



Bibliometric Analysis of Studies on Well-Being

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ABSTRACT

In this research, publications on "well-being" between 1993 and 2022 in the Web of Science database are examined. The bibliometric analysis technique was used in the study. As a result of the bibliometric analysis of 2390 articles evaluated, the following data were obtained: The year with the most written articles was 2021. It has been observed that there has been an increase in the number of articles since 2008. The four authors most cited were Ryff, Diener E., Ryan, and Seligman. The top four institutions cited are University College London, Melbourne University, Sydney University, Monash University and Oxford University. The top four publishing institutions are as follows, respectively. Melbourne University, University College London, Monash University and Sydney University. The four most cited countries are the USA, the UK, Australia and the Netherlands, while the four most publishing countries are the UK, USA, Australia and Spain. The top four most cited journals are Personality and individual differences, Ageing & Society, Plos One, and Frontiers in Psychology, respectively. The top four journals with the most publications are as follows: Frontiers in Psychology, International Journal of the Environment, Plos One and Personality and individual differences.

Keywords: Well-Being, bibliometric analysis, positive psychology, happiness, Vosvierer.

INTRODUCTION

One variable that has been used in many areas of positive psychology over the past decade is the concept of "well-being". A lot of research has been done on this subject and will continue to be done. This topic, of great interest to authors, has been variously interpreted and categorized by many authors.

Seligman, who is considered the founder of positive psychology, is one of these authors. In his book "Flourish" defined Seligman (2011) well-being in the PERMA model. According to him, the concept of "flourishing" emphasizes the development of individuals and indicates that it would contribute significantly to their functionality in terms of development and psychological flexibility. He underlines that, from this point of view, it can be said that well-being is a kind of subjective expression. Seligman accentuates five elements in the PERMA model. These are:

(P) Positive emotions: the concept of authentic happiness and positive emotions, which is the first component of well-being theory, can be measured subjectively (Seligman, 2011). It enables individuals to overcome challenges and maintain their strength (Catalino& Fredrickson, 2011).

(E) Engagement: Another component of the PERMA well-being theory is engagement. It is the individual's commitment to his or her daily activities (Butler & Kern, 2016). It is also defined as flow (Csikszentmihalyi, 1990). Flow, on the other hand, can be defined as not being able to understand how time passes (Csikszentmihalyi, 1990)

(R) Positive/Good relationships: means being loved and valued by others (Butler & Kern, 2016).

(M) Meaning: Meaning makes one feel worth living and is the awareness of one's life purpose (Butler & Kern, 2016).

(A) Achievement: Achievement is something that can be measured both objectively and subjectively and can be gained and sustained even if it does not evoke positive feelings or make sense to the person (Seligman, 2011). PERMA evaluates the feeling of working and fulfilling daily responsibilities to achieve goals (Butler & Kern, 2015, 2016).

Another theory put forward in this regard is Ryff's theory. According to Ryff's theory of psychological well-being, the absence of disease is not a sufficient condition for the individual's well-being, the more functional the individual is in his life, the higher his level of well-being. The functionality in the life of the individual is provided by the functionality of these six dimensions. These are:

Self-acceptance; includes the individual's positive evaluations of himself. It also includes accepting past experiences.

Personal growth: the individual's openness to new experiences; his life period includes crises, and for development, the individual must learn to cope with these crises and continue his lifelong development.

The purpose in life; the individual must have a purpose while continuing his development. This is also an indicator of mental health.

Positive relationships with others; is to establish open and trusting relationships with other people with a strong sense of empathy and love.

Environmental mastery; includes choosing the environment suitable for the individual and taking into account the mental conditions while doing this.

Autonomy; is a combination of self-determination and self-regulation. That is, it includes the ability to make one's own decisions and the internal regulation of autonomy (Ryff & Keyes 1995).

Diener's theory is another one that fits this description. Diener gave the idea of psychological well-being a fresh viewpoint. He, unlike others, also considered how we perceive things (Diener, 1984). His concept is known as subjective well-being as a result of this viewpoint. Mental health is not always equated with subjective well-being. Being well-adjusted psychologically is not explained by well-being. Despite being in good health, the person is unwell. This scenario is subjective in the sense that it differs from person to person. The aspects of subjective well-being are two: negative affect (fear, anger...) and positive affect (joy, excitement...). The cognitive dimension of the theory is life satisfaction (Lucas & Diener, 2009). Life satisfaction, on the other hand, is the general evaluation of individuals' lives according to the criteria they choose (Diener & Suh, 1997).

It is believed that a bibliometric analysis of this much discussed and theorized concept will shed light on the authors of these publications. From this perspective, it would be appropriate to define bibliometric analysis.

