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THE IMPERATIVE OF STUDENTS AND TEACHERS' WELL-BEING IN FINNISH UNIVERSITY: A BIBLIOMETRIC APPROACH

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Abstract

The need for bibliometrics is growing globally, and it is a type of literature review that explores the role of individual researchers and research teams. Many education stakeholders focus on schools' role in fostering mental health as they investigate ways to improve school climate, safety, and student well-being. While most of this attention is focused on students' mental health requirements, it is necessary to investigate methods to assist teachers, and other learning facilitators who frequently endure significant stress levels. This bibliometric study investigates how academic authors in Finland in well-being research perceived positive emotion, engagement, relationship, meaning and accomplishment as the impactful factors of the theory of well-being. This study utilized Biblioshiny App for bibliometric data analysis with RStudio. This result shows the limited number of authors' activeness in well-being research and the need for more authors and studies in Finland. This bibliometric study contributes to the well-being literature by showing how the literature on well-being aligns with the PERMA theory and how well-being literature evolves and grows in Finland. This study explained the methodology, explored the results, and concluded with implications and future research.

Keywords: Teacher, well-being, university, bibliometric, PERMA, Finland.

1 INTRODUCTION

Due to the ravaging COVID-19, organisations need to review their health strategies [1], while [2][3] advocates that employers should create an ideal working environment that helps work switch. Likewise, [4] confirmed the ripple effect of teachers' well-being on individuals and organisations. This study spotted a gap for further examination of well-being in the study of [5], as the authors suggest further study on interventions to improve teacher well-being.

Many education stakeholders focus on schools' role in fostering mental health as they investigate ways to improve school climate, safety, and student well-being. While most of this attention is focused on students' mental health requirements, it is necessary to investigate methods to assist teachers and other learning facilitators who frequently endure significant stress levels. If the institutions fail to address the mental health needs of teachers while concentrating on the effects of stress and trauma on students, this may impair their capacity to meet crucial needs among the students. There is a connection between well-being and the physical health of teachers, the stability of schools, the efficiency of teaching, and students' success. This study aims to clarify the concepts of teacher and student well-being in the literature and to add to the knowledge of the overlapping daunting task of teachers and student well-being with the bibliometric lens.

This study also intends to examine the departure and alignment of published academic work with the PERMA Theory of Well-Being. A recent study posits that well-being is difficult to quantify and agrees with the existing studies that mindfulness-based interventions (MBI) are a panacea for well-being improvement [6]. In the study, Liu and others shed light on how mindfulness intervention helped the emotional distress participants improve their well-being with the PERMA theory lens. The authors discovered two significant gaps in the literature on well-being and suggested that future researchers should work toward the therapeutic mechanism of mindfulness to foster well-being. The study by [3] found that lack of support from the school administrators, interactions [7], and increased workloads, among others, increased the teachers' stress levels and recommended that the school administrators prioritise the well-being of the teachers in their agenda. Also, [8] added study burnout and psychological needs as part of inhibitors of student's well-being and proffered solutions of rigorous student engagement through distance learning to lessen the effect of COVID-19. [9] suggested coping styles that reduce the workload and stress through different health mechanisms.

In [10] opinion, lower levels of academic stress, less worry about COVID-19, and regular information from the educational institutions and the government are associated with high levels of mental well-being. Another study focused on the Nordic countries and employed landscape drawings of nature to illustrate the promoters of well-being. The authors classified well-being into physical, social, and therapeutic well-being spaces [11]. Further, the earlier systematic review confirmed the importance of social relationships as a trigger for teacher well-being [12].

Many studies have contributed to the literature on well-being, but there is still less attention on insights about student's and teacher's well-being. This study will answer the following research questions: (a) What lessons do we learn from the over-time production of scholarly works in well-being research? (b) What is the positioning of the emerging keywords in well-being research? (c) Why is collaboration essential in well-being research? This bibliometric study investigates how academic authors in Finland in well-being research perceived positive emotion, engagement, relationship, meaning and accomplishment as the impactful factors of the theory of well-being. This study explained the methodology, explored the results, and concluded with implications and future research.

