

A Unified Proposition on Well-being, Mindfulness and Academic Achievement: A Bibliometric Analysis

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Abstract. This article presents a critical review of empirical studies on students' academic well-being and engagement with mindfulness and epistemic beliefs in a wide range of educational contexts from 2013 to 2023. Two central themes were identified through a systematic process of paper selection and review: 1) Students' academic well-being, mindfulness, and epistemic beliefs levels; and 2) the impacts of academic well-being on students with various influencing factors at the individual, interpersonal, and environmental levels. VOSviewer, a bibliometric visualization tool, is used in the study to examine and synthesize empirical research conducted throughout this particular span. The study provides insight into the evolving setting of scholarly works, identifying major trends, prominent research concerns, networks of collaboration, and the relationship between well-being, mindfulness, and academic achievement. The findings of this study contribute to a cohesive concept that incorporates well-being and mindfulness into educational frameworks to improve academic achievement and nurture students' development. The findings provide the groundwork for future research and strategic plans aimed at improving educational practices and student outcomes.

Keywords: academic achievement, mindfulness, well-being

1 Introduction

The development in education settings recently is starting to encompass the whole student's growth aspects, not only academic achievement but also their overall well-being and mindfulness. Along with the relationship among the three domains, namely academic success, students' well-being, and mindfulness, this presents intriguing subject matter for research in academic communities. This also results in increased awareness among researchers, educators, and policymakers that education transcends conventional indicators of academic success. They recognized that in order to improve scholarly achievement, promoting students' psychological, social, and emotional well-being is a significant factor to consider. It is scientifically proven that subjective well-being is an important factor in a student's academic life [1]. Especially in the post-pandemic era, there could also be aspects of urgency for students' well-being. Several studies done previously indicate that the interruption to usual instruction caused by COVID-19

has had an effect on students' mental health and learning. Initial research suggests that the interruption to usual instruction caused by COVID-19 has had an effect on students' mental health and learning. International surveys show a rising (self-reported) degree of frustration, anxiety, and lack of hope among higher education students, as well as concerns about more workloads, academic performance, and even job prospects [2]-[5].

In addition, mindfulness practice, which involves maintaining awareness of the present moment and focus, is increasing in popularity due to its ability to improve both mental well-being and cognitive functions. It is because mindfulness is able to help students overcome stressors [6]. Also, the research conducted in the setting of higher education in the UK and Italy shows the important connection between cognitive resilience, alongside the associations of each dimension with mindfulness, and how a short intervention based on mindfulness and coaching and training on study strategies may improve students' effective learning [7]-[8].

In accordance with the preceding statement, the objective of this bibliometric analysis is to carefully analyze the range of scholarly literature involving the interconnected terms of well-being, mindfulness, and academic achievement using VOSviewer, a strong bibliometric analysis tool. VOSviewer visualizes and analyzes bibliographic data, making it easier to identify major research themes, prominent books, and developed patterns in academic discourse. In addition, the aim is also to discuss an overall idea that brings together these critical components of student development by combining and organizing this body of research. The researchers of the study hope to identify patterns, gaps, and potential future directions, eventually leading to a thorough comprehension of how to promote well-being and mindfulness and how they can positively influence academic success, guiding educational procedures and regulations towards a more comprehensive and student-centered approach.

2 Method

The bibliometric analysis was carried out using VOS Viewer software version 1.6.19 to examine research on mindfulness, well-being, and academic satisfaction crafted from the Scopus database for 20 years (2003–2023), resulting in 602 documents crafted from the Scopus database. The data limits the search only to social sciences, psychology, arts, and humanities research, which includes all types of documents, including article journals, review papers, book reviews, and book chapters. The Boolean operator was applied in the search process for the three keywords, as shown in Table 1.

Table 1. Boolean Operator

Keywords	Boolean operator
Well-being	Wellbeing OR Well-being OR Happiness OR Health OR Satisfaction
Mindfulness	Mindfulness OR Consciousness OR Attention
Academic Achievement	Academic Success OR Academic Achievement OR Academic Satisfaction

This research utilized VOS Viewer as a tool to map the intellectual pattern of the issues of well-being, mindfulness, and academic achievement by visualizing the bibliometric mapping. This software is more effective in informing literature review because label, density, and clustering

views are included. This software has been widely used in bibliometric studies recently [9]-[11]. In several analytical domains, including subject word research, cluster analysis, author profiling, and keyword research, it offers definite advantages. The program's text mining capabilities enable the creation and visualization of co-occurrence networks by extracting important phrases from a sizable corpus of scientific literature[12]. Additionally, high-frequency keywords that are frequently used in this field of study were extracted using the algorithm. These network maps are made up of nodes and links, where the nodes stand in for different entities including nations, organizations, writers, and keywords. The connections between nodes show relationships, while the size of the nodes reflects their numerical frequency. A thicker line indicates a stronger correlation. This research applied two types of analyses to cluster the most current literature on mindfulness, well-being and academic satisfaction, namely co-occurrence analysis and bibliographic coupling. Bibliographic coupling is used to see the polarity of the author network, while co-occurrence analysis is used to see emergent research topics in related areas [13]-[15].