Bibliometric analysis

Bibliometrics, one of the qualitative research methods, is a research method that arose from the use of mathematical and statistical methods in the scanning of various scientific sources (Pritchard, 1969). This concept was first introduced by Pritchard in 1969 (Lawani, 1981). Bibliometric analyzes have both identification and evaluation characteristics. It shows, for example, the defining characteristic of the production years of the items. Articles and author citations indicate this assessment (McBurney & Novak, 2002). This analysis method also provides a time estimation. It gives us an assessment of scientific activity from the past to the present and at the same time the present (Garfield, Morton, & Small, 1983). It is also a powerful technique used to identify industry influencers and the relationships between them. It reveals the contribution of authors, countries, journals and institutions to literature and science (Merigó and Yang, 2017). In this regard, it is a guide for researchers (Hotamışlı and Erem, 2014). Bibliometric studies provide an analysis of both the past and present situation. At the same time, it is an important technique to determine the scientific value of the publications according to which indicators. Bibliometric analysis is an interdisciplinary technique that can be easily used in many disciplines and reflects scientific development (Samiee & Chabowski, 2012). Keyword analysis helps to identify the most used keywords in documents, whereas bibliography analysis reveals the link between the two documents (Mulet-Forteza, Martorell-Cunill, Merigó, Genovart-Balaguer, & Mauleon-Mendez, 2018). As Heberger Christie & Alkin (2010) stated, this technique, which helps to determine the direction and development of scientific research, is thought to add a different scientific value to well-being. From this point of view, the data obtained from the search using the word "well-being" on 6.10.2022 in the Web of Science database was used in our study. In this study, bibliometric analysis of articles on well-being was conducted. The articles were evaluated in terms of years of publication, keywords, citations to authors, institutions, countries and journals.

The questions to be answered in the study are given below.

What is the distribution of publications by years?

What are the most recurring keywords in the publications' keyword network?

Who are the most cited authors in the research?

What is the distribution of the publications according to the institutions where they are most published?

What is the distribution of the publications according to the countries where they are most published?

What is the distribution of publications according to the most published journals?

METHOD

One of the qualitative research techniques employed in this study was the bibliometric analysis methodology. The quantitative and qualitative characteristics of publications in any scientific field are determined by the bibliometric analysis technique, which also reveals the stage of scientific development and provides an opportunity to assess that stage (Huang Ho & Chuang, 2006). These technical articles provide a general picture of an area of research that can be classified by authors, countries, institutions, and journals. In bibliometric research, citation indexes are used as a data source (Cobo, López-Herrera, Herrera-Viedma & Herrera, 2011). The VOSviewer 1.6.6 tool was used in this study to evaluate the data. The computer program makes circles. The number of studies is indicated by the size of the circle. By grouping the circles together, a shape is produced.

Circle groups are displayed in identical color groups. The circle grows larger with increasing publication importance. The difference between the circles indicates the proximity or distance of the two papers. The circles' close proximity makes clear how strongly they are connected. The relationship and resemblance between those publications decrease as the distance between the circles increases. In addition, the absence of any connection between the flats is an indication that there is no relationship between them (Van Eck & Waltman, 2013).

Findings and Interpretation

This study consists of data obtained by searching the word "well-being" on the Web of Science on October 6, 2022. We explored the relationship between bibliographic analysis and articles on well-being in terms of year of publication, keywords, authors, institutions, countries and journal citations.

First, we looked at the number of publications on the theme of "well-being" from 1993 to 2022 in the Web of Science database. A total of 2,390 publications were found over the years. Figure 1 shows the annual distribution of these publications.

