

RESEARCH ARTICLE

Predicting the relationship between level of mindfulness and subjective well-being: A study of doctoral scholars in India

Abhigyan Bhattacharjee^{1,*}, Shraddha Karki Chetry¹, Satish Chandra Ojha²

¹ Department of Management, North-Eastern Hill University, Tura Campus, Tura-794002, Meghalaya, India

² Indian Institute of Management Bodh Gaya, India

* Corresponding author: Abhigyan Bhattacharjee, abhigyanbhattacharjee@nehu.ac.in

ABSTRACT

The research examined the correlation between mindfulness and the subjective well-being of doctoral scholars. The compilation of the PhD scholars' data was obtained from universities offering doctoral programs from two states, viz., Assam and Meghalaya, of India. A simple random sampling method was employed to choose 112 PhD candidates, including 43.5% male and 56.5% female participants. The data from this investigation were analyzed utilizing Pearson correlation and multiple regression. Data on self-reported perceived mindfulness were collected using three instruments: the Five Facets Mindfulness Questionnaire, the Positive and Negative Affect Scale, and the Life Satisfaction Scale. A multivariate regression model was constructed and analysed. The results indicated a robust correlation between elevated mindfulness scores and increased good emotions, decreased negative emotions, and a modest efficacy in predicting overall mindfulness. This study's results indicate that mindfulness significantly affects the subjective well-being of PhD scholars during their doctoral studies. The findings indicate that PhD scholars can enhance their subjective well-being during their studies by appropriately employing mindfulness techniques.

Keywords: mindfulness; subjective wellbeing; doctoral scholars, stress; mental health

1. Introduction

Academic activities have a major impact on the stress levels experienced by college students^[1]. Stress can have a considerable impact on students' academic performance and psychological well-being^[2,3]. Students are more vulnerable to developing mental health illnesses during this critical period of adulthood, as many psychological problems emerge at this time^[4].

Academicians, mental health practitioners, and legislators have long highlighted concerns about mental health issues among university students, including those obtaining doctorates^[5,6]. PhD researchers face tremendous interruption as their academic careers grow. Individuals who battle with stress may develop unhealthy coping mechanisms and adopt maladaptive lifestyle patterns such as substance abuse, eating and sleep problems, a lack of exercise, and so on^[7,8]. Research has shown that practicing mindfulness meditation can improve one's capacity to focus, be more aware of their environment, and successfully regulate their emotions. This, in turn, can lead to more control over how one reacts to potentially stressful situations.

ARTICLE INFO

Received: 24 September 2024 | Accepted: 2 December 2024 | Available online: 2 January 2025

CITATION

Bhattacharjee, A., Chetry, S. K., Ojha, S. C. Predicting the relationship between level of mindfulness and subjective well-being: A study of doctoral scholars in India. *Environment and Social Psychology* 2024; 9(11): 3129. doi:10.59429/esp.v9i11.3129

COPYRIGHT

Copyright © 2024 by author(s). *Environment and Social Psychology* is published by Arts and Science Press Pte. Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>), permitting distribution and reproduction in any medium, provided the original work is cited.

Mindfulness improves emotional regulation, openness to the present moment, and the ability to return to more desired mental states^[9]. Research has found a link between mindfulness-based training programs and lower levels of perceived stress, psychological distress, and sickness^[10,11].

Prior research has shown that anxiety and melancholy are the most common psychological repercussions of scholastic stress^[3-5]. In order to alleviate the negative psychological impacts of academic stress, researchers must find underlying mechanisms that protect students from these consequences. Individuals' incapacity to properly manage stress can appear as negative coping mechanisms and maladaptive lifestyle behaviours such as substance addiction, dietary and sleep disruptions, and a lack of physical activity^[6].

This study investigates doctoral scholars' experiences with understanding the significance of mindfulness in achieving subjective well-being. According to research, higher levels of perceived mindfulness defined as the ability to see the current moment without judgment, have been linked to improved well-being^[27].

In the present study, we are particularly intrigued by doctoral scholars' conduct during their Ph.D journey. This study aimed to examine the degree to which perceived mindfulness can predict subjective well-being among doctoral scholars.

