Mindfulness and Well-Being: A Bibliometric Analysis

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ABSTRACT
Research into mindfulness and well-being has become an interesting topic for research. This article provides a review of trends in mindfulness and well-being research using bibliometric analysis, the data of which is taken from the Scopus database. This article aims to identify trends in the development of mindfulness and well-being research and to identify current research topics and future research opportunities. This study identifies several clusters using keyword co-occurrences analysis. Each cluster represents the current topic indicated by frequent keywords, while keywords that do not appear frequently provide opportunities for exploration of future research topics. Finally, this study provides direction for the exploration of research related to mindfulness and well-being.

Keywords: Bibliometric analysis, Mindfulness, Scopus database, Well-being.

1. INTRODUCTION

The study of mindfulness has been extensively researched in fields such as psychology, neuroscience, and medicine. In recent years, the study of mindfulness in management has also grown and developed. Mindfulness has a role in helping improve the functioning of individuals, groups, and organizations effectively [1]. Mindfulness is generally defined as focused attention on current events both internally and externally [2]. Mindfulness also plays a role in improving personal well-being [3]. In addition, mindfulness can improve performance [4] and work engagement [1]. Mindfulness can also help reduce stress [5] Thus, making mindfulness a strategy to reduce stress, which can later lead to personal well-being.

The relationship between mindfulness and well-being has become a topic of interest in mindfulness research. The relationship between mindfulness and well-being is not only studied theoretically but also empirically. The higher the level of mindfulness, the higher the effect on well-being [6]. Well-being is defined as "a broad category of phenomena that includes people's emotional responses, domain satisfactions, and global judgments of life satisfaction" [7]. Mindfulness and well-being research has developed so that bibliometric studies are needed to find out trends and research developments on these topics. Trends in mindfulness and well-being research were reviewed using bibliometric analysis. Bibliometric analysis is a

widely used approach to examine literature trends [8]. In addition, bibliometric analysis is also defined as "a form of statistical analysis of publications that provides quantitative insight into academic literature" [9]. The bibliometric study of mindfulness and well-being includes two research questions. First, what are the trends in mindfulness and well-being research publications? Second, what are the current research topics related to mindfulness and well-being and what are the research opportunities related to these topics in the future? This paper seeks to identify topics that are currently trending and provide future research directions.

2. LITERATURE REVIEW

Mindfulness is a Buddhist tradition rooted in Eastern spirituality [10]. The term mindfulness comes from the eastern words which consist of *smrti* (Sanskrit), *sati* (Pali), and *dran-pa* (Tibetan) [11]. Mindfulness in the Buddhist tradition is associated with meditation, while in the context of western psychology, mindfulness is defined as awareness that arises with attention to the present experience with acceptance and non-judgment [11]. Another definition of mindfulness is a state in which the individual pays attention to current events with acceptance and non-judgment [10]. Mindfulness consists of three fundamental components, namely intention, attention, and attitude [11]. Apart from being a state, mindfulness can also be seen as a trait, namely the variation in the state of mindfulness experienced by

each individual [12]. The high level of a person's mindfulness is identical to a variety of positive outcomes. These positive outcomes include mental health, satisfaction with relationships, and effectively reducing pain [13]. Mindfulness also has a strong correlation with subjective well-being [13]. Mindfulness through meditation training tends to promote well-being [13].

Increased mindfulness is associated with improved well-being [6]. Mindfulness provides a number of positive benefits through the processes that underlie mindfulness. Schultz et al. [14] explained that mindfulness includes emotional regulation as a central mechanism that provides the benefits of mindfulness. Then, open, non-judgmental attention can make individuals better able to understand events that are happening and less likely to experience ruminations [14]. Mindfulness is also a protector in unfavorable environmental conditions and reduces negative effects thereby encouraging well-being [14]. Well-being is generally divided into two, namely subjective well-being and psychological well-being [6]. Although, the two are often used interchangeably. Measurement of subjective well-being includes pleasant affect, unpleasant affect, and life satisfaction [6]. Meanwhile, the measurement of psychological well-being includes vitality, self-actualization, autonomy, competence, and relatedness [6]. The more mindful a person is, the higher the individual's well-being. Mindfulness contributes to well-being both directly and indirectly. Mindfulness contributes directly through increasing self-capacity to engage and enjoy current experiences, while indirectly, through improving self-regulatory skills.