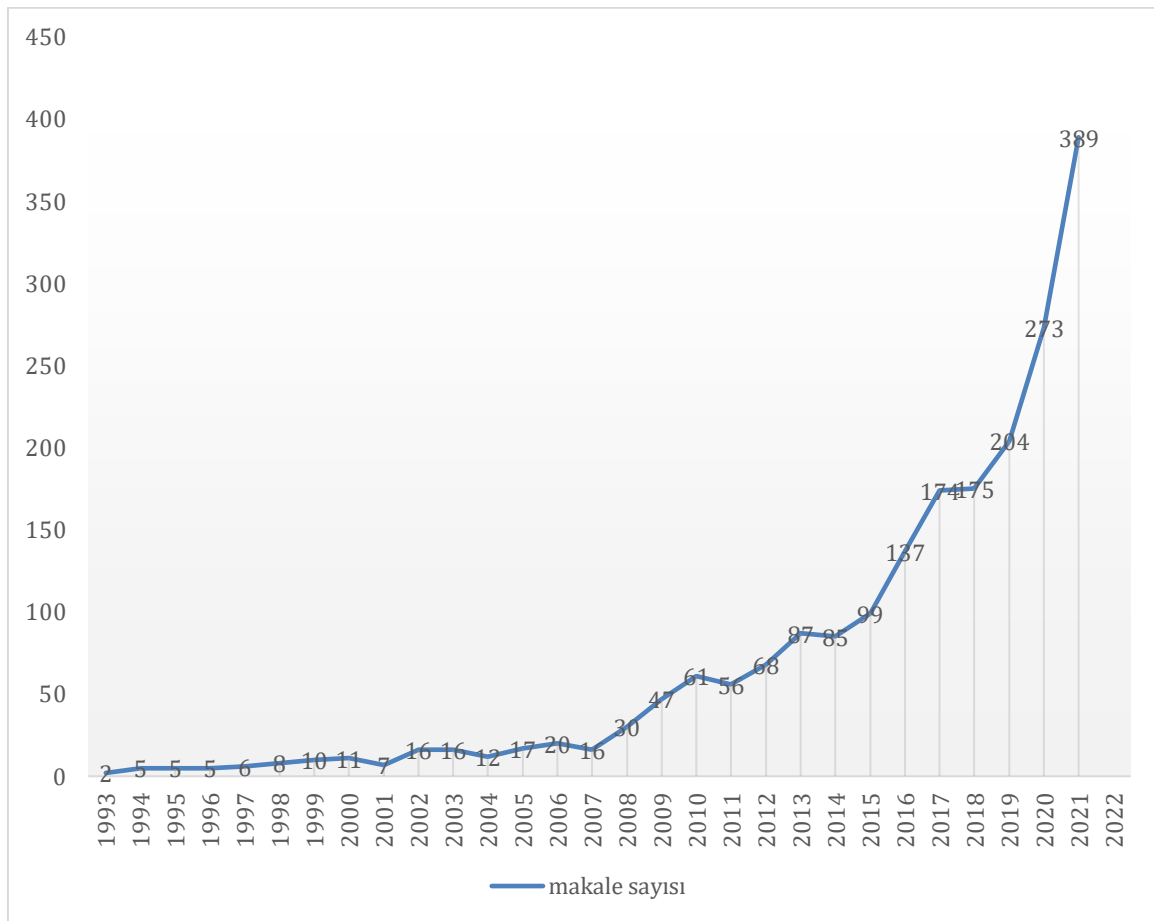


Figure 1

When Figure 1 is examined, it is seen that there has been an increase in the number of articles since 2008. Considering the distribution by years, it can be seen that the year with the most articles on "well-being" was 2021, while the year with the lowest number of articles was 1993, with 389 articles.