1.1. Mindfulness

Mindfulness is discussed in Mahayana Buddhist Sanskrit texts, notably the “Stages of Meditation” (Sanskrit: Bhavanakarama) by Kamalashila (ninth century C.E.) and the “Ornament of Clear Realisation” (Sanskrit: Abhisamayalankara), attributed to Maitreya and recorded by Asanga (fourth century C.E.). These are scholarly works written by distinguished Buddhist scholars, based on the canonical teachings of the Buddha as documented in the Sanskrit sutras. In Theravada vipassana meditation, this essential consciousness is believed to progressively lead the practitioner to directly observe the impermanence and selflessness of experience, aided by the development of sustained momentary attention^[12]. This representation of fundamental awareness is arguably the most widely acknowledged interpretation of mindfulness, as popularized in the West by Kabat-Zinn (1990; 2003).^[13,14] Mindfulness (Pali: sati; Sanskrit: smṛti; Tibetan: dranpa) is an essential component of Buddhist meditation training. It is defined in numerous manners throughout different Buddhist schools and throughout Buddhist history. An often-cited benefit of mindfulness is that it “improves psychological functioning”^[15]. Gethin (2011) posited that the Satipatthana Sutta elaborates on mindfulness, which involves the observation of qualities as they exist, and includes the preliminary acknowledgment of awakening and understanding of the four noble truths: suffering, its origin, its cessation, and the path to its cessation^[16].

The preliminary research suggesting that mindfulness could be harmful to specific individuals is the study conducted by Rosing and Baumann (2008), which demonstrated that individuals with restricted access to their self-system—particularly their preferences, wants, and desires—mistake expert recommendations for their own goals^[17]. This is especially harmful as this impact originated from extrinsic motivations. The personal importance of these aims has been shown to negatively correlate with well-being^[17,18]. Moreover, the pursuit of undesired goals, particularly those inconsistent with one's inherent desires and motives, leads to psychosomatic symptoms, underscoring a specific aspect of mindfulness that indicates inadequate functioning rather than a positive state^[17,19].

Defining mindfulness primarily as a 'technique' may be a preliminary approach; nonetheless, for it to be recognized by the scientific community as a substantial idea, its proponents must offer compelling methods for its observation and quantification. Although not a strict methodological requirement, distinguishing

mindfulness from comparable concepts such as self-control or self-regulation (Baumann et al., 2005), self-observation (Hart, 2013), and attentional control (Bishop et al., 2004) is deemed important^[19-21]. The 'science of mindfulness' highlights its therapeutic advantages, which may warrant the persistence of this practice; yet, this rationale is not invariably sufficient. This signifies the beginning of a new layer of translation, defined by an innovative sort of 'justification.' It is posited that consciousness necessitates no external validation. It possesses inherent value: "the effort itself is its own objective"^[22]. One participates in it for its intrinsic pleasure, similar to a "social gathering," undertaken entirely for its own merit^[23]. Kabat-Zinn's book offers not a pragmatic justification of "engage in it and it will cure you," but instead an aesthetic promise: "engage in it and you will find pleasure."^[28] Thus, mindfulness therapy has specific scientific, technical, and medical aspects. We have already observed certain contradictions resulting from the attempt to merge these diverse elements. The importance of the scientification of mindfulness is often examined through its 'non-scientific' effects, as indicated by research demonstrating that mindfulness therapy has a paradoxical quality that hinders the generation of definitive results^[24,25].

Prior research (Karakayali, 2024) demonstrated discrepancies in mindfulness scales regarding fundamental components of the mindfulness construct. While the majority of scales prioritize attention or awareness, comparisons reveal notable disparities^[25]. The MAAS evaluates mindfulness, focusing specifically on the aspect of attention^[26]. Bergomi et al. (2013) contend that mindfulness assessments have nine distinct aspects, with each scale featuring a specific subset of these dimensions^[27]. The nine aspects were derived from a study of eight questionnaires, including their subscales and the theoretical constructs behind their conceptualization. All aspects of mindfulness included in the scales were listed and semantically classified, taking into account the scale descriptions and item content. The resultant components are (1) observation and attentiveness to experiences; (2) deliberate action; (3) non-judgmental acceptance of experiences; (4) self-acceptance; (5) willingness and preparedness to confront experiences, avoiding avoidance; (6) non-reactivity to experiences; (7) non-identification with personal experiences; (8) insightful understanding; and (9) labelling and description.

Bishop et al. (2004) advocated for a comprehensive definition and operationalization of mindfulness. The authors identified two aspects of mindfulness: (1) the self-regulation of attention directed towards the present moment and (2) a certain disposition marked by curiosity, openness, and acceptance. In light of alternative definitions found in the scientific literature, more dimensions may be included into the second component—mindful orientation. Thus, mindfulness can be characterized as a form of attention marked by distinct yet interrelated attributes (e.g., acceptance and non-judgment). The comprehensive scope and complexity of mindfulness, along with its origins in Buddhist psychology, have significantly shaped the current variety of definitions and applications^[21].