To start with, the co-occurrence analysis was applied based on the articles' keywords. The meaning of co-occurrence analysis is finding terms or words that frequently appear in papers, books, or articles. This analysis has the goal of explaining the focus of the topic related to well-being, mindfulness, and academic achievement. If the keywords frequently show up together in related publications in the last 20 years, it can be implied that there is a strong connection between the focus of the topic. The co-occurrence clusters of keywords also imply the current research topics that indirectly reflect the basis knowledge of well-being and mindfulness toward students' academic achievement. After the co-occurrence analysis was conducted, the next analysis was bibliography coupling, which aimed to assist us in identifying scientific papers that have a connection because they quote the same previous research, implying a resemblance in content or ideas about well-being and mindfulness towards scholarly achievement. Both of these approaches aid academics in identifying patterns and connections throughout the large body of academic literature.

3 Findings and Discussion

3.1 Co-Occurrence Analysis

Co-occurrence analysis was conducted based on the article' keywords. This analysis aims at elaborating on the focus of the topic of the research related to well-being and mindfulness towards academic achievement for over 20 years.

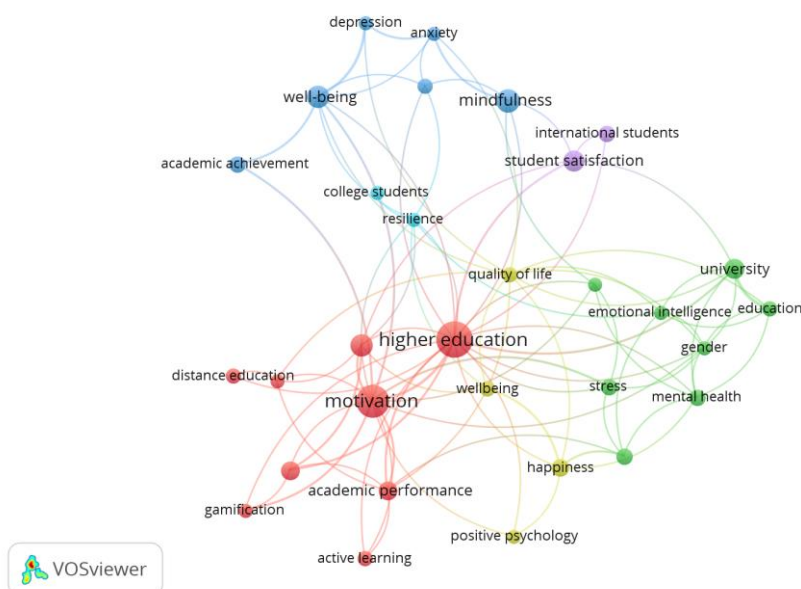


Figure 1. The topical focus on Well-being, Mindfulness and Academic Achievement. Note: The analysis includes Author's keyword with minimum of 5 occurrences, among 1878 keywords, there are 43 keywords that meet the threshold.

The co-occurrence analysis was applied in this research to explain recent topics of interest covered in the literature, with a topical focus on Well-being, Mindfulness and Academic Achievement. Figure 1 shows the network visualization of the co-occurrence analysis of the keywords with a minimum of 5 occurrences. It can be seen that among 1878 keywords, there are 43 that meet the threshold. The study of higher education and motivation are the two primary research topics that have been explored in literature, as they represent the large nodes in the figure. Also, as seen in the blue clusters, the keywords of Well-being, Mindfulness and Academic Achievement are closely related to each other, as represented by the short length of the line, which reflects the stronger inter-relatedness.

3.2 Bibliographic Coupling

The bibliographic coupling analysis was conducted to find papers that cite similar or the same earlier papers. This study chose to run the journal bibliographic coupling and the country bibliographic coupling.

3.2.1 The prominent sources

The current research compiled the research on mindfulness, well-being, and academic satisfaction crafted from the Scopus database for 20 years (2003–2023), resulting in 602 documents crafted from the Scopus database. There are 8 journals among those sources that have regularly released studies on the topic of Well-being, Mindfulness and Academic Achievement with at least 5 citations, as shown in Table 1.

