied to academic life—examinations, deadlines, workload, and related pressures (Misra & McKean, 2000). Effective coping can buffer the impact of stress on both mental health and academic outcomes. Given the prevalence of distress among

undergraduates, it is critical to examine interventions that can be integrated into teaching and learning environments to bolster students' coping capacity.

Mindfulness-based approaches have emerged as a promising avenue to reduce stress and improve coping among students. Mindfulness meditation, defined as paying attention to the present moment with nonjudgmental awareness and acceptance (Kabat-Zinn, 2003), has demonstrated positive effects on stress reduction in various populations. A substantial portion of early mindfulness research, however, has relied on tightly controlled laboratory settings and long intervention periods (Jha et al., 2010; van Vugt & Jha, 2011). In contrast, more recent evidence indicates that brief, nonclinical mindfulness interventions delivered in classroom or online formats can yield meaningful benefits without the substantial resources required for intensive programs (Strait et al., 2020). These modalities—short sessions, easy accessibility, and integration into existing coursework—align well with the practical realities of university environments where time and resources are constrained.

The Mindfulness to Meaning Theory (MMT) offers a theoretical framework for understanding how mindfulness may impact distress and academic coping. MMT posits that mindfulness can facilitate cognitive reappraisal, enabling individuals to reinterpret life events and adopt alternative perspectives about stressors (Garland & Fredrickson, 2019). Importantly, MMT emphasizes that the impact of distress is mediated by appraisal—how an individual perceives and interprets an adverse event. If mindfulness fosters a more adaptive appraisal, it can reduce the perceived severity of stress and enhance coping efficacy, thereby supporting better academic outcomes. In this sense, the relationship between mindfulness, distress, and academic coping is not unidirectional; it depends on the cognitive and affective appraisals that students bring to stressful situations.

Several critical implications emerge for educators, policymakers, and researchers:

- Integration of brief mindfulness practices into coursework: Given the resource constraints in many Nigerian universities, incorporating short, evidence-based mindfulness exercises into lectures, seminars, or online modules could be a feasible strategy to reduce stress and strengthen academic coping. Practices might include 5–10 minute guided mindfulness or breathing exercises at the start or end of class, short

reflective journaling, or brief audio-guided sessions available through the learning management system.

- Emphasis on accessibility and scalability: Brief, scalable interventions are particularly suitable for large class sizes and diverse student populations. Online platforms can augment reach while ensuring that content is culturally relevant, linguistically accessible, and sensitive to the local context.
- Alignment with the MMT framework: Interventions should be designed to facilitate cognitive reappraisal. For example, activities could prompt students to reframe challenging academic events (e.g., upcoming exams or assignment deadlines) as manageable tasks and to identify personal values and meanings that give purpose to their effort, thereby reducing distress and improving coping.
- Consideration of broader stressors: While mindfulness can enhance coping, it should be embedded within a holistic approach to student well-being that also addresses structural and systemic stressors (economic pressures, governance-related uncertainties, and institutional shortcomings) that contribute to distress. Complementary supports may include campus counseling services, peer support programs, financial literacy resources, and clear communication with students during periods of upheaval.
- Measurement and evaluation: To establish efficacy in real-world settings, studies should employ pragmatic designs with robust yet feasible outcome measures. Key outcomes include levels of perceived stress, anxiety, depression, distress, coping strategies, academic performance indicators (e.g., GPA, course retention), and student engagement. Process measures should capture acceptability, feasibility, and adherence to mindfulness practices.
- Cultural and contextual adaptation: Interventions should be culturally sensitive and tailored to the Nigerian university context. This includes language considerations, relevance of examples, and alignment with local academic calendars and stressors. Collaboration with students and mental health professionals can guide the adaptation process to maximize engagement and effectiveness.
- Ethical and safety considerations: When addressing potential suicidal ideation or severe distress, protocols must be in place for risk assessment, referral to campus or

community mental health resources, and ensuring confidentiality. Clear guidelines for instructors delivering mindfulness content are essential to safeguard student well-being.

In summary, the convergence of high prevalence of mental health concerns among Nigerian undergraduates, the unique sociopolitical stressors of the period following the 2023 election, and the practical constraints of university settings create an opportunity to explore brief, classroom- or online-delivered mindfulness interventions grounded in the Mindfulness to Meaning Theory. Such interventions have the potential to improve distress, enhance academic coping, and, by extension, support academic performance. However, to translate this potential into practice, future work should prioritize contextual adaptation, rigorous yet pragmatic evaluation, and integration with broader student-support infrastructures. By doing so, Nigerian universities can cultivate more resilient students who are better equipped to navigate current and future challenges without compromising their mental health or academic success.