The preceding description indicates that 'Mindfulness' refers to the deliberate and nonjudgmental focus on the present moment^[26]. Mindfulness-based therapies are exceedingly popular and seeing significant global proliferation. Mindfulness originated from Eastern meditation practices, especially those linked to Buddhism. These activities are designed to help individuals develop the ability to focus their attention actively. The principal aim of mindfulness-based therapies is to intentionally observe and comprehend an experience as it transpires, devoid of the observer's preconceived prejudices. In recent decades, scholarly research has focused extensively on mindfulness. Researchers have suggested many explanations and concepts related to mindfulness to improve understanding of its scope^[28-29]. Mindfulness is a cognitive condition developed by the intentional and nonjudgmental focus of attention on the present moment over an extended period. Brown et al. (2007) offers a definition of mindfulness that includes several critical characteristics. These traits include having clear and non-conceptual awareness, retaining flexible and non-discriminatory attention,

taking an empirical viewpoint towards reality, prioritizing involvement in the present, and sustaining stable and continuous attention and awareness^[30].

This study investigates the correlation between perceived mindfulness and the subjective well-being of doctoral students.

1.2. Subjective well-being

Subjective well-being evaluates societies' and people's general quality of living. Philosophers have debated the essence of a happy life for more than a millennium, finally agreeing that a happy life is naturally desired. Although subjective well-being is thought to be important for society and quality of life, it is insufficient by itself. Although positive psychology has lately attracted attention, ethicalists have always debated the definition and substance of well-being. Two groups formed out of the well-being researchers: one focused on subjective well-being and the other on psychological well-being. Subjective well-being relates to the cognitive assessment of one's life satisfaction as well as the emotional dimension of juggling happy and bad emotions. Psychological well-being is defined as the ability to securely navigate difficulties and adversity^[29]. Diener's studies designate this dimension of well-being as hedonic well-being, therefore synonymizing subjective well-being with hedonic well-being explicitly. In the psychological tradition, well-being results from the search of desirable goals. To show this legacy, Ryff carefully examined developmental, humanistic, and clinical psychology. Empirical data confirming the six components of psychological well-being—autonomy, environmental mastery, personal development, good interpersonal relationships, life purpose, and self-acceptance were presented in the study^[30]. A great sense of life satisfaction and a predominance of good emotions define subjective well-being most of the time. In this regard, the concept of subjective well-being is sometimes used synonymously with "happiness." Thus, it is well known that improving a person's well-being requires fully optimizing their joyful experiences^[31]. Three main components define this concept: unfavourable effects, favourable results, and general life satisfaction. Many elements influence people's own level of well-being. One really needs mindfulness. This study tries to find whether subjective well-being in doctoral candidates is predicted by mindfulness.

1.3. Mindfulness and subjective well-being

While many studies concentrate on the relationship between mindfulness and negative psychological effects including depression and anxiety, a small but increasing number of studies have found that mindfulness influences or correlates with various dimensions of psychological well-being and positive mental health ^[25,31]. For instance, joyful emotions and mindfulness ratings show a clear and favourable relationship. Furthermore, connected to better self-esteem, resilience, hope, and life happiness is mindfulness. This suggests that mindfulness may be really helpful in enhancing both pleasure and meaning-based well-being. Still, the results have not been often duplicated. Trait mindfulness does not have a substantial influence on the prediction of life satisfaction, as indicated by research^[32]. Additional research is required to comprehend the connections between these parameters^[33]. Mindfulness, which evaluates two components of well-being, was evaluated using the MAAS [24]. The study employed two commonly used assessment tools: the Positive and Negative Affect Schedule (PANAS)^[34,39] to investigate subjective well-being (SWB). Their results revealed a high correlation between mindfulness and psychological and subjective well-being. Their results thus match other studies on the relationship between variables, including those of both persons with clinical diseases and those without^[37].

Empirical data demonstrates the positive effects of mindfulness on subjective and eudemonic well-being. Characteristic mindfulness is closely linked, according to past studies, to a range of cognitive and affective indicators of mental health and well-being, including lowered emotional discomfort, improved eudemonic

well-being, and raised subjective well-being (SWB^[36]). Lower depressed symptoms, anxiety, and stress are linked to lower degrees of emotional disturbance. More vitality and self-fulfilment define higher degrees of eudemonic well-being. As noted, earlier, two main determinants of SWB are emotional balance and life enjoyment. Consequently, mindfulness and subjective well-being (SWB) show a positive correlation as observed by a rise in pleasant emotions, a decrease in negative emotions, and a better degree of enjoyment with life^[35].