Table 2. Core Journal publishing on Well-being, Mindfulness and Academic Achievement

Sources (Journal name)	Cluster	Links	Total Link Strengths	Number of Documents	Number of Citation
Academic Medicine	3	3	5	10	496
Bmc Medical Education	1	3	3	8	210
Frontiers in Psychology	2	6	10	18	69
Journal of Attention Disorders	1	3	6	9	168
Journal of Further and Higher Education	1	4	8	5	25
Medical Education	3	1	3	5	171
Nurse Education Today	2	2	3	6	52
Sustainability (Switzerland)	2	2	6	13	123

In Table 2, three journals that place first to third in addressing the topic of Well-being, Mindfulness and Academic Achievement, are *Academic Medicine*, *Bmc Medical Education*, and *Frontiers in Psychology*. As for the most cited references, publications from *Academic Medicine* are in the top place with 496 citations for 10 documents. Furthermore, the top publications on Well-being, Mindfulness and Academic Achievement, study were published by *Bmc Medical Education*, which also ranked second in terms of most referenced sources with 8 articles. The following journal was *Frontiers Psychology*, which has 69 citations of 18 articles on the topics of Well-being,

Mindfulness and Academic Achievement. As can be seen in the table, the top journals cover health, psychology, and education. Most of the journals focused on medical topic (Academic Medicine, BMC Medical Education, Medical Education, and Nurse Education Today), followed by psychology (Frontiers Psychology and Journal of Attention Disorders). However, there is the Journal of Further and Higher Education which the main topic is higher education, as well as Sustainability (Switzerland) with a sustainability topic.



Figure 2. The prominent sources. Note: The analysis includes Sources with minimum of 5 occurrences; among 419 sources, only 7 keywords meet the threshold.

The journal bibliographic analysis was applied in this research to find out how journals are connected. based on the article they cite. Figure 2 shows the network visualization of the journal bibliographic coupling analysis of the sources with a minimum of 5 occurrences. It can be seen that, among 419 sources, only 7 keywords meet the threshold. However, in the topic of Well-being, Mindfulness and Academic Achievement, there were only 4 journals that were connected with each other, namely Sustainability (Switzerland), Frontiers in Psychology, Journal of Further and Higher Education, and Academic Medicine.

3.2.2 The Leading Countries

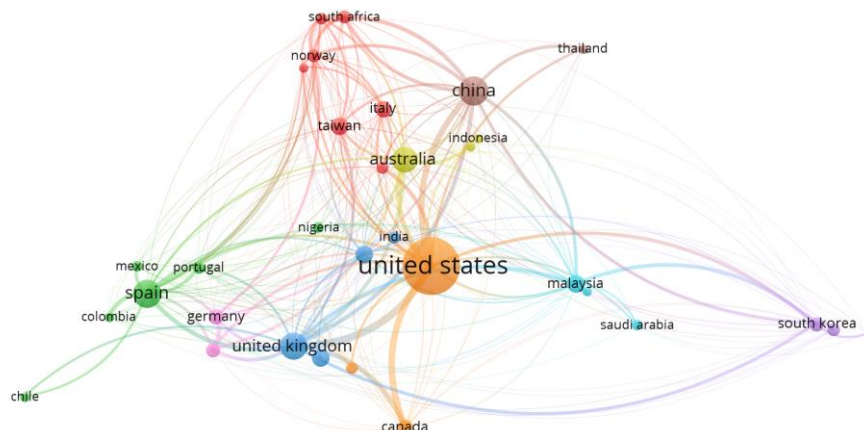


Figure 3. The network of research based on countries. Note: The analysis includes authors' countries with minimum of 5 occurrences, among 98 countries, there are 33 keywords that meet the threshold.

As can be seen in Figure 3, for countries bibliographic grouping, the analysis includes authors' countries with a minimum of 5 occurrences. There are 33 keywords that meet the threshold among 98 countries. Apparently, most of the literature studies are from the United States since it is represented by the biggest nodes in the mapping, followed by the United Kingdom and China. Despite the statistical map that shows the United States is the center of research regarding the topic of well-being, mindfulness, and academic achievement, the network visualization has also shown other countries in Southeast Asia, such as Indonesia, Malaysia, and Thailand. Those countries shown in Figure 3 are represented by small dots, meaning that research concerning well-being and mindfulness towards academic success in the said countries is still in its early stages and has the possibility to develop in the future.