2. Publications on "well-being" from the Web of Science database, Keyword network analysis are given in Figure 2.

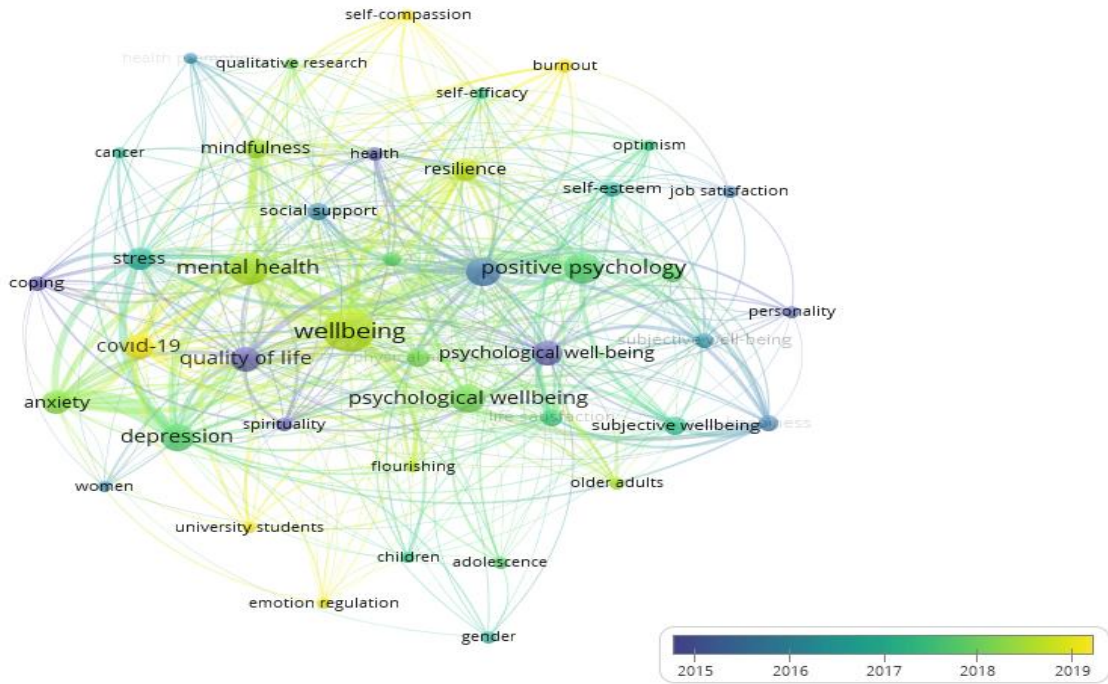


Figure 2: Keyword Network Analysis

2. Keyword network analysis is a form of analysis that reveals the relationship between the concepts used as keywords in the data set.

The circles in the figure represent words. The arc-shaped lines in between show which keywords are used most often in addition, the size of the circles that make up the keywords is proportional to the frequency of use. The number of times each word is used is given in Figure 3.

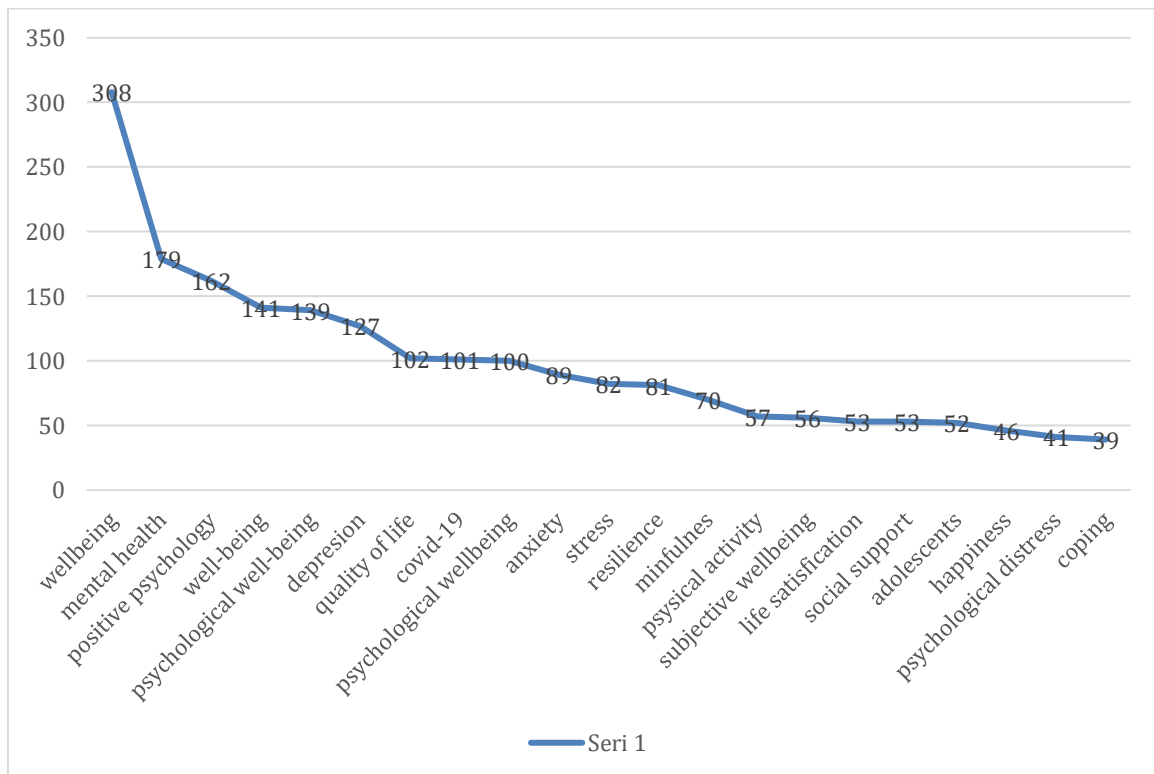


Figure 3. Number of words in keyword network analysis

When the table was examined, the most frequently repeated data were obtained. Words with more than 20 repetitions as a limit are as follows:

Wellbeing (380), mental health (179), positive psychology (162), well-being (141), psychological well-being (139), depression (127), quality of life (102), covid-19 (101), psychological well-being (100), anxiety (89), stress (82), resilience (81), mindfulness (70), physical activity (57), subjective wellbeing (56), life satisfaction (53), social support (53), adolescent (52), happiness (46), psychological disorder (41), coping (39), subjective well-being (37), self-confidence (37), health (33), spirituality (42), burnout (32), youth (27), job satisfaction (27), gender (26), elderly (25), personality (25), optimism (24), growth (24), children (23), qualitative research (23), self-compassion (22), health discount (22), female (22), cancer (21), university students (20), self-efficacy (20), regulation of emotions (20).