References

Baer, R. A., Carmody, J., & Hunsinger, M. (2012). Weekly change in mindfulness and perceived stress in a mindfulness-based stress reduction program. *Journal of Clinical Psychology, 68*(7), 755–765. https://doi.org/10.1002/jclp.21865

Bruffaerts, R., Bonnewyn, A., Van Oyen, H., Scott, K. M., & Bruffaerts, R. (2018). Mental health problems in college freshmen: Prevalence and academic functioning. *Journal of Affective Disorders, 225*, 97-103. doi:10.1016/j.jad.2017.07.044

Carver, C. S. (1997). You want to measure coping but your protocol's too long: consider the brief cope. *International Journal of Behavioral Medicine, 4*(1), 92-100.

Cavanagh, K., Strauss, C., Cicconi, F., Griffiths, N., Wyper, A., & Jones, F. (2013). A randomised controlled trial of a brief online mindfulness-based intervention. *Behaviour Research and Therapy, 51,* 573–578. http://dx.doi.org/10.1016/j.brat.2013.06.003

Chadwick, P. (2006). *Person-based cognitive therapy for distressing psychosis*. Wiley.

Chu, C., Roxas, N., Aguocha, C. M. *et al.* (2022). Integrating mental health into primary care: Evaluation of the Health Action for Psychiatric Problems In Nigeria including Epilepsy and SubstanceS (HAPPINESS) pilot project. *BMC Health Services Research, 22*, 333. https://doi.org/10.1186/s12913-022-07703-1

Garland, E. L. & Fredrickson, B. L. (2019). Positive psychological states in the arc from mindfulness to self-transcendence: Extensions of the mindfulness-to-meaning theory and applications to addiction and chronic pain treatment. *Current Opinion in Psychology, 28*, 184–191. https://doi.org/10.1016/j.copsyc.2019.01.004

Goyal, M., Singh, S., Sibinga, E. M. S., Gould, N. F., Rowland-Seymour, A., Sharma, R., Berger, Z., Sleicher, D., Maron, D. D., Shihab, H. M., Ranasinghe, P. D., Linn, S., Saha, S., Bass, E. B., & Haythornthwaite, J. A. (2014). Meditation programs for psychological stress and well-being: A systematic review and meta-analysis. *JAMA Internal Medicine, 174*, 357–368. https://doi.org/10.1001/jamainternmed.2013.13018

Gureje, O., Lasebikan, V.O., Kola, L., & Makanjuola, V.A. (2006). Lifetime and 12-month prevalence of mental disorders in the Nigerian survey of mental health and well-being. *British Journal of Psychiatry, 188*, 465–471.

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd edition). Guilford Press.

Jha, A. P., Stanley, E. A., Kiyonaga, A., Wong, L., & Gelfand, L. (2010). Examining the protective effects of mindfulness training on working memory capacity and affective experience. *Emotion, 10*, 54–64. https://doi.org/10.1037/a0018438.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10*(2), 144–156. https://doi.org/10.1093/clipsy.bpg016.

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., et al. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*, 184–189. https://doi.org/10.1001/archpsyc.60.2.184

Lerutla, A. (2000). Language, culture, and psychopathology: Conceptual and Methodological issues. *Psychiatry, 34*(3), 291–311.

Misra, R., & McKean, M. (2000). College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies, 16*, 41-51.

Pritchard, M. E., & Wilson, G. S. (2003). Using emotional and social factors to predict student success. *Journal of College Student Development, 44*, 18–28. https://doi.org/10.1353/csd.2003.0008

Ribeiro, I. J. S., Pereira, R., Freire, I. V., de Oliveira, B. G., Casotti, C. A., & Boery, E. N. (2018) Stress and quality of life among university students: A systematic literature review. *Health Professions Education, 4*, 70–77. https://doi.org/10.1016/j.hpe.2017.03.002.

Stallman, H. M. (2010). Psychological distress in university students: A comparison with general population data. *Australian Psychologist, 45*(4), 249-257. doi:10.1080/00050067.2010.482109.

Strait, J. U., Strait, G. G., McClain, M. B., Casillas, L., Streich, K. H., & Gomez, J. (2020). Classroom mindfulness education effects on meditation frequency, stress, and self-regulation. *Teaching of Psychology,* 1–7. https://doi.org/10.1177/0098628320901386

Tang, F., Byrne, M., & Qin, P. (2018). Psychological distress and risk for suicidal behavior among university students in contemporary China. *Journal of Affective Disorders, 228*, 101–108. https://doi.org/10.1016/j.jad.2017.12.005.

van Vugt, M. K., & Jha, A. P. (2011). Investigating the impact of mindfulness meditation training on working memory: A mathematical modeling approach. *Cognitive, Affective, & Behavioral Neuroscience, 11*, 344–353. https://doi.org/10.3758/s13415-011-0048-8.

Yang, C., Chen, A., & Chen, Y. (2021). College students' stress and health in the COVID-19 pandemic: The role of academic workload, separation from school, and fears of contagion. *PLoS One, 16*, e0246676. https://doi.org/10.1371/journal.pone.0246676.