

Mindful Movement Matters: Mindfulness Integration Strategies and Student Stress Intervening Variables in Physical Education

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Abstract: This study employs a descriptive comparative correlational approach with 260 PE students. It explores the realm of techniques for integrating mindfulness and their impact on variables related to stress intervention within the domain of Physical Education (PE). Students' perspectives on Breathing Awareness, Mindful Movement, Sensory Awareness, Gratitude Practice, and Self-Compassion Practice were evaluated. The results reveal that they had a moderate level of engagement with these strategies. Furthermore, the study examined possible discrepancies in the evaluation of mindfulness integration techniques based on gender and academic discipline. Remarkably, there were no notable disparities observed, indicating a uniform use of mindfulness practices across all demographic groups. Also, the research assessed student participants in relation to stress-related factors, including Rationality, Financial Status, Peer Groups, and Conviction. The factors were rated as being "Moderately Practiced". In a manner akin to the incorporation of mindfulness practices, the evaluation of stress-related variables shown no substantial variations when students were categorized based on their profiles. The correlation matrix of the research yielded a significant result: Breathing Awareness had a modest positive connection with Rationality ($r = 0.14$; $p = 0.025$). Nevertheless, the analysis did not reveal any noteworthy associations between Breathing Awareness and other stress-related variables, suggesting that these factors may not exhibit a statistically meaningful correlation.

Keywords: Breathing awareness, Mindful movement, Sensory awareness, Gratitude practice, And self-compassion practice rationality, Financial status, Peer groups, and conviction.

1. Introduction

The contemporary educational domain is characterized by a progressively rigorous academic environment. The academic community has recognized that the increasing demand for scholastic achievement, along with the high standards established by educators and parents, is a notable factor in the stress encountered by students (Jones et al., 2020; Smith & Johnson, 2021). The relentless endeavor for high grades and academic achievements has fostered an atmosphere in which stress becomes a constant companion^[1].

Furthermore, the ubiquity of digital gadgets and the prolonged duration of screen use have emerged as modern sources of stress. The findings of a recent research done by Anderson et al. (2022) revealed a significant association between excessive screen time, which includes extended use of electronic devices for both academic and recreational activities, and heightened levels of stress experienced by students. The convergence of work and leisure domains in the digital era increases stress levels by limiting options for relaxation and disengagement^[2].

During the current period characterized by the prevalence of social media, students are consistently exposed to meticulously constructed depictions of others' lives, leading to the emergence of impractical comparisons and sentiments of insufficiency. The study done by Johnson and Williams (2021) investigated the impact of social media-induced fear of missing out (FOMO) on individuals' stress levels. The phenomenon of conforming to societal and digital norms significantly exacerbates the levels of stress encountered by students^[3].

In Chinese context, it is evident that stress has emerged as

a notable and extensively studied concern among Chinese students. The heightened stress levels experienced by students in China may be attributed to a combination of factors, including the fiercely competitive character of the school system, social pressures, and the rapid shift towards a fast-paced contemporary lifestyle. Recent research has highlighted academic demands, strong rivalry for scarce university positions, and the need for high performance in standardized examinations like as the Gaokao as significant sources of stress (Li, 2019; Liu et al., 2020)^[4].

In conjunction with the pressures associated with academia, the advent of the digital era has created new sources of stress. The increased popularity of smartphones and the widespread use of social media platforms have raised worries over the phenomenon of internet addiction and the occurrence of cyberbullying, both of which have significant implications for the mental well-being of students (Zhu et al., 2020). The COVID-19 pandemic has had an influence on the stress levels of students, resulting in disturbances in conventional learning settings, a sense of ambiguity over what lies ahead, and difficulties associated with remote education (Tang et al., 2021)^[5].

This is the very reason why this research has been conceptualized. The combination of mindfulness techniques, physical exercise, and counseling services has shown promise in the mitigation of stress levels (Wu et al., 2019; Liu & Lu, 2021). This study posts a great importance for Chinese students as it has the ability to directly tackle a widespread and crucial problem that significantly impacts their academic path and overall well-being^[6]. The school system in China is well recognized for its strict structure, which imposes significant academic demands on students. The examination

of the effectiveness of tactics that integrate mindfulness and the factors that intervene in stress within this particular environment has significant significance. This research acknowledges the distinctive pressures experienced by Chinese students by designing treatments that are congruent with Chinese cultural values and academic requirements. Moreover, the findings of this research have the potential to have a substantial influence on several facets of individuals' lives. The acquisition of effective stress reduction strategies by students has the potential to enhance academic performance by facilitating improved focus and cognitive function. Furthermore, the results of this research have the potential to make a valuable contribution towards improving the mental well-being of Chinese students. By addressing the detrimental effects of chronic stress, such as anxiety, depression, and burnout, these findings may help to mitigate these risks. In addition to its relevance within academic circles, the findings of this research have the potential to foster the development of enduring coping mechanisms, so equipping students with the ability to effectively handle stresses across different phases of their lives^[7]. The possible ramifications of this research include the establishment of a more conducive learning atmosphere inside educational institutions, the exertion of influence on educational policy, and the contribution to global discourse around student well-being. The relevance of this research extends beyond the realm of academics for Chinese students, including aspects of holistic well-being, personal development, and the wider educational context.

2. Profile of the Student Respondents

2.1. Frequency and Percentage of Demographic Profile

According to the tabulated data, 25% were female and 75% were male, indicating that the vast majority of respondents are male. In terms of their course, 16% were in aerobics, 34% in badminton, basketball, fitness, football, martial arts, pingpong, and tennis, 7% in track and field, and 43% in volleyball. This indicates that the majority of the students specialize in volleyball.