Numerous cognitive and emotional indicators of mental health and well-being, including subjective well-being (SWB), have been found by research to be improved by mindfulness.

The study was directed by the following research question:

- What is the correlation between overall perceived mindfulness and subjective well-being (SWB)?
- Which aspects of perceived mindfulness have the most predictive power for subjective well-being (SWB)?

2. Methods

2.1. Participants and procedures

Participants in the current study are doctoral students conducting research in the fields of social sciences, humanities, and sciences at various Central Universities, Institutes of National Importance, State Public Universities, and State Private Universities in India's Assam and Meghalaya provinces. The sample consisted of 112 doctoral scholars, with 43.5% being male and 56.5% female respondents.

2.2. Instruments

The Five Facet Mindfulness Questionnaire (FFMQ) a 39-item scale developed by Baer et al. (2006) was considered to assess mindfulness. The study examined mindfulness as a multidimensional term, hence, the questionnaire has been used for evaluating mindfulness specifically for this study^[17]. All participants received total awareness ratings in addition to numbers for each specific aspect. The PANAS, a 20-item assessment of an individual's positive and negative emotions created by Watson, Clark, and Tellegen (1988), was used to score a 5-point Likert scale ranging from 1 (not at all) to 5 (very much)^[39]. The positive affect items include "interested," "alert," and "attentive," whereas the negative affect items include "hostile," "guilty," and "upset." Participants were given separate numerical assessments for positive and negative affect, ranging from 10 to 50. Higher scores indicate either more positive or detrimental results. The positive and negative affect items have strong internal consistency, with alpha coefficients of .86 and .89, respectively.

2.3. Statistical analysis

The Pearson Correlation analysis was employed to examine the relationship between the five components of mindfulness. In addition, multiple regression analysis was employed to ascertain whether mindfulness components may be used to predict the retrieval of positive and neutral words.

2.4. Internal consistency analyses of the measures

Prior to conducting the analysis, the Cronbach's alpha reliability score for each measure was obtained. Regarding the FFMQ, as stated in the research conducted by Baer et al. (2006), the internal consistency of the mindfulness facets 'observing', 'describing', 'acting with awareness', and 'non-judging' were determined to be satisfactory, while the mindfulness facet 'non-reactivity' was deemed acceptable^[38]. In addition, mindfulness exhibited robust internal consistency. Furthermore, the PANAS positive and negative affect measures exhibited a strong level of internal consistency, as indicated by previous research^[34].

3. Result

3.1. Reliability measurement

Table 1 shows the reliability measurement of the FFMQ.

Table 1. Internal consistency of the measures (N = 112).

Measure	Cronbach's Alpha
FFMQ - observing	0.84
FFMQ - describing	0.85
FFMQ - acting with awareness	0.89
FFMQ - non-judging	0.86
FFMQ - non-reactivity	0.82
FFMQ - overall Mindfulness	0.87
PANAS - positive Affect	0.86
PANAS - negative Affect	0.89

Baer et al. (2006) obtained the following internal consistency values while developing the scale: observing 0.83, acting with awareness 0.85, non-judging 0.86, non-reactivity 0.74, and explaining 0.91. These findings were consistent with a high degree of internal consistency. Baer et al. (2006) observed that the alpha coefficients of all FFMQ components range from 0.70 to 0.91^[38].

In our study, the Cronbach alpha values for the FFMQ subscales were 0.84 for 'observing', 0.89 for 'acting with awareness', and 0.86 for 'non-judging'. The mindfulness factor 'non-reactivity' had a Cronbach's alpha of 0.82, indicating a satisfactory level of internal consistency. Nonetheless, the mindfulness component labelled 'describing' had a Cronbach's alpha score of 0.71. The internal reliability of the entire mindfulness scale was 0.87.

The positive and negative affect measures on the Positive and Negative Affect Schedule (PANAS) had Cronbach's alpha coefficients of 0.86 and 0.89, respectively.

Similarly, in our study, PANAS for both the positive and negative affect items exhibited excellent levels of internal consistency, with Cronbach's alpha coefficients of 0.88 for positive affect items and 0.87 for negative affect items. The Cronbach's alpha value for total awareness is 0.87, indicating strong internal consistency. Cronbach's alpha scores of 0.82 to 0.87 are considered to show a high level of internal consistency.

3.2. Descriptive statistics

The FFMQ was utilized to evaluate mindfulness as a multidimensional concept. The PANAS assessed emotional balance, categorizing it as either positive or negative and quantifying it through mean scores and standard deviations.

In Table 2, descriptive data (mean and SD) are shown.