3. METHODOLOGY

The bibliometric analysis in this study uses data taken from the Scopus database without limiting the year. Scopus has a wider subject area coverage, so it is possible to search for better journals according to the

domain being reviewed [15]. The search stage using the Scopus database adopts four steps from Kumar et al. [16]. These stages include database search, scholarly filtration, language filtration, and subject filtration.

The Scopus database search uses the term "mindfulness" in the title while for keywords it uses the terms "mindfulness" and "well-being". The search results obtained 631 articles. The second stage is scholarly filtration, where we determine only articles from journals. The inclusion criteria are determined because the journal articles have gone through rigorous peer review and have contributed to scientific progress [15], so that 524 articles were obtained by excluding 107 articles. The third stage is language filtration, where we only select journal articles that use English. The search results obtained 508 articles by excluding 16 articles. The last stage is subject filtration, where we limit the subject areas to psychology, business, management, and accounting. Thus, the final results were 292 articles by excluding 216 articles that did not meet the criteria for subject filtration. A total of 292 articles were analyzed using VOSviewer with keyword co-occurrence analysis.

4. RESULTS

4.1 Publication Trend

Most of the mindfulness and well-being research published in 2020 is 40 articles and in 2021 there are also 40 articles. The frequency of publication in 2006-2011 has increased from one article to 11 articles. Then, from 2012 to 2019 despite fluctuations, the overall trend shown in Figure 1 continues to increase. In particular, in 2015-2016, there was a significant increase from 18 articles to 38 articles. Entering 2020, there is an increase in the frequency of publications to 40 articles and tends to be stable in 2021 as many as 40 articles.
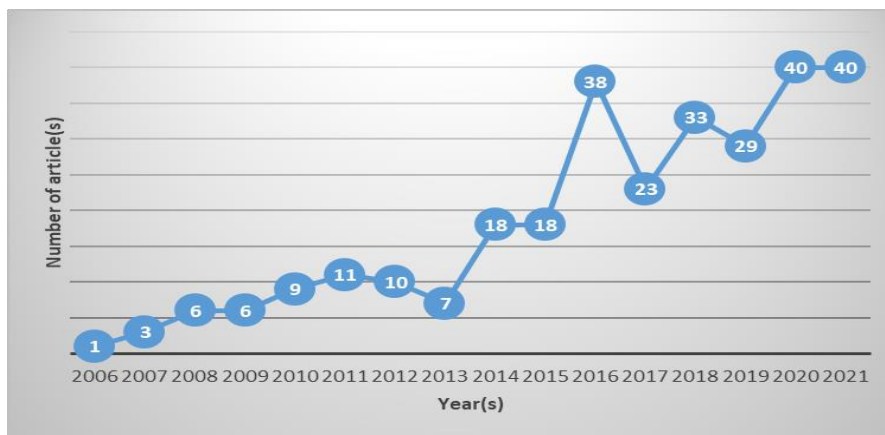

Figure 1. Mindfulness and Well-Being Research Publication Trend (2006-2021)