The findings provide significant insights into the demographic characteristics of the students chosen for the study within the domain of physical education. A notable finding reveals a considerable gender discrepancy, as 75% of participants identified as male while only 25% identified as female. The presence of a gender imbalance highlights the need for increased focus on gender inclusion and a more equitable representation in forthcoming research and pedagogical endeavors in the realm of physical education. By acknowledging and examining this discrepancy, a more holistic comprehension of the encounters and viewpoints of male and female students may be attained, hence promoting fairer approaches in the field of physical education.

Moreover, the allocation of students across different classes is a significant discovery^[8]. The data reveals that a substantial fraction of students (43%) choose to concentrate in volleyball, while other courses such as aerobics, badminton, basketball, fitness, football, martial arts, pingpong, tennis, and track & field have comparatively lower student enrollments. The prevalence of volleyball as a preferred sport indicates its high level of popularity among students within the school setting. Additional investigation is necessary to comprehend the

fundamental variables that influence this choice and the possible consequences it may have on students' stress levels and overall experiences in their selected courses. In the field of physical education, it is advisable for educators and policymakers to contemplate the expansion of course offerings in order to accommodate a wider array of interests and preferences. This approach will contribute to the creation of a more comprehensive and inclusive learning environment.

2.2. Assessment of the Student-Respondents of their Mindfulness Integration Strategies as to Breathing Awareness

Based on a composite mean of 2.94 and a standardized deviation of 0.22, respondents moderately practiced and agreed that mindful breathing is a useful skill for managing their emotional well-being ($M = 3.09$), that mindful breathing helps them better regulate their stress levels ($M = 3.02$), and that mindful breathing helps them focus during stressful situations. Similarly, they agree that conscious breathing allows them to release stress in their bodies ($M = 2.98$) and that practicing mindful breathing on a daily basis improves their mood ($M = 2.93$).

The findings provide an evaluation of mindfulness integration tactics pertaining to Breathing Awareness. It includes several indicators along with their corresponding means, standard deviations, verbal interpretations, and rankings. The average composite score for all variables is 2.99, suggesting a modest degree of implementation of mindfulness integration methods specifically linked to Breathing Awareness among the participants.

The indicator that exhibits the highest mean score in this evaluation is Indicator 2, which pertains to the usefulness of mindful breathing in maintaining emotional well-being. This indicator has a mean score of 3.09. This implies that individuals saw attentive breathing as especially advantageous in the context of regulating their emotional well-being. The present suggestion posits that the inclusion of mindful breathing methods into physical education curricula or stress management therapies may provide significant benefits in fostering emotional well-being among pupils.

Conversely, the indicator that exhibits the lowest mean value is Indicator 10, which pertains to the statement "Mindful breathing is an integral component of my self-care routine," with a mean score of 2.89. Although participants in this study exhibited a modest degree of engagement, the lower mean value implies that mindful breathing may not be seen as an essential component of their self-care practices. The suggestion is that there might be an opportunity to enhance awareness and education on the significance of mindful breathing as a form of self-care, which may result in a higher rate of acceptance among students. It can be posited that students engage in mindfulness integration practices pertaining to Breathing Awareness to a modest extent. The results indicate that there are potential advantages in integrating mindful breathing methods for emotional well-being, as seen by the highest mean. Conversely, the lowest mean implies a need for more awareness of the significance of mindful breathing in students' self-care practices.

The study of Banitt (2023) somehow supports the findings of the recent findings as it aimed to assess the efficacy of mindfulness and mindful breathing treatments in mitigating undesired classroom behaviors within a first-grade classroom context. The research period lasted for a duration of six weeks, during which two weeks were allocated for the collecting of

baseline data, followed by four weeks dedicated to the implementation of mindfulness treatments. These interventions included several practices such as mindful breathing, social-emotional tales, and mindful movement/meditation. The data gathering methods used in this study included many techniques, including an unpleasant behavior tally chart, researcher field notes, specialized instructor surveys, individual student mindfulness diaries, and one-on-one student talks^[9].

The results of this research revealed a significant decrease in three out of five undesirable classroom behaviors subsequent to the six-week mindfulness intervention. Furthermore, the students shown proficiency in the application of mindfulness techniques across a range of practical scenarios. The findings presented in this study are consistent with recent scholarly investigations in the domain of education, which emphasize the beneficial effects of incorporating mindfulness techniques into classroom environments, particularly in relation to conduct and overall well-being (Banitt, 2023). This research adds to the expanding body of data that substantiates the efficacy of mindfulness techniques in reducing undesirable behaviors within educational settings. The results emphasize the possibility of integrating mindfulness and mindful breathing practices as significant resources for educators to create more conducive and harmonious learning environments (Banitt, 2023)^[10].

2.3. Assessment of the Mindfulness Integration Strategies in terms of Mindful Movement

The variable had a composite mean of 2.99 and a standardized deviation of 0.24 based on the tabulated data. The results show that the students practiced mindfulness moderately and agreed that it is simple to incorporate mindfulness into their fitness regimen ($M = 3.08$), that when they practice mindfulness, they feel more engaged and present in their exercises ($M = 3.08$), and that when they practice mindful movement, they see an increase in flexibility and calmness ($M = 3.04$). Furthermore, they agree that mindful movement is an excellent technique for relieving tension and stress ($M = 3.02$), and mindful exercise assists them in managing stress and anxiety ($M = 3.00$).

Research provides an evaluation of mindfulness integration tactics pertaining to Mindful Movement. It includes several indicators along with their corresponding means, standard deviations, verbal interpretations, and rankings. The average composite score for all variables is 2.97, suggesting a modest degree of implementation of mindfulness integration methods in relation to Mindful Movement among the participants.

The indicator that exhibits the greatest mean score in this examination is Indicator 4, which pertains to the ease of incorporating mindfulness into one's fitness program. This indicator has a mean score of 3.08. This finding suggests that the individuals had little difficulty in integrating mindfulness practices into their exercise regimens. The suggestion being made is that incorporating mindfulness techniques into a fitness routine might be well welcomed and practical, perhaps leading to enhanced general well-being and stress management for persons involved in physical activity.