1.1 PERMA Theory of well-being

Well-being is associated with eudaimonia. It is a state of teachers and students being happy, healthy, and prosperous. Seligman proposed PERMA (Positive Emotion, Engagement, Relationships, Meaning and Accomplishment) as five essential elements of well-being [13][14]. This proposition covers the fundamentals of positivity and flourishing. Earlier in 2004, there was a clarion call to policymakers at governmental, organizational, and corporate levels to focus on issues that revolve around well-being, consisting of people daily living based on their evaluations and feelings. The authors also argued that the economic theory is more predominant than the individual structured theory to pursue their goal of sustainable well-being [15]. Based on the proposition of Diener and Seligman, teachers and students are yet to determine a structural theory of well-being, and the school authorities need to brace up for this challenge. [16] concluded that PERMA theory is in its infancy, but progressively, it will turn into a complete theory showcasing well-being elements.

1.2 Application of the PERMA Theory to students' and teachers' well-being

The five building blocks of well-being in Figure 1 are not rocket science nor a one-time solution to attain a flourishing life. The five elements of well-being create awareness, enlightenment and guidance for the students and the teachers that desire quality life.

1.2.1 Positive Emotion

According to Seligman, positive emotion is hedonic, could be heritable, and fluctuate within a range. Existing literature has examined hedonic motivation and found that it is an antecedent of fun or pleasure derived from using technology [17][18]. Also, another study underscored the importance of cultural and emotional intelligence as an ability to understand a different culture and a conscious effort to manage one's emotions and that of others [19]. Students and teachers need to look for a way to maintain a stable emotion, and whenever that emotion fluctuates, they should learn how to employ emotional intelligence to manage the situation that confronts them.

1.2.2 Engagement

Since emotional positivity is insufficient to balance students' and teachers' well-being, the students and teachers need to be engaged by demonstrating their skills and strengths and giving their full attention while tackling a challenging task. When students' and teachers' skills are sufficient for the challenging activity that confronts them, the experience is called 'flow' and [20] tagged 'flow' as the psychology of happiness. Inferring from the proposition of Csikszentmihalyi, students and teachers need to work towards flow in their daily endeavours.

1.2.3 Relationships

In Seligman's opinion, relationships are crucial to well-being, and the experience accrues from the relationship in terms of belongingness, great joy, laughter, and pride in achievement. Support from superior officers of teachers and connection of students with teachers is a solid antidote to the tearing life of sinking and a way out of miry clay of discouragement, shame, and a path to the way up. Students and teachers must develop a strong relationship that enables their capacity for kindness, love, empathy, compassion, teamwork, and self-sacrifice.

1.2.4 Meaning

Seligman touched on 'meaning' as a sense of belongingness and the ability to engage in something more significant than the self. The higher institutions' management can trigger and create an environment that makes sense of meaning. Different activities on campus like religion, science, student and teacher's unionism, social community and social causes like the green club can promote students' and teachers' well-being.

1.2.5 Accomplishment

Accomplishment is the sense of fulfilment and Seligman said it could occur in a conducive workplace, in sports, games, and through hobbies. The author remarked that accomplishment pursuit might not lead to positive emotion, meaning or relationships. For higher-education students, accomplishment can occur when they meet the deadlines for projects or assignments or successfully graduate and pass with excellence. On the other hand, an accomplishment for a teacher may mean job satisfaction, witnessing the students' success and when promoted. There are categories of low and high well-being, and it is pertinent for the students and the teachers to work towards a higher level of well-being.

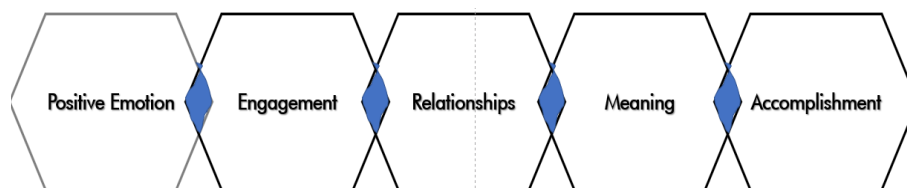


Figure 1. PERMA elements of well-being.

2 METHODOLOGY

This study adopted [19] updated bibliometric workflow to achieve this study's goal. Two significant databases: Web of Science and Scopus, were utilised for data extraction. The search string "university student or university teacher and well-being" were used in the two databases. Web of Science generated 4216, while Scopus generated 528 academic papers. After the exclusion criteria, Web of Science remained 58 while Scopus remained 12 articles. The two outputs from the databases were merged with RStudio App, and the duplicates of 7 articles were expunged (Table 2, 3 and Figure 2). Finally, 63 articles were used for the data analysis with the Biblioshiny App (Table 1).