4.2 Publication Outlet

Figure 2 shows the distribution of articles related to the publication outlets where Mindfulness is the most prolific journal for the publication of mindfulness and well-being research. A total of 65 articles were published on Mindfulness. Then, followed by Personality and Individual Differences with 24 articles, Frontiers in Psychology with 14 articles, Stress and Health with 9 articles, and Current Psychology with 7 articles. Three journals respectively, namely the Journal of Occupational Health Psychology with 6 articles, BMC Psychology with 4 articles, and Behaviour Research and Therapy with 4 articles.
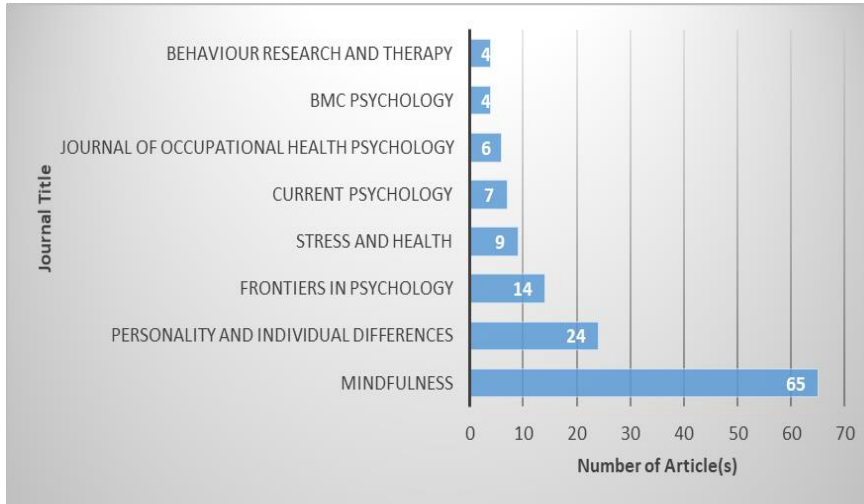

Figure 2. The Top Eight Journals in Terms of Publication

4.3 Topic Development Analysis

Identify currently developing topics and future research opportunities using VOSviewer with keyword co-occurrence analysis to determine keywords that often appear. VOSviewer then shows three different visualizations in bibliometric mapping related to keywords into different clusters using network visualization (Figure 3) and density visualization (Figure 4). The keyword co-occurrence analysis uses a full counting method with a minimum number of occurrence keywords, which is five, then 675 keywords are obtained with 38 items that meet the threshold.
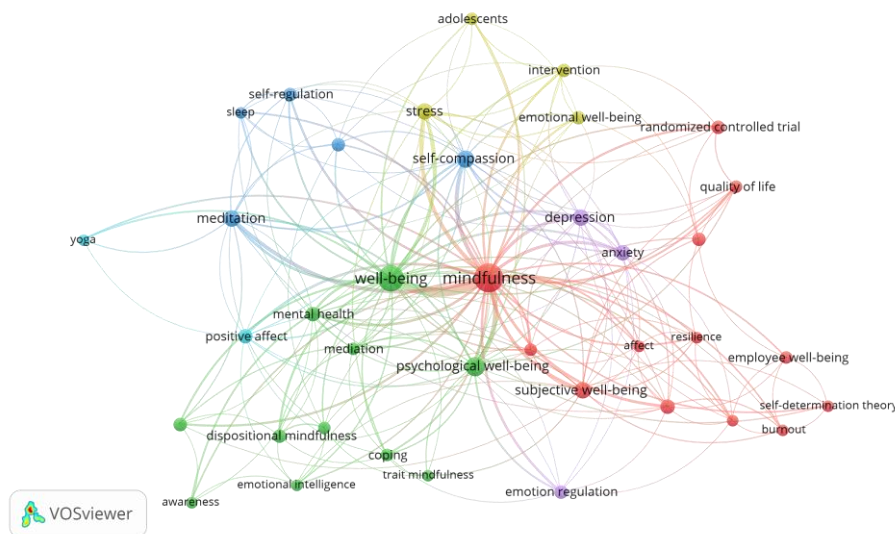