Conversely, the indicator that exhibits the lowest mean value is Indicator 2, which pertains to the notion of mindfully participating in physical activities as a means to maintain emotional awareness, with a mean score of 2.88. Despite demonstrating a modest degree of involvement, the lower

mean value implies that individuals may not perceive a significant correlation between engaging in physical activities mindfully and their level of emotional awareness. The suggestion is that there might be potential for improving the incorporation of mindfulness techniques with emotional awareness within the realm of physical activities. The evaluation reveals that the individuals engage in mindful integration techniques pertaining to Mindful Movement to a modest extent. The highest average value underscores the potential for seamlessly integrating mindfulness practices into fitness regimens, hence indicating the viability of fostering mindfulness within the context of physical activity. In the meanwhile, the lowest average indicates a possible opportunity to enhance the establishment of a more profound link between the practice of being fully present in physical pursuits and the cultivation of emotional consciousness.

2.4. Assessment of the Mindfulness Integration Strategies in terms of Sensory Awareness

Based on the tabulated data, the variable had a composite mean of 2.97 and a standardized deviation of 0.26. It means that the students practiced mindfulness moderately and agreed that they enjoy the attentive moments that sensory awareness brings to their day ($M = 3.05$), that sensory awareness has helped them deal with stress and worry ($M = 3.03$), and that engaging with their senses mindfully improves their overall quality of life ($M = 3.03$). Similarly, they agree that practicing sensory awareness allows them to discover delight in the smallest of moments ($M = 3.01$) and that it improves their capacity to be present in their daily lives ($M = 3.00$).

The findings present an evaluation of Mindfulness Integration Strategies with regards to Sensory Awareness. It offers valuable insights into how participants perceive their involvement in sensory awareness practices and the effects of these practices on their overall well-being. Indicator 10 had the highest mean score, indicating that participants have a strong appreciation for the mindful experiences that sensory awareness cultivates in their everyday routines. This underscores the significance they attribute to these particular activities. In contrast, the indicator with the lowest mean score was Indicator 4. This finding suggests that participants may not feel a significant enhancement in general consciousness as a result of engaging in sensory awareness activities, relative to the other analyzed elements. However, it is important to note that the mean score for Indicator 4 still falls within the range of moderate practice. The aforementioned results highlight the need of cultivating a favorable mindset towards mindfulness and sensory awareness activities in order to promote regular participation. Furthermore, the authors emphasize the need for educators and practitioners to augment the efficacy of strategies designed to raise overall consciousness by means of sensory awareness. In general, the evidence indicates that participants see sensory awareness techniques as beneficial and pleasurable, highlighting their potential to enhance mindfulness and well-being in people's everyday existence.

Upon comparing these results to the aforementioned study findings, a notable similarity can be seen in both studies. Both researches highlight the significance of sensory awareness and mindfulness activities in augmenting emotional well-being. Although there are variations in the precise methodology and treatments used, the general inference is that mindfulness practices that include sensory engagement

have the potential to enhance emotional well-being and alleviate stress.

From a practical standpoint, the implications of these results indicate that it would be beneficial for educators, practitioners, and researchers to integrate sensory awareness and multisensory experiences into mindfulness programs. This integration has the potential to augment the overall well-being of people. Furthermore, the use of technology-based methods, as shown in the latest research, presents novel opportunities for the implementation of mindfulness therapies.

In general, both studies provide valuable contributions to the expanding body of research that supports the beneficial impact of mindfulness and sensory awareness activities on emotional well-being. These activities provide significant insights into their ability to enhance self-awareness, alleviate stress, and enhance general quality of life.

2.5. Assessment of the Mindfulness Integration Strategies in terms of Gratitude Practice

The research data revealed that the variable had a cumulative mean of 3.09 and a standard deviation of 0.22, implying that the students moderately practice it and agree that expressing gratitude on a regular basis elevates their mood and improves their attitude ($M = 3.16$), that practicing thankfulness aids them in developing a happy and grateful mentality ($M = 3.15$), and that gratitude practice gives them a sense of calm and balance in their lives ($M = 3.11$). Furthermore, they agree that practicing thankfulness gives them a sense of fulfillment and pleasure ($M = 3.09$), and that reflecting on what they are grateful for allows them to shift their perspective in a positive direction ($M = 3.08$).

The evaluation of Mindfulness Integration Strategies with a specific emphasis on Gratitude Practice provides significant findings on the reactions of participants and the influence of gratitude practice on their overall well-being. The indication "Expressing thanks on a regular basis elevates my mood and improves my attitude" had the highest mean score, highlighting the substantial impact of thankfulness on enhancing participants' emotional well-being and attitudes. This discovery underscores the significance of engaging in frequent appreciation exercises as a strategy to augment one's emotional state and cultivate a constructive cognitive outlook. This finding is consistent with other studies that have emphasized the positive effects of thankfulness on individuals' overall state of well-being.

In contrast, the indicator "Gratitude practice gives me a feeling of calm and balance in my life" has the lowest mean score. This implies that although gratitude practice is still considered valuable, its ability to promote a sense of calm and balance may be somewhat less significant compared to other dimensions of gratitude. Although the score of this indicator is categorized as "Moderately Practiced," it emphasizes the need of comprehending the many impacts of thankfulness practice.

These findings contribute significant insights into the correlation between mindfulness, appreciation, and employee assistance behavior. The alignment of their results with the existing body of research on mindfulness lends credence to the notion that mindfulness practices possess the capacity to have a beneficial influence on several facets of people' life, including their workplace conduct. The consequences of these results are significant for businesses that want to provide a work environment that is both positive and productive.