Table 2. Means and standardized deviations (N = 112).

Measure	M	SD	N
FFMQ – Observing	27.5714	6.09935	112
FFMQ- Describing	23.7232	5.78318	112

Table 2. (Continued)

Measure	M	SD	N
FFMQ- Acting with awareness	25.3214	7.53994	112
FFMQ-NON-Judging	27.7946	7.33760	112
FFMQ-Non reactivity	24.5446	5.50657	112
FFMQ-Overall mindfulness	132.1607	28.02076	112
PANAS-Positive affect	53.3125	7.99328	112
PANAS-Negative affect	41.1696	10.88919	112

The FFMQ facet scale scores were as follows: observing (mean = 27.5714, standard deviation = 6.09935), describing (mean = 23.7232, standard deviation = 5.78318), acting with awareness (mean = 25.3214, standard deviation = 7.53994), non-judging (mean = 27.7946, standard deviation = 7.33760), non-reactivity (mean = 24.5446, standard deviation = 5.50657), and overall mindfulness (mean = 132.1607, standard deviation = 28.02076).

The study found that the average scores for each aspect scale were much higher than the median. These data suggest that the research scholars displayed higher levels of mindfulness in all five facet categories.

The study participants achieved scores above the scale's middle for overall mindfulness, indicating that they consistently reported their thoughts and activities as being in sync with a state of awareness.

Furthermore, the individuals' PANAS scores, which measure positive affect (M=53.3125) and negative affect (M=41.1696), exceeded the midpoint of the scale for both positive affect (30) and negative affect (30), indicating elevated emotional states. According to Watson's (1988) findings, the general population has an average positive affect score of 29.7 and an average negative affect score of 14.8^[39]. Thus, when comparing the results of our inquiry to Watson's computations, it appears that participants' average scores are higher in terms of both positive and negative consequences.

A sizable fraction of the associations was highly significant [see **Table 3**].

Table 3. Correlations between mindfulness, EI, and SWB.

Acting with Awareness	.421**	.640**	1	660**	561**	802**	.029	.005
Non-judging	.609**	.688**	60**	1	696**	870**	-0.12	.110
Non-reactivity	.733**	.823**	561**	696**	1	874**	.131	.026
Overall Mindfulness	.803**	.904**	802**	870**	.874**	1	.039	.085
Positive affect	.012	.055	029	-0.12	.131	.039	1	-.118
Negative affect	0.96	.138	005	.110	.026	.085	-.118	1

** Correlation is significant at the level 0.01 level (2-tailed); $p < .05$, ** $p < .01$.

Subjective well-being correlated positively with overall mindfulness and positive affect, but negatively with overall mindfulness and negative affect. Similarly, the individual components linked with positive feelings and conversely with bad emotions. As a result, higher levels of general awareness and particular mindfulness in various elements of a person's life have been linked to increased happy sentiments and decreased negative emotions. It is worth noting that the SWB components of positive and negative affect were highly connected, as expected. In terms of positive affect, the multiple regression analysis revealed that only the facets 'describing' and 'non-reactivity' were significant predictors. While the aspect of mindfulness

known as 'observing' was connected with a pleasant emotional state, it lacked predictive power in the relationships studied in this multiple regression analysis. To be clear, unlike 'describing' and 'non-reactivity', the act of 'observing' did not only connote happy emotions or have a discernible effect on this specific component of subjective well-being.

Table 4 displays the Summary of the Multiple Regression Analysis for the Five Mindfulness Facets.

Table 4. Positive affect.

Variable	<i>B</i>	<i>SE B</i>	β
Observing	.09	.14	.07
describing	.37	.12	.28**
acting with awareness	-.05	.15	-.04
non-judging	.002	.11	.002
non-reactivity	.42	.15	.25**

Note: $R^2 = .20$; *adjusted R^2 = .16*, ** $p < .01$; ($N = 112$).

Through the multiple regression analysis, it was found that only the variables 'non-judging' and 'non-reactivity' had a significant impact on negative affect. In addition, the characteristics of 'describing' and behaving with awareness were found to be predictive when analysing the correlations, as demonstrated in **Table 3**. Nevertheless, they lacked the ability to exclusively predict negative affect in the multiple regression analysis, as indicated in **Table 5**.

Table 5 shows the Summary of the Multiple Regression Analysis for the Five Mindfulness Facets.

Table 5. Negative affect.

	<i>B</i>	<i>SEB</i>	β
Observing	.05	.12	.04
Describing	-.21	.13	-.17
Acting with awareness	.04	.12	.05
Non-Judging	-.42	.10	-.36***
Non-reactivity	-.50	.15	-.28***

Note: $R^2 = .29$; *adjusted R^2 = .26*, *** $p < .001$; ($N = 112$).