3. Review of Author/Authors in terms of Citation Number

The main feature of citations is to introduce scientific sources and to establish a link between the person making the citation and the cited document.

At the same time, citations are used to show evidence and provide the opportunity to reach wide audiences (Al and Tonta, 2004). In this context, the most cited authors are important when looking at the variables included in the analysis. As a result of the data set analysis, the author citation network analysis is given in Figure 4.

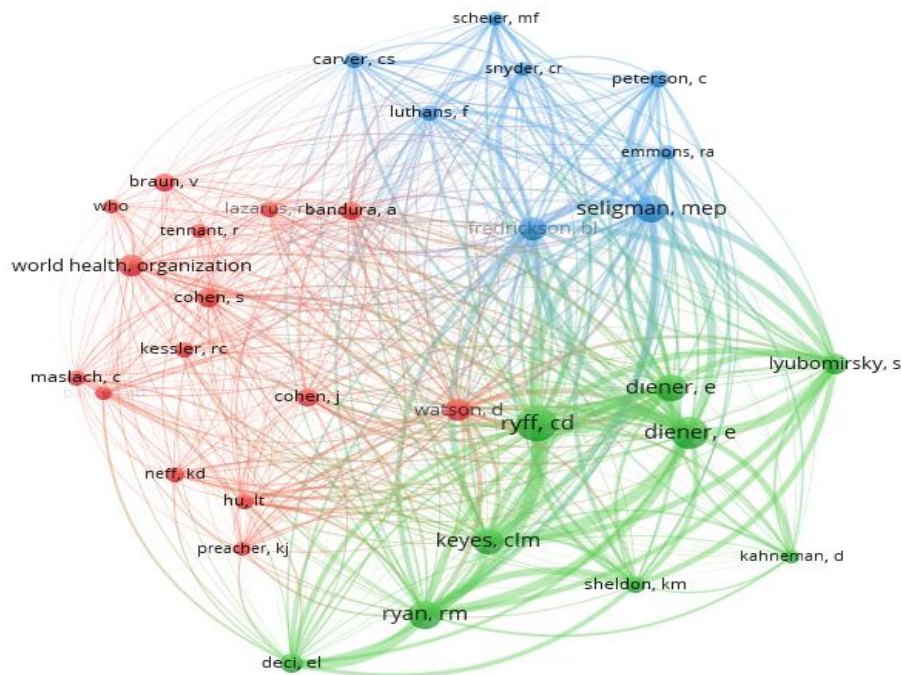


Figure 4

Şekil 4. Author Citation network analysis.

The Author Attribution network analysis is a form of analysis that reveals the relationship between authors in the data set. The circles in the figure represent the authors. The arc-shaped lines in between show which authors the authors work with the most. The colors of the shapes represent clustering. In addition, the size of the circles that make up the authors is proportional to the citation made to that author. Authors with more than 100 citations as a limit are as follows: Ryff (612), Diener E. (516), Ryan (422), Seligman (388), Diener E. (364), Keyes (354), Fredrickson (289), World Sağlık Örgütü (253), Watson (242), Lyubomirsky (223), Deci (191), Cohen S. (187), Bandura (172), Braun (170), Cohen J. (159), Sheldon KM (145), Peterson (144), Carver (131), Hu (128), Lazarus (128), Maslach (127), Luthans (124), Kessler (122), Neff (118), Scheier (114), Emmons (113), Bakker (110), Kahneman (104), Snyder (100), Preacher (100), Tennant (100).

4. The publications accessed from the Web of Science database on “well-being” and the network analysis according to the publication institutions are given in Figure 5.