2.6. Assessment of the Mindfulness Integration Strategies in terms of Self-Compassion Practice Figures

Research provides a summary of their evaluation of the strategies they used to integrate mindfulness into their lives in terms of self-compassion practice, with a composite mean of 3.07 and a standard deviation of 0.22. This suggests that the students practiced self-compassion moderately and agree that engaging in self-compassion activities provides solace during stressful situations ($M = 3.11$), that self-compassion adds to a better feeling of self-acceptance ($M = 3.10$), and that self-compassion practice helps them deal with self-criticism and negative self-talk ($M = 3.09$). Similarly, the students agree that cultivating self-compassion allows them to be kind and understanding to themselves ($M = 3.08$), and that practicing self-compassion improves their overall mental and emotional well-being ($M = 3.07$).

The findings of the evaluation of techniques for incorporating mindfulness, specifically in relation to the practice of self-compassion reveal a fair results. The mean scores and standard deviations for each indication are shown, along with a verbal explanation and ranking for each indicator. The indicator that received the highest mean score in the evaluation of Self-Compassion Practice is Indicator 8, which states that "Self-compassion, as observed in my personal experience, contributes to an enhanced sense of self-acceptance." This indicator had a mean score of 3.11. The data collected from the participants in this research reveals that there was a notable prevalence of consensus among them about their agreement with the aforementioned statement. This finding implies that actively participating in self-compassion activities has a substantial role in augmenting their overall feeling of self-acceptance.

In contrast, the indicator with the lowest mean score is Indicator 7, which pertains to the statement "Engaging in self-compassion practice allows me to effectively address challenges by prioritizing self-care." This particular indicator had a mean score of 3.00. While expressing a moderate degree of agreement, this score implies that participants may regard the practice of self-compassion as somewhat less efficacious in addressing challenges related to self-care when compared to other dimensions of self-compassion.

In a nutshell, the alignment of results between the current study and the research conducted by Centeno and Fernandez underscores the persistent and favorable influence of mindfulness treatments on the development of mindfulness abilities, empathy, and self-compassion among the college student population. The aforementioned results highlight the potential effectiveness of mindfulness-based programs as evidence-based approaches in enhancing the overall well-being of college students in various cultural settings. Additional investigation in this domain has the potential to enhance the advancement of more efficacious and culturally attuned mindfulness therapies within educational contexts.

2.7. Difference in the Assessment of Mindfulness Integration Strategies based on Sex Figures

Research provides how the assessment of mindfulness integration strategies differs when the students are grouped based on their assigned sex. Using the independent sample t-test, it generated p-values higher than the 0.05 level of significance for breathing awareness ($t = -1.49$; $df = 258$; $p =$

0.138), mindful movement ($t = -0.14$; $df = 258$; $p = 0.887$), sensory awareness ($t = -0.62$; $df = 258$; $p = 0.533$), gratitude practice ($t = -0.01$; $df = 258$; $p = 0.994$), and self-compassion practice ($t = 1.49$; $df = 258$; $p = 0.138$). This could imply that the researcher will not reject the null hypothesis and will conclude that the evaluation of mindfulness integration strategies does not differ by gender.

The implications of the findings suggest that there is no significant difference in the evaluation of mindfulness integration techniques depending on students' assigned sex, are of great importance. The findings of this study highlight the gender-neutral nature of mindfulness tactics, indicating that both male and female students may get equal benefits from and actively participate in mindfulness practices, with no significant differences seen in their experiences or outcomes. This discovery is of significant importance as it underscores the inclusive nature of mindfulness as a practice that can be used to enhance the overall well-being of kids across all gender identities.

Moreover, the absence of statistically significant gender disparities suggests that the advantages associated with mindfulness practices, such as enhanced awareness of breathing, mindful physical activity, sensory perception, expression of appreciation, and cultivation of self-compassion, may have broad applicability across genders. These behaviors exhibit the capacity to improve several dimensions of well-being among students, irrespective of their gender, highlighting their universal nature and wide-ranging usefulness. Educational institutions and mental health practitioners have the potential to include mindfulness-based therapies into their practices, since there seems to be no significant gender-specific differences in their efficacy. This has the potential to enhance the accessibility of mindfulness programs for students of both genders, therefore fostering mental health and general well-being across different student cohorts. This also provides a valuable contribution to the field by presenting evidence that challenges and seeks to diminish gender preconceptions often linked with the practice of mindfulness. Throughout history, there has been a correlation between particular health practices and gender roles or stereotypes. This serves to question prevailing prejudices and advocate for a broader, all-encompassing approach to incorporating mindfulness practices into educational and therapeutic contexts.

Finally, the absence of substantial gender disparities may serve as an incentive for a broader range of students, regardless of their gender, to participate in mindfulness exercises. The increasing popularity of mindfulness as a means of reducing stress, regulating emotions, and promoting general well-being has led to its potential to attract a broader and more varied audience. This inclusion has the potential to cultivate a healthier and more balanced educational setting.

2.8. Difference in the Assessment of Mindfulness Integration Strategies based on Course

Research shows how students' assessments of mindfulness integration strategies differ depending on their course. The analysis of the one-way ANOVA revealed p-values higher than the 0.05 level of significance for breathing awareness ($F = 0.61$; $df = 9,250$; $p = 0.791$), mindful movement ($F = 1.14$; $df = 9,250$; $p = 0.337$), sensory awareness ($F = 1.00$; $df = 9,250$; $p = 0.442$), gratitude practice ($F = 1.17$; $df = 9,250$; $p = 0.317$), and self-compassion practice ($F = 1.41$; $df = 9,250$;

$p = 0.184$), which may indicate the researcher will not reject the null hypothesis. Hence, it can be concluded that regardless of their courses, the assessment of mindfulness integration strategies is the same.