3.3 Implications of future research of Well-being, Mindfulness, and Academic Achievement

Subsequent to the current bibliographic research that has the goal of mapping out the range of scholarly literature on the topics of well-being, mindfulness, and academic achievement, it was found that the analysis results in various aspects of the said interdisciplinary concepts. The co-occurrence and bibliographic coupling analysis help the authors investigate how it is focusing on psychology, education, neuroscience, and other disciplines. In order to gain a complete view of student development, in this case their academic success, research on these interdisciplinary concepts of well-being and mindfulness is needed. Especially in higher education settings, this is in accordance with previous research that has scientifically proven how mindfulness supports students well-being, thus resulting in better levels of scholarly achievement [16]-[18]. Promoting mindfulness, according to the research, has the ability to boost academic achievement while also increasing a child's spiritual, environmental, emotional, social, creative, and physical well-being [16]. Meaning that understanding how these aspects are interrelated is a pivotal facets that would contribute to a holistic comprehension of students' development.

To begin with, the results of the co-occurrence analysis for well-being, mindfulness, and academic success implied that there are quite strong connections between each key term, as indicated by the length of the line. Additionally, another keyword that frequently appears along with well-being, mindfulness, and academic achievement is 'higher education', which is also the biggest node in the network visualization. Other than that, 'college students' and 'university' are also included in the network. It indicated that most literature studies done previously related to the same field also considered the higher education context. Previous studies done in the past have scientifically proven that mindfulness intervention is acceptable and helpful for university students and can help them with their academic studies [19]-[20]. However, the said topics are described as small dots in the network visualization, thus meaning that there is still room for development, exploration, and a potential gap in understanding.

In addition, related articles or journals about how well-being and mindfulness influence academic achievement are identified through bibliographic coupling. The clusters of journals on the discourse of well-being, mindfulness, and academic achievement are psychology journals, education journals, and medical journals. One of the most reputable journals is *Frontiers in Psychology*, with 18 documents and 69 citations contributing to this discourse. One of them is the research conducted by Węziak [21] in this journal, which indicated that implementation of more comprehensive well-being metrics that go beyond psychological well-being may aid in shifting the focus away from health deficits and toward health and well-being promotion. Additionally, the articles from the *Journal of Further and Higher Education* also contained one article in which the findings revealed strong, obvious connections between greater academic performance and increased resiliency, mindfulness, self-compassion, and awareness of future implications, as well as unfavorable relationships with procrastination [22]. Furthermore, the article from the *Sustainable (Switzerland)* journal, which according to network visualization that has a strong connection with other journal, also contributes in stating results about how mindfulness has a favorable relationship with resilience, which leads to improved academic achievement. This is according to the findings of a study including 497 students from colleges, universities institutions, and secondary schools [23].

As for the countries contributing to the focus topic, United States, United Kingdom, and China are still leading countries in this aspect. However, Southeast Asia countries are starting to contribute more insight. Especially in Indonesia, the topic regarding students' well-being and mindfulness has increased in the post-pandemic era. To begin with, a study has scientifically proven that academic stress, coping, and social-cultural adaptation were found to have a substantial influence on the psychological well-being of Indonesian postgraduate students, and all constructs were proven to be reliable and valid [24]. On the other hand, another study found that despite its importance in students' academic and nonacademic successes, research on students' well-being has received little attention in Indonesian schools [25]. It can be concluded that in latest year, the topic about students' mental health, and psychological well-being are starting to take into account by researchers in Indonesia. The various subject matter could also become a wide range of research topics, methodologies, and interdisciplinary approaches.. This could be a valuable opportunity for future Indonesian researchers who want to do an in depth exploration towards these topics.

Lastly, this bibliographic study aims to explore about the literature studies related with well-being, mindfulness, and academic achievement. According to the analytical map by VOSviewer in this recent paper, it is indicated that in previous research, incorporating well-being and mindfulness techniques into academic environments can improve student performance and overall well-being. It is highly expected that the findings of this recent study could contribute to inform educational practices and policies.

4 Conclusion

Incorporating mindfulness and well-being practices into academic contexts has great promise for improving student performance and general well-being. According to research, such integration has a positive influence, leading to the creation of educational practices and policies that stress a comprehensive method to student development. Regulations that encourage and direct the implementation of these practices are critical. Distributing resources, providing

opportunities for professional development for educators, and emphasizing the importance of well-being in school through guidelines and recommendations are all crucial first steps. Institutions may support the adoption of mindfulness and well-being practices in this way, allowing students to succeed academically and in other parts of their lives. Finally, the balanced development of academic performance and well-being can be accomplished through the purposeful integration of mindfulness practices, which fosters a culture that values students' overall development.

Acknowledgement

The authors would like to express their appreciation for the support of the sponsors with Institute of Research and Community Services (LPMM) Brawijaya University, Indonesia for *Hibah Penelitian Unggulan* Project Number: 612.8/UN10.C20/2023.

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