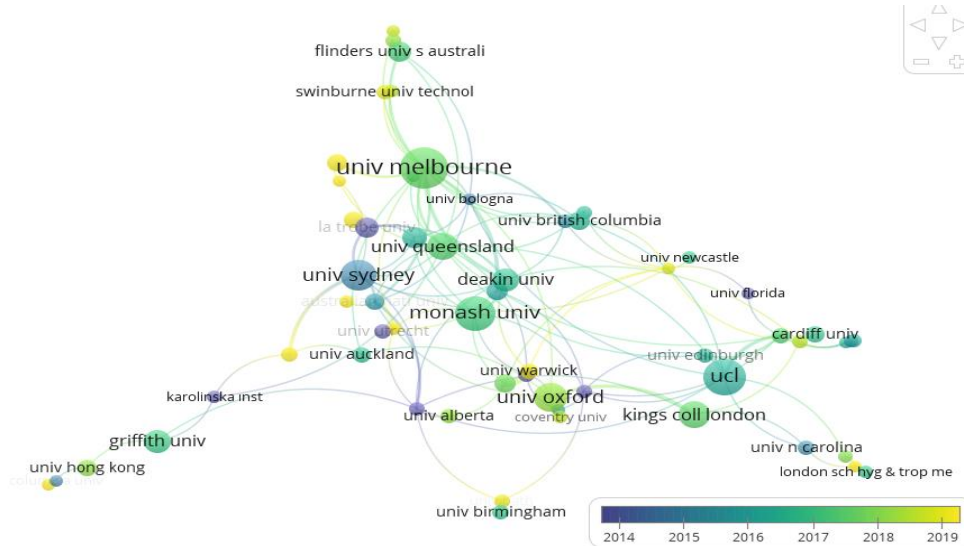


Figure 5. Distribution of Publications by Institutions

The size of the circles represents the number of publications, and the color represents the citations they received. The top ten most cited institutions are University College London (1651), Univ Melbourne (984), University of Sydney (689), Monash University (644), Oxford University (636), University of Carolina (601), Deakin University (551), University of Manchester (530), King’s College London (492), Griffith University (478). The top ten institutions that publish the most are as follows: University of Melbourne (57), University College London (48), Monash University (44), University of Sydney (38), Oxford University (35), University of Queensland (32), King’s College London (31), Deakin University (25), Griffith University (25), University Valencia (23).

5. The publications accessed from the Web of Science database on “Well-Being” and the network analysis by country of publication are given in Figure 6.

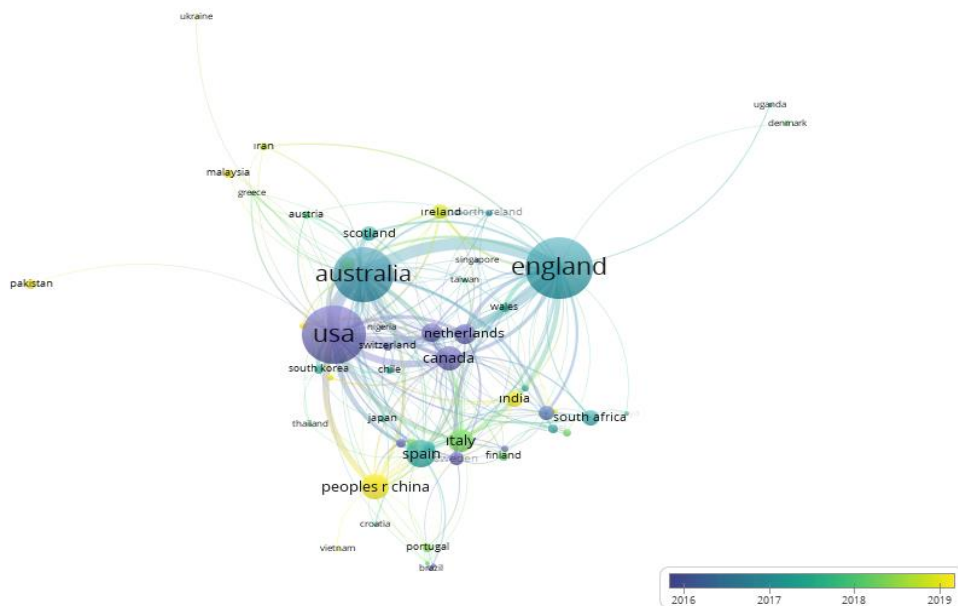


Figure 6 Distribution of publications by country.

The size of the circles in Figure 6 represents the number of publications, and the color represents the clustering of citations they received. The arc shapes in between represent the connection between countries.

Distribution by Country

Top ten most cited countries USA (13523), England (9506), Australia (6359), Netherlands (3179), Canada (2704), Germany (2249), Spain (1752), Sweden (1523), Italy (1491) and China (1369). The top ten countries

with the most publications are England (451), USA (418), Australia (383), Spain (140), China (128), Canada (120), Italy (115), Netherlands (93), Germany (84) and India(67). While making the most publications, the top ten countries with co-authored publications with other countries are Australia (204), USA (196), England (176), Canada (87), Italy (54), China (54), Spain (53), Turkey (43), Netherlands (40) and Germany (27).

6. Figure 7 shows a network analysis with publications from the Web of Science database and published journals on the topic of "well-being".