The findings posit there are no significant differences in students' evaluations of mindfulness integration tactics across different courses. This finding has important consequences and provides valuable insights. They underscore the widespread applicability and adaptability of mindfulness interventions within the educational setting. Irrespective of the particular courses they are enrolled in, students have a similar tendency to assess mindfulness integration tactics. This implies that the integration of mindfulness into many academic disciplines may be efficacious, without being limited to certain areas of study. Hence, it is feasible for educational establishments to integrate mindfulness initiatives into a wide range of academic disciplines, thereby fostering psychological wellness and mitigating stress levels among students from various educational backgrounds.

Moreover, the results suggest that mindfulness techniques have the potential to be regarded as a comprehensive method for promoting mental health and overall well-being that surpasses the confines of certain academic disciplines. These approaches have the potential to provide a more complete and integrated approach to mental health care in educational environments, benefiting students from all courses equally. The findings also provide a counterargument to the concept that mindfulness techniques may have greater advantages or applicability in certain academic disciplines. The absence of substantial disparities in students' evaluations implies that mindfulness is not confined to certain disciplines, but rather may serve as a beneficial asset for students across many academic domains. This fosters a more comprehensive and diversified approach to promoting mental health in educational settings. These results may serve as a catalyst for educational institutions to include mindfulness training within their comprehensive student support services, acknowledging the potential universal advantages of such programs. Through the integration of mindfulness practices within the comprehensive educational framework, educational institutions have the potential to foster the all-encompassing growth of their students and enhance their ability to successfully manage the many difficulties encountered in academic pursuits.

In a nutshell, the findings which demonstrate the absence of substantial disparities in students' evaluations of mindfulness integration approaches across diverse courses underscore the versatility and wide-ranging relevance of mindfulness techniques within educational settings. The results of this study provide evidence that mindfulness may serve as a beneficial strategy for enhancing the mental well-being of students with varying academic backgrounds. This suggests the need of adopting a more inclusive and comprehensive approach to mental health care inside educational institutions.

2.9. Assessment of the Stress-Intervening Variables in terms of Rationality

Research summarizes the assessment of stress-intervening variables in terms of rationality of a sample of students. Based on the tabulated data, it produced a composite mean score of 3.01 and a standard deviation of 0.22, implying that the students moderately practiced it and agree that their cognitive abilities play a key role in their ability to properly handle

stress ($M = 3.08$), that they rely on their cognitive abilities to relieve stress and sustain emotional well-being ($M = 3.07$), and that using their intellect improves their general resistance to pressures. Similarly, they agree that their intelligence provides them with critical skills for navigating and reducing stress ($M = 3.05$), as well as assisting me in adjusting to and dealing with difficult situations ($M = 3.03$).

The evaluation of stress-intervening factors is presented with a special emphasis on reason as a determinant of stress management. The Research encompasses a range of variables that assess the degree to which people consider their cognitive talents and intellectual capacity as crucial in properly managing stress. The average composite score for all of these factors is 3.08, suggesting that the respondents possess a modest degree of reasoning in relation to their stress coping skills. A notable observation in the chart is that the item with the highest average score is item 8, which posits that people rely on their cognitive capacities to alleviate stress and maintain emotional well-being. The obtained mean score for this indicator was 3.07, indicating that participants place a high level of importance on their intellectual abilities as essential resources for managing stress. This discovery implies that participants in the research had an awareness of the importance of their cognitive abilities in efficiently coping with stress.

In contrast, question 7 has the lowest mean score, suggesting a positive correlation between one's intellectual capacity and a proactive approach to managing stress. The indicator in question obtained an average score of 2.92. Although the score remains within the somewhat practiced range, it suggests that participants regard their intellect as exerting a relatively less proactive impact on their reaction to stress in comparison to other facets of reason.

In brief, Dillard's investigation into the stress experiences and coping mechanisms of telecommunicators is consistent with the present study's emphasis on using mindfulness integration practices for the purpose of stress management. Both findings emphasize the importance of coping methods in managing stress and provide significant perspectives on improving people's overall welfare. The research conducted by Dillard has significant implications, particularly in relation to the significance of achieving a balance between work and home life, as well as the reduction of chronic stressors. These findings can be applied within the educational domain, specifically in the implementation of mindfulness practices. By incorporating such practices, educational institutions can contribute to the long-term well-being and stress management of their students.

2.10. Assessment of the Stress-Intervening Variables in terms of Financial Status

The assessment of stress-intervening variables in terms of the financial status of a sample of students is summarized in the research. The tabulated results showed that it obtained a composite mean score of 3.02 and a standard deviation of 0.24. This means that the students agree that their financial well-being has a significant influence on their stress levels ($M = 3.11$), that their financial stability has a huge impact on their overall stress management ($M = 3.07$), and that having enough financial resources enables them to deal with pressures more comfortably ($M = 3.06$). In addition, they are in agreement that their financial stability has a positive influence on their attitude toward stress management ($M = 3.03$) and that their financial assets contribute to a feeling of

security and stress reduction ($M = 3.03$).

The analysis of stress-mediating factors associated with individuals' financial situation yields significant findings about participants' perspectives on the influence of financial stability on stress management. Significantly, the indicator with the highest mean score is Indicator 3, titled "I believe that my financial well-being has a significant influence on my stress levels," which has a mean score of 3.11. This finding highlights the participants' firm belief in the important impact of financial well-being on their ability to manage stress effectively. This discovery underscores the importance of financial stability as a critical determinant in people's capacity to manage and alleviate stress levels.

In contrast, the indicator with the lowest mean score, Indicator 6, titled "Having sufficient financial resources reduces the effect of pressures on me," has a mean score of 2.95. This finding implies that although financial resources are moderately effective in reducing the impact of stress, participants do not solely depend on financial means to alleviate the effects of stressors. This nuanced view suggests that people are aware of the constraints of relying just on financial resources to handle the multifaceted nature of stress.