In the multiple regression study that included five elements, only the aspect of 'describing' shown predictive ability. The correlation analysis revealed that the dimensions of 'acting with awareness', 'non-judging', and 'non-reactivity' had a significant association with positive affect. Nevertheless, these factors did not exert a discernible influence on forecasting negative emotional state in the multiple regression analysis.

4. Discussion

According to the findings of our research, there is a strong and positive connection between perceived mindfulness and one's own sense of well-being. Additionally, we discovered a significant connection between mindfulness and one's general sense of well-being. In some contexts, the term "mindfulness" refers to the deliberate practice of concentrating one's attention on the sensations that are occurring in the present moment without developing views or passing judgments. Our capacity to be fully present in the moment is improved via the practice of mindfulness, which is a cognitive approach. It has been related to reducing a variety of different sorts of pain and enhancing general emotional well-being in conditions that are positive,

negative, or completely neutral. Mindfulness is a self-contained state of consciousness that enables us to recognize and respond to uncomfortable thoughts and feelings in a manner that is both balanced and appropriate. The practice of mindfulness involves maintaining a state of alertness and nonjudgmental awareness in the here and now. Caution instils a sense of awareness and makes it simpler for individuals to accept the circumstances in which they find themselves. Specifically, among the doctoral scholars who participated in this study, it is anticipated that higher levels of mindfulness will correlate with higher levels of subjective well-being and vice versa. Literature review on mindfulness found that individuals who are highly aware are able to confront challenging circumstances without avoiding them, make the most of the present moment, and possess abilities that improve their mental well-being. For example, they are able to become more familiar with their feelings and thoughts by concentrating on their body and mind. According to the findings of the current research, individuals have several capabilities that can provide an explanation for the positive association that exists between mindfulness and subjective well-being. Furthermore, the findings of the current study indicate that internal control, which is considered to be a component of a positive disposition, has a favourable impact on the subjective well-being of an individual.

5. Limitations and future direction

The data depended solely on self-report measures, which were chosen for their strong reliability; yet, these measures are susceptible to bias, since participants often provide socially acceptable responses. Participants may have been predisposed to portray themselves favourably, or they may lack self-awareness of their conduct, resulting to inaccurate findings. The sample primarily comprised students from the Northeast India, therefore limiting generalizability. The sample were predominantly the scholars from North-East India, with less representation of pan India. A more demographically diverse population could provide a comprehensive examination of the influence of varied race and ethnicity, warranting investigation in future research.

Individuals practicing mindfulness were guided to concentrate on meditation, honing their ability to focus on the present moment and enhance their awareness of internal experiences, so enabling them to endure terrible situations. Nonetheless, it may be beneficial to acknowledge the effects of adversities on psychological well-being. A salient aspect of mindfulness is the expectation that practitioners will dedicate themselves to a consistent practice to preserve its benefits; thus, mindfulness transcends from a mere technique for eliciting happiness and evolves into a lifelong endeavour of self-improvement and self-discipline, contingent upon the extent of its application in structuring one's subjectivity^[38]. Future studies may concentrate on the collective well-being of doctorate scholars rather than the individual well-being.

Given the growing focus on the well-being of doctoral scholars at universities, it is essential for mental health and counselling services to provide psycho-education on mindfulness to support their transition to academia with a professional and positive perspective. The present study overlooked the recorded diversity in age and ethnicity among participants, potentially limiting the investigation of the varied impacts of these factors on subjective well-being. This study, however, based on Arthington's (2016) research, highlights the secular nature of mindfulness, which serves as a form of psychological power/knowledge that conceals political and socioeconomic viewpoints regarding the causes of dissatisfaction and distress in modern society^[40].

Nonetheless, the inquiry possesses both practical and theoretical ramifications. Our research suggests that a concise online/offline training program could benefit PhD researchers with insufficient mindfulness skills. The aim of this research is to enhance students' capacity to make informed lifestyle choices and alleviate their stress and negative emotions. Further research might investigate the efficacy of mindfulness

exercises on the well-being of academics across diverse universities, as well as the potential enhancement of their altruism through these activities. The study's conclusions could be more generalizable if replicated with diverse samples. The findings suggest that mindfulness improves an individual's subjective well-being. Thus, integrating mindfulness-based exercises into initiatives aimed at enhancing subjective well-being may augment their efficacy in academic settings over time. To improve the overall well-being of doctorate scholars in student-centered higher education, higher education policy should be reinforced and mental health services provided, as suggested by the current study and prior assessments.