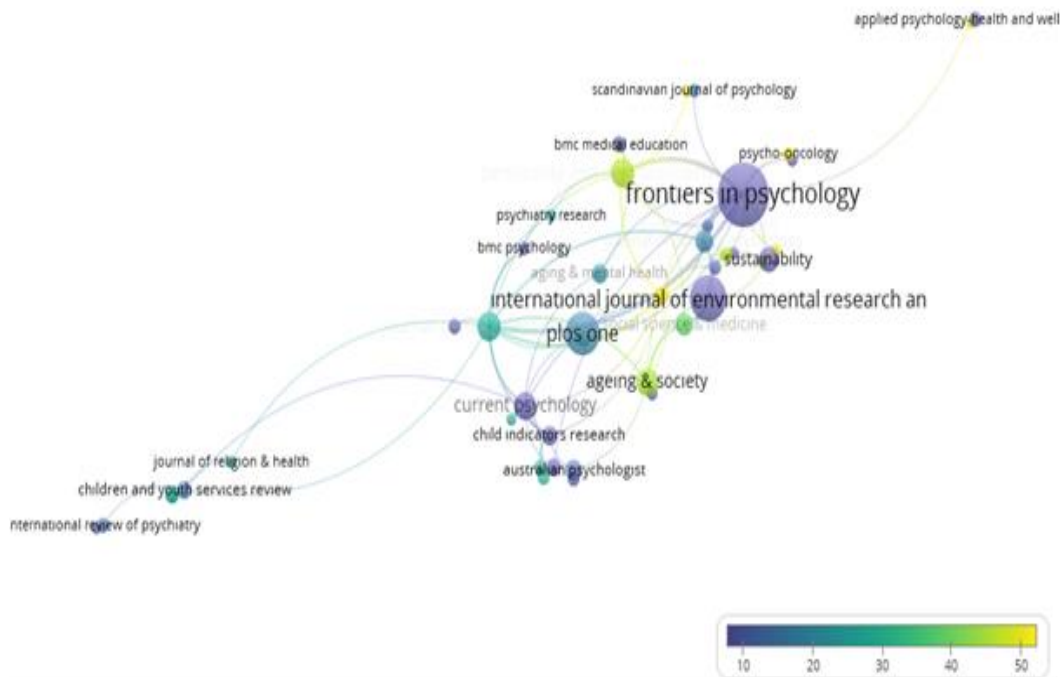


Figure 7 Distribution of publications by journals

In Figure 7, the distribution of publications by journals is given. The size of the circles represents the number of publications, and the color represents the clusters of citations they receive.

The most cited journals are Personality and individual differences (1201), Aging & Society (1035), Plos One (990), Frontiers in Psychology (851), Journal of Happiness Studies (711), International Journal of Environment (623), Social Science & Medicine (612), BMC Public Health (449), Current psychology (149), Sustainability (129).

The top four journals with the most publications are as follows. Frontiers in Psychology (121), International Journal of Environment (65), Plos One (55), Personality and individual differences (27). Journal of Happiness Studies (26), Aging & Society (24), Current psychology (23), Sustainability (20), Social Science & Medicine (16), BMC Public Health (16)

RESULT

It has been observed that there has been an increase in the number of articles as of 2008. Considering the distribution by years, it can be seen that the year with the most articles on "well-being" was 2021, while the year with the lowest number of articles was 1993, with 389 articles. Bibliometric analysis provides the opportunity to describe in terms of years (Garfield et al. 1983). For example, it shows the defining feature of the years between which the articles were made. Citations to articles and authors reveal the aspect of evaluation (McBurney & Novak, 2002). In a study conducted in various fields on well-being, the years between 1982 and 2020 were analyzed and the highest year was found to be 2020 (Ali, Jusoh, Idris, Abbas, Nor, Alharthi, 2012).

Words with more than 20 repetitions as a limit are as follows: wellbeing (380), mental health (179), positive psychology (162), well-being (141), psychological well-being (139), depression (127), quality of life (102), covid-19 (101), psychological well-being (100), anxiety (89), stress (82), resilience (81), mindfulness (70), physical activity (57), subjective wellbeing (56), life satisfaction (53), social support (53), adolescent (52), happiness (46), psychological discomfort (41), coping (39), subjective well-being (37), self-confidence (37), health (33), spirituality (42), burnout (32), youth (27), work satisfaction (27), gender (26), elderly (25), personality (25), optimism (24), development (24), children (23), qualitative research (23), self-understanding (22), health discount (22), female (22), cancer (21), university students (20), self-efficacy (20), emotion regulation (20). In a study conducted in various fields on well-being, the most frequently used keywords were

found to be quality of life, mental health, health, depression and physical activity (Ali & et al. 2012). The keyword network measures the most common keywords used in documents (Mulet-Forteza& et al. 2018). Keyword analysis also shows with which words the concept of well-being is used the most, which shows us on which subjects the most relevant studies have been conducted.