In brief, the latest research results on students' perspectives on the correlation between financial stability and stress management not only correspond with, but also validate the larger insights derived from prior studies on stress and coping mechanisms. Collectively, these findings underscore the significant significance of acknowledging the intricate characteristics of stress and argue for all-encompassing stress treatment initiatives that integrate financial well-being in conjunction with other coping mechanisms. The use of this comprehensive method has the capacity to augment people's ability to cope with stress and make a substantial contribution to their overall state of well-being.

2.11. Assessment of the Stress-Intervening Variables in terms of Peer Groups

Research shows the assessment of stress-intervening variables in terms of peer groups of a sample of students. According to the tabulated results, it received a composite mean score of 3.02 and a standard deviation of 0.24. This demonstrates that the students agree that interactions with friends help to keep their stress levels in check ($M = 3.14$), that having a strong social network provides essential emotional support during times of stress ($M = 3.06$), and that their friendships play an important role in their stress management ($M = 3.06$). Additionally, they agree that they rely on their friendships for emotional support during difficult times ($M = 3.03$), and that friendship strengthens their resilience in the face of stress ($M = 3.02$).

The findings offer an evaluation of stress-mediating factors associated with peer groups among the examined population, providing valuable insights into the impact of friendships on their ability to cope with stress. The statistical measures and subjective explanations of the variables provide insight into the perceived significance of peer assistance in managing stress.

Indicator 3, entitled "The positive impact of social interactions with friends on stress reduction," has the highest mean score of 3.14, thereby highlighting its significance. This discovery highlights the notable beneficial influence that social contacts with friends may have in mitigating stress levels. This finding suggests that people have a strong conviction about the significant role that their friendships play

in efficiently managing and alleviating stress.

On the other hand, Indicator 6, which is labeled "The support I receive from my friends enables me to cope with pressures and enhances my overall sense of well-being," has the lowest average score of 2.96. Although respondents in this study demonstrated a reasonable level of proficiency, the results indicate that they view their friends' support to be slightly less efficacious in improving their overall well-being when confronted with stress, relative to the other indicators. Nevertheless, it is essential to acknowledge that even the minimum average score shows a favorable perspective about the significance of friendships in the context of stress management.

The outcomes of this study underscore the importance of peer groups and social support in the implementation of stress management measures by people. The elevated mean scores seen across many indications suggest that people possess a heightened awareness and appreciation for the emotional support and solace offered by their friends in times of stress. This finding underscores the significance of cultivating robust social networks and nurturing friendships as a means to bolster resilience when confronted with stress.

The findings combined suggest that a comprehensive strategy is necessary to assist people in effectively coping with stress and improving their emotional well-being. The current research results indicate the significance of including financial wellness programs in conjunction with other coping strategies. Additionally, Foubister's study emphasizes the beneficial impact of establishing stable peer connections. It is essential for institutions and educators to acknowledge the importance of these external influences and include them into the development of intervention programs and support systems.

In a nutshell, the aforementioned research provides valuable insights into the importance of external influences in the management of stress and the promotion of emotional well-being among people. The research highlights the need of adopting a holistic strategy that recognizes the complex and diverse aspects of stress and emotional difficulties. The presence of financial stability, social support, and secure peer networks significantly influences the overall well-being of people.

2.12. Assessment of the Stress-Intervening Variables in terms of Conviction

Research shows the students' assessment of their stress-intervening variables in terms conviction, with a composite mean score of 3.01 and a standard deviation of 0.23. The results indicate that the students agree that their forceful communication style contributes to their emotional well-being ($M = 3.08$), that their assertiveness allows them to handle stress by confronting problems front on. ($M = 3.04$), and that being forceful seems to have a favorable influence on their overall stress levels ($M = 3.03$). Furthermore, they appear to agree that assertiveness plays an important role in their stress management ($M = 3.02$) and that assertiveness improves their ability to express themselves and confront challenges ($M = 3.01$).

Each indication within the research represents a distinct facet of assertiveness and its influence on the management of stress. The statistical measures of mean scores, standard deviations, verbal interpretations, and rankings are presented for each indication. The indicator that has obtained the highest mean score in this evaluation is Indicator 6, which asserts that

one's aggressive communication style has a positive impact on their emotional well-being. This indicator has achieved a mean score of 3.08. This finding suggests that individuals have a strong conviction that their forceful communication style has a beneficial impact on their emotional well-being. The aforementioned discovery indicates that the use of assertiveness in communication might potentially function as a beneficial strategy for effectively dealing with stress and fostering emotional well-being among the individuals involved.

In contrast, the indicator with the lowest mean score is Indicator 5, which states, "Assertiveness has a positive effect on my strategies for managing stress," with a mean score of 2.93. Although participants in this study demonstrated a moderate level of proficiency, the results indicate that, on average, they perceive a little lower level of benefit from assertiveness as a stress management strategy compared to other measures. This suggests that assertiveness may not serve as the main method for managing stress among some individuals.

The findings of this study underscore the importance of assertiveness as a viable strategy for managing stress, specifically in relation to emotional well-being (Indicator 6). Although there is diversity in mean scores among indicators, it is important to recognize that assertiveness is still a crucial ability for addressing certain stress-related difficulties. Consequently, therapies and programs designed to improve assertiveness skills have the potential to provide people with further resources for efficiently coping with stress and fostering their general state of well-being. Furthermore, the implementation of individualized stress management measures that take into account individual preferences and abilities might be advantageous, given that not all persons may depend on assertiveness as their predominant coping strategy.

In brief, the results indicate that assertiveness, namely in the realm of communication, is a significant factor in promoting emotional well-being and effectively coping with stress (Indicator 6), but the perceived advantages of assertiveness may change in relation to other areas of stress management. The inclusion of assertiveness skills in stress management programs and treatments may be a beneficial aspect, as it has the potential to enhance people's overall stress resistance and well-being.