Table 1. Inclusion and Exclusion of well-being literature.

	<i>Web of Science</i>	<i>Scopus</i>
Search Strings	(university student or university teacher) and well-being (Topic)	TITLE-ABS-KEY ((university AND student OR university AND teacher) AND well-being)
Search Output	4216	528
Exclusion Criteria	(university student or university teacher) and well-being (Topic) and Articles (Document Types) and English (Languages) and 2022 or 2021 or 2020 or 2019 or 2018 or 2017 or 2016 or 2015 or 2014 or 2013 or 2012 (Publication Years) and FINLAND (Countries/Regions)	TITLE-ABS-KEY (university AND student OR university AND teacher AND well-being) AND (LIMIT-TO (AFFILCOUNTRY , "Finland")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2012)) AND (LIMIT-TO (DOCTYPE , "ar"))
Exclusion Output	58	12
Total		58 + 12 = 70
Duplicate		7
Final		63

Table 2. R Data Input.

```
install.packages("bibliometrix")
library(bibliometrix)
biblioshiny()
setwd("c:/Users/Intel/Desktop/Post_Doc_Application/wellbeing")
getwd()
DigitScopus=convert2df("scopus.bib", dbsource="scopus", format="bibtex")
View(DigitScopus)
digitwos = convert2df ("wos.bib", dbsource = "isi", format = "bibtex")
View(digitwos)
CombinedData = mergeDbSources (DigitScopus, digitwos, remove.duplicated = TRUE)
View (CombinedData)
dim(CombinedDatabase)
library (openxlsx)
write.xlsx (CombinedData, file = "XlsCombinedData.xlsx")
```

Table 3. R Data Output.

```
> setwd("c:/Users/Intel/Desktop/Post_Doc_Application/wellbeing")
> getwd()
[1] "c:/Users/Intel/Desktop/Post_Doc_Application/wellbeing"
> DigitScopus=convert2df("scopus.bib", dbsource="scopus", format="bibtex")
Converting your scopus collection into a bibliographic dataframe
Please, take a look at the vignettes:
- 'Data Importing and Converting' (https://www.bibliometrix.org/vignettes/Data-Importing-and-Converting.html)
- 'A brief introduction to bibliometrix'
(https://www.bibliometrix.org/vignettes/Introduction\_to\_bibliometrix.html)
Missing fields: CR
Done!
Generating affiliation field tag AU_UN from C1: Done!
> View(DigitScopus)
> digitwos = convert2df ("wos.bib", dbsource = "isi", format = "bibtex")
Converting your isi collection into a bibliographic dataframe
Done!
Generating affiliation field tag AU_UN from C1: Done!
> View(digitwos)
> CombinedData = mergeDbSources (DigitScopus, digitwos, remove.duplicated = TRUE)
7 duplicated documents have been removed
> View (CombinedData)
> dim(CombinedDatabase)
> library (openxlsx)
> write.xlsx (CombinedData, file = "XlsCombinedData.xlsx")
```




Data		
CombinedData	63 obs. of 29 variables	
DigitScopus	12 obs. of 32 variables	
digitwos	58 obs. of 46 variables	

Figure 2. Combined Journal Databases.

3 RESULTS

The need for bibliometrics is growing globally, and it is a type of literature review that explores the role of individual researchers and research teams. It also updates the knowledge base with authors and sources, H-index, and impacts factor [21]. Bibliometric is a type of literature review that deals with the quantitative evaluation of scientific publications, and it is a handy tool for longitudinal bibliometric analyses [22].

The bibliometric analyses with Biblioshiny App [23] generate many interesting charts, and in Figure 3, the descriptive statistics show the dashboard of the data utilised for this study. The data used is from 2012 to 2022 with 55 sources and 63 documents, but the results show 0% of the Annual Growth Rate (AGR). The indicator of annual performance and future performance is AGR. Based on the algorithm of the Biblioshiny App on AGR, the increase in the value of students' and teachers' well-being literature in Finland is not visible despite the publications. Two hundred and twenty-one published articles from the Scopus and Web of Science; out of the 221, only four are single authored, while international co-authorship accounts for 39.68%, with 3.98 co-authorship per document. 270 author's keywords, 2476 references, 4.29 average document age and 12.6 average citations per document.