Figure 3. Network Visualization

Figure 3 shows 6 clusters marked with red, green, dark blue, yellow, purple, and light blue. The first cluster (red) has 13 items with the most frequent term being "mindfulness" (236 occurrences). The second cluster (green) has 11 items with "well-being" as the most frequent term (136 occurrences). The third cluster (dark blue) has 5 items with words that often appear, namely "self-compassion" (24 occurrences). The fourth cluster (yellow) has 4 items with the word that often appears, namely "stress" (23 occurrences). The fifth cluster (purple) has 3 items with the most frequent term, namely "depression" (19 occurrences). The sixth cluster (light blue) has 2 items with the most frequent term, namely "positive affect" (11 occurrences).
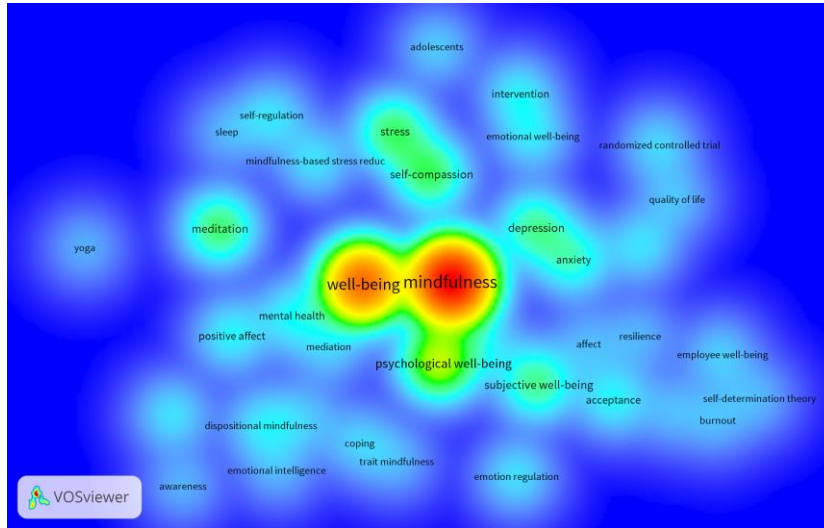

Figure 4. Density Visualization

Figure 4 shows the density visualization mapping. Each node in the keyword co-occurrence analysis has a different color depending on the density of each item. When the number of nodes and weight increase, the density will also increase. The red color shows the largest number of items and the highest weight. The redder the color of the nodes indicates the importance of the topic. Each keyword shows the trend and direction of research in the future. Trends in the study of mindfulness and well-being were identified from the occurrence of certain items on the VOSviewer. Keywords in each cluster represent various current topics and those that can be developed in the future (Table 1).

Table 1. Item Clustering and Frequent Keywords

Cluster	Frequent Keywords	Keywords
First Cluster (13 items)	Mindfulness (236 occurrences), subjective well-being (20 occurrences), acceptance (11 occurrences).	Affect, burnout, employee well-being, life satisfaction, mindfulness meditation, perceived stress, quality of life, randomized control trial, resilience, self-determination theory.
Second Cluster (11 items)	Well-being (136 occurrences), psychological well-being (42 occurrences), mental health (11 occurrences).	Awareness, coping, dispositional mindfulness, emotional intelligence, mediation, positive psychology, psychological distress, trait mindfulness.
Third Cluster (5 items)	Self-compassion (24 occurrences), meditation (23 occurrences).	Mindfulness-based stress, self-regulation, sleep.
Fourth Cluster (4 items)	Stress (23 occurrences), intervention (10 occurrences).	Adolescents, emotional well-being.
Fifth Cluster (3 items)	Depression (19 occurrences), anxiety (15 occurrences).	Emotion regulation.
Sixth Cluster (2 items)	Positive affect (11 occurrences).	Yoga.

Table 1 shows that frequent keywords are the words that appear most often and represent the trend of topics studied in mindfulness and well-being research. Then, the keywords that do not frequently appear are topics that can be further developed in the future, such as affect, burnout, awareness, coping, mindfulness-based stress, adolescence, emotion regulation, and yoga.

5. CONCLUSION

This study reviewed 292 articles from the Scopus database using VOSviewer. A total of 292 articles are the final articles from the screening of 631 articles in the Scopus database. Overall, mindfulness and well-being research is experiencing an increasing trend. Current topic developments and future research opportunities can be seen based on keyword co-occurrence analysis. The analysis identifies six clusters and each cluster has frequent and not frequent keywords. Frequent keywords represent the current trend of mindfulness and well-being research topics, while keywords that don't appear often provide opportunities to be researched and developed in the future. This study also has limitations. This research is theoretical in nature, so it tends to have limitations in terms of practice. However, this study can provide practical implications for future research as a basis for exploring various research topics related to mindfulness and well-being.

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