The current research results pertaining to the evaluation of stress-mediating factors in relation to conviction exhibit a strong correlation with the ideas expounded upon in the preceding examination of assertiveness and its significance in the realm of stress mitigation (American Heart Association, 2021). Both sets of studies highlight the significance of assertiveness as a possible strategy for efficiently managing stress. Indicator 6, which focuses on the impact of assertive communication on emotional well-being, had the highest average score. This statement aligns with the previously introduced concept that the act of being forceful in communication has a notable influence on one's emotional state and, therefore, their ability to manage stress.

Additionally, it is acknowledged by both authors that assertiveness may not provide equivalent benefits across all dimensions of stress management. Indicator 5, which pertains to the positive influence of assertiveness on stress management techniques, had a somewhat lower average score. This suggests that participants may not see assertiveness as the predominant approach to managing stress. This is

consistent with the previous research, which recognized that assertiveness may not be the only or favored method of stress management for every person (American Heart Association, 2021).

The significance derived from the aforementioned studies underscores the importance of assertiveness as a means of managing stress, especially in relation to one's emotional well-being (American Heart Association, 2021). The aforementioned statement underscores the need of implementing treatments and programs that specifically target the improvement of assertiveness skills within a complete stress management approach. Moreover, it is essential to acknowledge the significance of knowing that people possess a wide range of preferences and capabilities in dealing with stress. Consequently, by providing a variety of stress-reducing resources and tailored methodologies that take into account individual variances, people might be empowered to choose the most effective techniques for their needs.

In brief, the latest research results provide more substantiation for the proposition that assertiveness, especially in the context of communication, plays a crucial role in enhancing emotional well-being and facilitating successful stress management. The perceived advantages of assertiveness may change in relation to various facets of stress management; yet, it continues to be a significant competency for effectively addressing certain stress-related difficulties. Recognizing and advocating for assertiveness as a component of a complete stress management strategy helps augment people's overall capacity to cope with stress and improve their general well-being.

2.13. Difference in the Assessment of Stress-Intervening Variables based on Sex

Research shows how the assessment of stress-intervening variables differs when the students are grouped based on their assigned sex. Using the independent sample t-test, it generated p-values higher than the 0.05 level of significance for rationality ($t = 0.52$; $df = 258$; $p = 0.601$), financial status ($t = -0.31$; $df = 258$; $p = 0.754$), friends ($t = -0.41$; $df = 258$; $p = 0.679$), and conviction ($t = -0.79$; $df = 258$; $p = 0.429$). This may imply that the researcher will not reject the null hypothesis and will come to the conclusion that the assessment of stress-related intervening variables does not differ according to gender.

The ramifications of the results reported, which analyze the evaluation of stress-intervening factors according to the students' assigned sex, are many. The findings of this study suggest that there is no statistically significant disparity in the perception of stress-related factors between male and female students. This is supported by the observation that the p-values for rationality, financial status, friends, and conviction surpass the predetermined threshold of significance of 0.05. This suggests that the influence of gender on students' evaluations of stress management elements is not significant. Therefore, it is possible to create and execute stress management methods and treatments that do not need customization based on gender. This approach promotes inclusiveness and efficiency in treating stress-related concerns among students.

Furthermore, the lack of gender-based discrepancies in the evaluation of stress-related characteristics indicates a degree of fairness in students' interpretations of these variables within the framework of stress. The discovery is promising as it suggests that stress management interventions may use a

universally applicable strategy, fostering equity and equitable availability of resources and assistance for all students, regardless of their gender. These findings may be used by institutions and organizations to develop stress management programs that promote inclusiveness, perhaps resulting in treatments that are more successful and relevant to a wider range of individuals.

Furthermore, these findings emphasize the significance of using gender-neutral language and strategies in stress management education and efforts. Based on the available evidence, it seems that gender does not have a substantial impact on students' perceptions of the stress-intervening factors in question. Consequently, using gender-neutral language has the potential to foster the establishment of a supportive and inclusive educational setting. This strategy is consistent with the overarching objective of cultivating a campus culture that prioritizes diversity and guarantees that stress management options are readily available and relevant to every student.

Although the research did not reveal statistically significant disparities depending on gender, it is crucial to recognize that gender is a multifaceted facet of identity including several characteristics. Subsequent investigations might delve into other dimensions of gender and their possible ramifications on the perception and handling of stress. However, the present research findings provide useful perspectives on the widespread nature of stress-related beliefs among students, hence urging educational institutions to embrace inclusive and fair strategies in order to tackle stress and enhance overall well-being.

2.14. Difference in the Assessment of Stress-Intervening Variables based on Course

Research shows how students' assessments of stress-intervening variables differ depending on their course. The analysis of the one-way ANOVA revealed p-values higher than the 0.05 level of significance for rationality ($F = 0.652$; $df = 9,250$; $p = 0.860$), financial status ($F = 0.50$; $df = 9,250$; $p = 0.873$), friends ($F = 0.46$; $df = 9,250$; $p = 0.899$), and conviction ($F = 0.84$; $df = 9,250$; $p = 0.582$), which may indicate the researcher will not reject the null hypothesis. As a result, regardless of their courses, the assessment of stress-intervening variables is the same.

The substantial implications for educational institutions and students arise from the consistent evaluations of stress-intervening factors across various academic courses. Foremost, the findings suggest that students, irrespective of their particular field of study, perceive stress-related elements in a same fashion. This implies that the core elements of stress, coping mechanisms, and stress management methods are applicable across all academic disciplines and are not significantly impacted by the specific subject matter being studied. As a result, educational institutions have the capacity to design comprehensive stress management programs and support services that address the collective requirements of their student population, ensuring the accessibility of these resources to all students. This methodology has the potential to optimize the distribution of resources and promote fair and equal availability of assistance for stress-related issues.