Figure 3. Descriptive statistics for well-being literature.

The changing slope in Figure 4 underscored the trends and patterns of annual publication production of literature in well-being research. 2012 ended with three publications, and the trends of publications have been ups and downs from 2013 to 2021. The peak in one decade was recorded in 2021, with 13 publications. The situation of publications in 2022 is not sure yet. At the time of this study, three publications have been recorded.

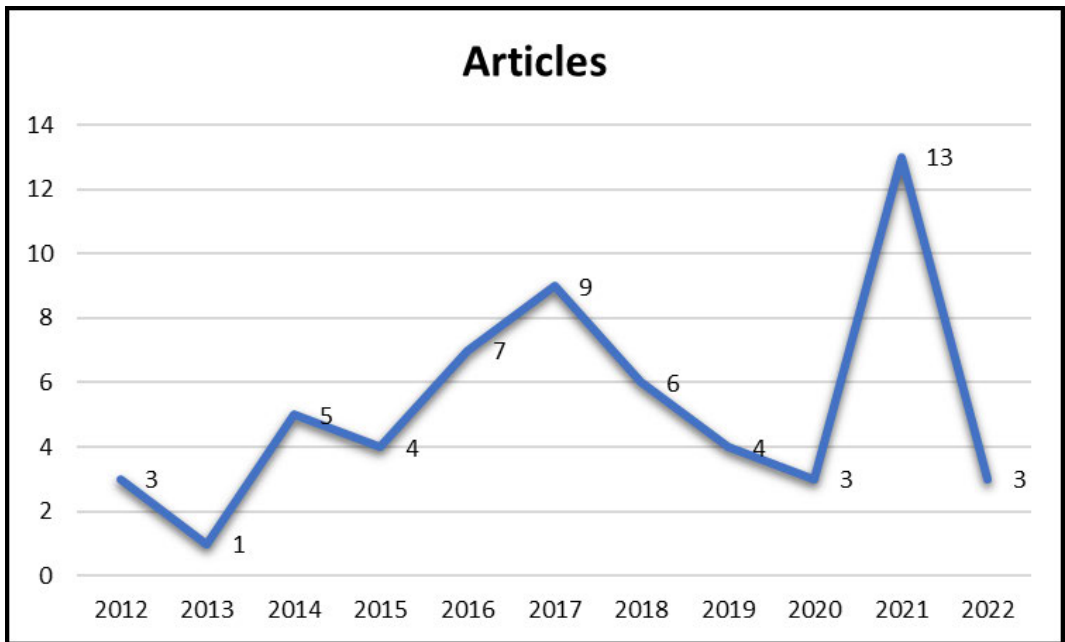


Figure 4. Annual production of well-being literature in Finland.

In Figure 5, the horizontal line indicates the years of publications, while the node indicates the number of publications. The bigger the node, the higher the number of publications. Pyhalto K. has been the most consistent author over the years. The author's publication span from 2012 to 2022. The author has the highest publication of 2 in 2017 with 38 total citations and total citations per year of 6.3.

On the other hand, Lonka K. published between 2012 and 2019 and has the peak publication of 2 in 2012. One hundred and two total citations and 9.27 total citations per year. Though Pyhalto K. is the most consistent author, Lonka K. had the highest citations. The publication rate of well-being literature in Finland was generally very low, with a minimum of 1 and a maximum of 2 between 2012 till middle of 2022 per author. The paper that commands the highest citations for Pyhalto K. in 2017 is "Social support as a contributor to student teachers experienced wellbeing", and it was published in Research Papers in Education, a journal with a 2.173 impact factor. For Lonka K., the influential paper is "Relations between teacher students approaches to learning cognitive and attributional strategies wellbeing and study success". This paper was published in 2012 in Higher Education with an impact factor of 3.947. The chart of top authors' production over time shows yearly gaps for authors and intermittent publications.