Authors with more than 100 citations as a limit are as follows: Ryff (612), Diener E. (516), Ryan (422), Seligman (388), Diener E. (364), Keyes (354), Fredrickson (289), World Health Organization (253), Watson (242), Lyubomirsky (223), Deci (191), Cohen S. (187), Bandura (172), Braun (170), Cohen J. (159), Sheldon KM (145), Peterson (144), Carver (131), Hu (128), Lazarus (128), Maslach (127), Luthans (124), Kessler (122), Neff (118), Scheier (114), Emmons (113), Bakker (110), Kahneman (104), Snyder (100), Preacher (100), Tennant (100). In a similar study conducted by Ali & et al. (2012), these are Bruera, Cella, Steptoe & Lyubomirsky. The reason for the different results is thought to be related to the inclusion of many fields. The most cited author is very important as the most influential author in that field (McBurney & Novak, 2002; Huang et al., 2020). Many authors will shape their work by looking at this data. While writing the literature of their publications, they will take care to cite these authors (McBurney & Novak, 2002; Huang et al., 2020). Many authors will shape their work by looking at this data. While writing the literature of their publications, they will take care to cite these authors.

The top ten institutions with the most citations, respectively University College London (1651), University of Melbourne (984), University of Sydney (689), Monash University (644), Oxford University (636), University of Carolina (601), Deakin University (551), University of Manchester (530), King's College London (492), Griffith University (478). The top ten institutions that publish the most are as follows: University of Melbourne (57), University College London (48), Monash University (44), University of Sydney (38), Oxford University (35), University of Queensland (32), King's College London (31), Deakin University (25), Griffith University (25), University Valencia (23). In the study of Ali & et al. (2012), these were University Michigan, University College London, Univ Melbourne and University of Toronto. Common Universities in both studies are University of Melbourne and University College London.

Distribution by Country

Top ten most cited countries are: USA (13523), England (9506), Australia (6359), Netherlands (3179), Canada (2704), Germany (2249), Spain (1752), Sweden (1523), Italy (1491) and China (1369). The top ten countries with the most publications are England (451), USA (418), Australia (383), Spain (140), China (128), Canada (120), Italy (115), Netherlands (93), Germany (84) and India (67). While making the most publications, the top ten countries with co-authored publications with other countries are Australia (204), USA (196), England (176), Canada (87), Italy (54), China (54), Spain (53), Turkey (43), Netherlands (40) and Germany (27).

Ali & et al. (2012) found similar results to ours in a study of well-being-related publications. The countries with the most studies are USA (3167), England (2209) and Australia (925).

The distribution of publications by country shows the contribution of each country to that field of study. This contribution can be both quantitative and qualitative. This means, the number of studies done is quantitative. The number of citations to the studies reveals the qualitative contribution.

The top ten most cited journals are Personality and Individual Differences (1201), Aging & Society (1035), Plos One (990), Frontiers in Psychology (851), Journal of Happiness Studies (711), International Journal of Environment (623), Social Science & Medicine (612), BMC Public Health (449), Current psychology (149), Sustainability (129).

The top ten journals with the most publications are as follows: Frontiers in Psychology (121), International Journal of Environment (65), Plos One (55), Personality and individual differences (27), Journal of Happiness Studies (26), Aging & Society (24), Current psychology (23), Sustainability (20), Social Science & Medicine (16), BMC Public Health (16). The description of journals is important for authors. In this field, how many references are made to which journal provides an important source for the authors to choose which journal to publish their works.

The study is limited to examining the articles between the specified years. In addition, not examining other studies such as books and papers can be counted among the limitations. The study only consists of articles scanned in the Web of Science database. Therefore, a search was made among those whose language of the article was only English. Future studies can include studies involving different years. Books and papers can be included in the studies. The study can be done to include different databases. Turkish articles can be included in the research universe.

Article Information

Table 1

Ethics Committee Approval:	The data of the research is exempt from the Ethics Committee Decision as it is obtained from the studies performed
Informed Consent:	Since the data for the research were obtained from the studies conducted, the consent of the participants was not required.
Financial Support:	No financial support was received from any institution or project for the study.
Conflict of Interest:	There is no conflict of interest between individuals and institutions in the study.
Copyrights:	Necessary permissions have been obtained from the copyright holders for the images used in the study.

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