The consistency shown in the evaluation of students' performance across different courses suggests the potential integration of stress management education into the comprehensive curriculum, hence providing advantages to students from diverse academic fields. By integrating stress

management concepts into academic curricula, educational institutions may provide students with vital life skills that transcend their academic pursuits. This method advocates for a comprehensive educational framework that acknowledges the significance of psychological and emotional well-being in conjunction with scholastic accomplishments.

These results emphasize the need of implementing a proactive and all-encompassing strategy for stress management within the realm of higher education. The findings indicate a degree of uniformity across various courses, underscoring the need for educational institutions to consistently evaluate and monitor the stress levels and overall well-being of their students. Regular surveys and feedback systems may be valuable tools for institutions to discern developing pressures or issues that may be specific to certain courses or student demographics. This enables institutions to implement focused solutions as needed. The findings of the research have the potential to foster a synergistic approach across various academic departments and support services inside educational institutions. By acknowledging the collective encounters of stress and the prevalence of stress management techniques, higher education institutions may facilitate interdepartmental collaboration in order to create and execute efficient stress alleviation efforts. The use of an interdisciplinary approach has the potential to foster the development of creative and comprehensive programs that effectively cater to the overall well-being of pupils.

2.15. Relationship between Mindfulness Integration Strategies and Stress Intervening variables in Physical Education

The correlation matrix shows the assessments of mindfulness integration strategies and stress-intervening variables correlated to each other. Analysis of Pearson's r correlation revealed that only breathing awareness has a relationship to stress-intervening variables in terms of rationality ($r = 0.14$; $p = 0.025$; very weak positive), since the computed p -value is less than the 0.05 level of significance, implying that the null hypothesis will be rejected. The correlation coefficient is positive, indicating that as the assessment of breathing awareness increases, so does the assessment of rationality. On the other hand, no significant relationship was found with the rest of the variables. These findings suggest that the variables do not have a statistical connection with one another and that the value of one variable does not increase or decrease in response to the growth or decrease of the value of the other variable.

The correlation matrix offers insights into the complex association between mindfulness integration tactics and stress-related factors in the field of physical education. This tool provides useful insights into the relationship between mindfulness practices and several factors, including reason, financial situation, social connections (friends), and conviction. These factors are crucial in effectively managing stress among students. The results give rise to many significant consequences.

The first finding indicates a favorable association (coefficient of 0.14) between the practice of breathing awareness and the development of reason among students. This shows that individuals who actively participate in breathing awareness practices are more inclined to adopt a logical perspective when confronted with stressful situations. This highlights the potential advantages of integrating these

activities into physical education curriculum, since they have the potential to improve students' cognitive resilience when confronted with stress.

Further, it is worth noting that attentive movement, while not significantly associated with stress factors, has a negative link with financial status, as shown by a coefficient of -0.08 . Although the statistical significance of this association is not established, it suggests the potential for mindful movement activities to mitigate some dimensions of financial stress experienced by students. This discovery necessitates more investigation into the impact of mindful exercise on one's financial well-being.

Additionally, it is worth noting that the practice of thankfulness has a positive association with friendships, as shown by a coefficient of 0.10. This implies that those who actively engage in cultivating appreciation are likely to encounter enhanced social connections and benefit from stronger support networks. Although the p -value of 0.093 does not reach statistical significance, it is worth noting that this pattern highlights the possible social advantages of thankfulness practices in mitigating stress by enhancing peer connections.

In conclusion, there is a positive relationship between the practice of self-compassion and conviction among students, as shown by a coefficient of 0.09. This suggests that students who cultivate self-compassion are more likely to have a heightened feeling of conviction. This discovery suggests that the practice of self-compassion might possibly enhance students' ability to effectively cope with stress by increasing their confidence and resolve.

In a nutshell, the correlation matrix highlights the possibility of using mindfulness practices in the field of physical education to impact students' perceptions of stress and their coping mechanisms. The consequences of these results are of practical significance for educators and institutions seeking to improve the overall well-being of pupils. By customizing mindfulness programs to target particular stress-related issues, embracing a comprehensive approach to overall well-being, and undertaking more research on these associations, physical education has the potential to serve as a beneficial platform for educating students with efficacious stress management strategies. These findings underscore the significance of incorporating mindfulness techniques in order to enhance not only physical health, but also emotional fortitude and cognitive flexibility, so fostering the comprehensive growth of students' overall well-being.

3. Conclusion

3.1. The inclusion of a wide range of student participants from different physical education courses and genders indicates that the findings of the research may be applicable to a larger population of students, hence increasing the external validity of the results.

3.2. The evaluation of mindfulness integration tactics suggests that these strategies are well integrated into the daily routines of students, hence creating potential for treatments or programs to further optimize their mindfulness practices for the purpose of stress management.

3.3. The findings indicate that mindfulness integration tactics have a consistent impact across many demographic parameters. This shows that these strategies have the potential to be universally beneficial for students, regardless of their gender or academic discipline. By incorporating these

strategies, educational institutions may effectively enhance students' ability to cope with stress.

3.4. The modest evaluation of stress-mediating variables underscores the significance of aspects such as Rationality, Financial Status, Peer Groups, and Conviction in impacting students' stress mitigation, suggesting prospective avenues for focused interventions and assistance.

3.5. The observation that stress-intervening factors are perceived similarly across different demographic groups suggests that stress management programs or treatments may be developed without requiring significant customization depending on gender or course, therefore expediting efforts to promote students' well-being.

3.6. The correlation between Breathing Awareness and reasoning indicates that the inclusion of mindfulness techniques, such as Breathing Awareness, might potentially enhance reasoning in the context of stress management. Nevertheless, the absence of substantial correlations with other variables highlights the need of investigating supplementary approaches or factors that might have a more direct impact on stress management.

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