Future research might explore the aspects of mindfulness practices in academics by incorporating more comprehensive well-being characteristics to gain a greater understanding of their inter-relational impacts.

Author contributions

AB: Conceptualization, writing—original draft preparation, supervision, project administration methodology, writing—review and editing. SKC: investigation resources, data curation, validation, formal analysis, visualization, and software. SCO: formal analysis. All authors have read and agreed to the published version of the manuscript.

Acknowledgments

The authors acknowledge the support of all the Research Scholars who responded to the request for filling up the questionnaire for this research work.

Conflict of interest

The authors declare no conflict of interest.

References

1. Persike, M., & Seiffge-Krenke, I. (2012). Competence in coping with stress in adolescents from three regions of the world. *Journal of Youth and Adolescence*, 41, 863-879. doi:10.1007/s10964-011-9719-6.
2. Felsten, G. (2002). Minor stressors and depressed mood: Reactivity is more strongly correlated than total stress. *Stress and Health: Journal of the International Society for the Investigation of Stress*, 18(2), 75-81. doi:10.1002/smi.925.
3. Stoeber, J., & Rambow, A. (2007). Perfectionism in adolescent school students: Relations with motivation, achievement, and well-being. *Personality and Individual Differences*, 42, 1379-1389. doi: 10.1016/j.paid.2006.10.015.
4. American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (Fourth edition, Text Revision)*. Washington, DC: Author.
5. Auerbach, R. P., Alonso, J., Axinn, W. G., Cuijpers, P., Ebert, D. D., Green, J. G., Hwang, I., Kessler, R. C., Liu, H., Mortier, P., Nock, M. K., Pinder-Amaker, S., Sampson, N. A., Aguilar-Gaxiola, S., AlHamzawi, A., Andrade, L. H., Benjet, C., Caldas-de-Almeida, J. M., Demyttenaere, K., Bruffaerts, R. (2016). Mental disorders among college students in the WHO World Mental Health Surveys. *Psychological Medicine*, 46(14), 2955–2970. <https://doi.org/10.1017/S0033291716001665>.
6. Pedrelli, P., Nyer, M., Yeung, A., Zulauf, C., & Wilens, T. (2015). College Students: Mental Health Problems and Treatment Considerations. *Academic Psychiatry*, 39(5), 503–511. <https://doi.org/10.1007/s40596-014-0205-9>.
7. Dyrbye, L. N., Thomas, M. R., & Shanafelt, T. D. (2006). A systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. *Academic Medicine*, 81, 354-373. doi:10.1097/00001888-200604000-0000.
8. Chow, P., & Flynn, D. M. (2016). The development of the student stressors and emotional disturbance scale. *College Student Journal*, 50(2), 191-198. doi:10.5539/ass.v7n10p30.
9. Snippe, E., Nyklíček, I., Schroevers, M. J., & Bos, E. H. (2015). The temporal order of change in daily mindfulness and affect during mindfulness-based stress reduction. *Journal of Counseling Psychology*, 62(2), 106-114, <http://dx.doi.org/10.1037/cou0000057>.

10. Carmody, J., & Baer, R. A. (2008). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioral Medicine*, 31(1), 23-33. doi: <http://dx.doi.org/10.1007/s10865-007-9130-7>
11. Reibel, D. K., Greeson, J. M., Brainard, G. C., & Rosenzweig, S. (2001). Mindfulness-based stress reduction and health-related quality of life in a heterogeneous patient population. *General Hospital Psychiatry*, 23(4), 183-192. doi:10.1016/S0163-8343(01)00149-9.
12. Sayadaw, M. (1991). *Practical insight meditation: basic and progressive stages*. Kandy: Buddhist Publication Society. Then, U.P., Tin, M.U., Trans.
13. Kabat-Zinn, J. (1990). *Full catastrophe living: how to cope with stress, pain and illness using mindfulness meditation*. New York: Dell Publishing.
14. Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: past, present and future. *Clinical Psychology: Science and Practice*, 10(2), 144–156.
15. Keng, S-L., 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.
16. Gethin, R. (2011). On some definitions of mindfulness. *Contemporary Buddhism* 12(1): 263-279.
17. Rosing, K., & Baumann, N. (2008). The dark side of mindfulness: why mindfulness interventions are not beneficial for everyone. *International Journal of Psychology*, 43(3-4), 296.
18. Kasser, T. & Ryan, R. M. (1996). Further Examining the American Dream: Differential Correlates of Intrinsic and Extrinsic Goals. *Personality and Social Psychology Bulletin*, 22, 280-287.
19. Baumann, N., Kaschel, R. & Kuhl, J. (2005). Striving for Unwanted Goals: Stress-Dependent Discrepancies Between Explicit and Implicit Achievement Motives Reduce Subjective Well-Being and Increase Psychosomatic Symptoms. *Journal of Personality and Social Psychology*, 89, 781-799.
20. Hart, R., I. Ivztan, and D. Hart. (2013). Mind the gap in mindfulness research: A comparative account of the leading schools of thought. *Review of General Psychology* 17 (4): 453–466.
21. Bishop, S.R., M. Lau, S. Shapiro, L. Carlson, N.D. Anderson, J. Carmody, Z.V. Segal, S. Abbey, M. Speca, D. Velting, and G. Devins. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice* 11 (3): 230–241.
22. Quaglia, J.T., K.W. Brown, E.K. Lindsay, J.D. Creswell, and R.J. Goodman. (2015). From conceptualization to operationalization of mindfulness. In *Handbook of mindfulness: Theory, research, and practice*, ed. K.W. Brown, J.D. Creswell, and R.M. Ryan, 151–170. New York: Guilford Press.
23. Kabat-Zinn, J. (1990). *Full catastrophe living*. New York: Delacorte.
24. Simmel, G. (1971). Sociability. In *Georg Simmel: On individuality and social forms*, ed. D.N. Levine, 127–140. Chicago: Univ. of Chicago Press.
25. Karakayali, N. (2024). The normal is pathological: semi-conscious brains, mindless habits, and the paradoxical science of mindfulness. *BioSocieties* 19, 59–83.
26. Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological wellbeing. *Journal of Personality and Social Psychology*, 84, 822–848.
27. Bergomi, C., Tschacher, W., & Kupper, Z. (2012). Measuring mindfulness: first steps towards the development of a comprehensive mindfulness scale. *Mindfulness*. Advance online publication. doi:10.1007/s12671-012-0102-9.
28. Kabat-Zinn, J. (1994). *Wherever you go, there you are Mindfulness meditation in everyday life*. New York, NY: Hyperion.
29. Kabat-Zinn, J., Lipworth, L., & Burney, R. (1985). The clinical use of mindfulness meditation for the self-regulation of chronic pain. *Journal of Behavioral Medicine*, 8, 163-190.
30. Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological wellbeing. *Journal of Personality and Social Psychology*, 84, 822-848.
31. Linley P.A., Maltby J., Wood A.M., Osborne G. & Hurling R. (2009). Measuring Happiness: The Higher-Order Factor Structure of Subjective and Psychological Well-Being Measures. *Personality and Individual Differences*, 47, 878-884. <http://dx.doi.org/10.1016/j.paid.2009.07.010>
32. Gallagher M.W., Lopez S.J. & Preacher K.J. (2009). The Hierarchical Structure of Well-Being. *Journal of Personality*, 77(4), 1025-1050.
33. Deci E.L. & Ryan R.M. (2008). Hedonia, Eudaimonia, and Well-Being: An Introduction. *Journal of Happiness Studies*, 9, 1-11. <http://dx.doi.org/10.1007/s10902-006-9018-1>.
34. Brown, K., Ryan, R. M., & Creswell, J. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry*, 18(4), 211-237. doi: 10.1080/1047840070159829.
35. Garland, E. L., Farb, N. A., Goldin, P. R., & Fredrickson, B. L. (2015). Mindfulness broadens awareness and builds eudaemonic meaning: A process model of mindful positive emotion regulation. *Psychological Inquiry*, 26(4), 293–314. <http://dx.doi.org/10.1080/1047840X.2015.1064294>.

36. Coffey, K. A., & Hartman, M. (2008). Mechanisms of action in the inverse relationship between mindfulness and psychological distress. *Complementary Health Practice Review*, 13(2), 79–91. <https://doi.org/10.1177/1533210108316307>
37. Deci E.L. & Ryan R.M. (2008). Hedonia, Eudaimonia, and Well-Being: Introduction. *Journal of Happiness Studies*, 9, 1-11. <http://dx.doi.org/10.1007/s10902-006-9018-1>.
38. Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., . . . Williams, J. M. G. (2008). Construct validity of the Five Facet Mindfulness Questionnaire in meditating and nonmeditating samples. *Assessment*, 15, 329-342.
39. Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. <http://dx.doi.org/10.1037/0022-3514.54.6.1063>.
40. Arthington, P. (2016) Mindfulness: A critical perspective. *Community Psychology in Global Perspective* 2(1): 87-104.