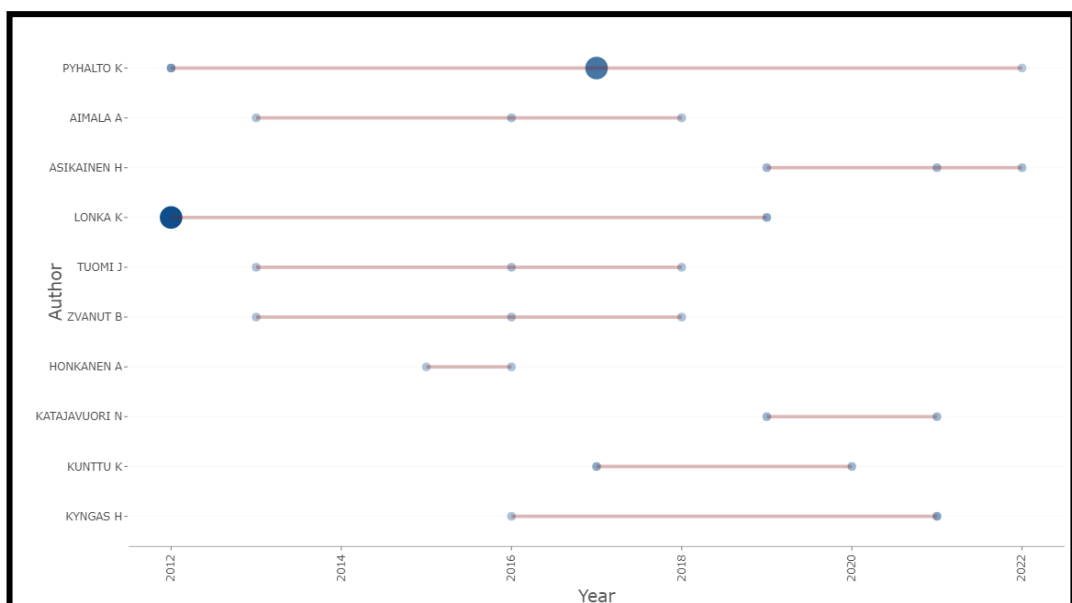


Figure 5. Top-Authors' Production over Time.

Out of the top ten relevant words generated with Biblioshiny App, health has 11 frequencies, followed by stress with ten and anxiety with 8. Figure 6 shows some keywords plus that revolve around the phenomenon of well-being. Health and stress follow closely, while anxiety and child had the same frequencies. Also, females, Finland and males had the same frequencies while depression, university and university students were grouped. The keywords plus were generated from the title of well-being articles.

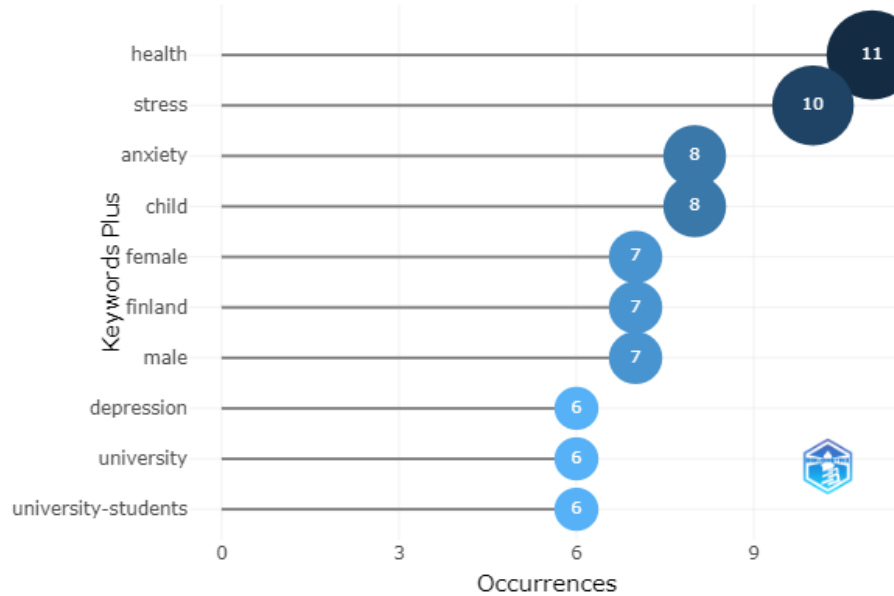


Figure 6. Most relevant words occurrences.

The corresponding author's country was displayed in Figure 7, and it shows the Multiple Country Publications (MCP) in red colour and Single Country Publications (SCP) in green colour. Since this bibliometric review focused on Finland's literature on well-being, Finland was number one with both MCP and SCP, but there are more SCP than MCP. There are more than 14 countries with MCP alone, and only one country (Korea) has SCP alone.

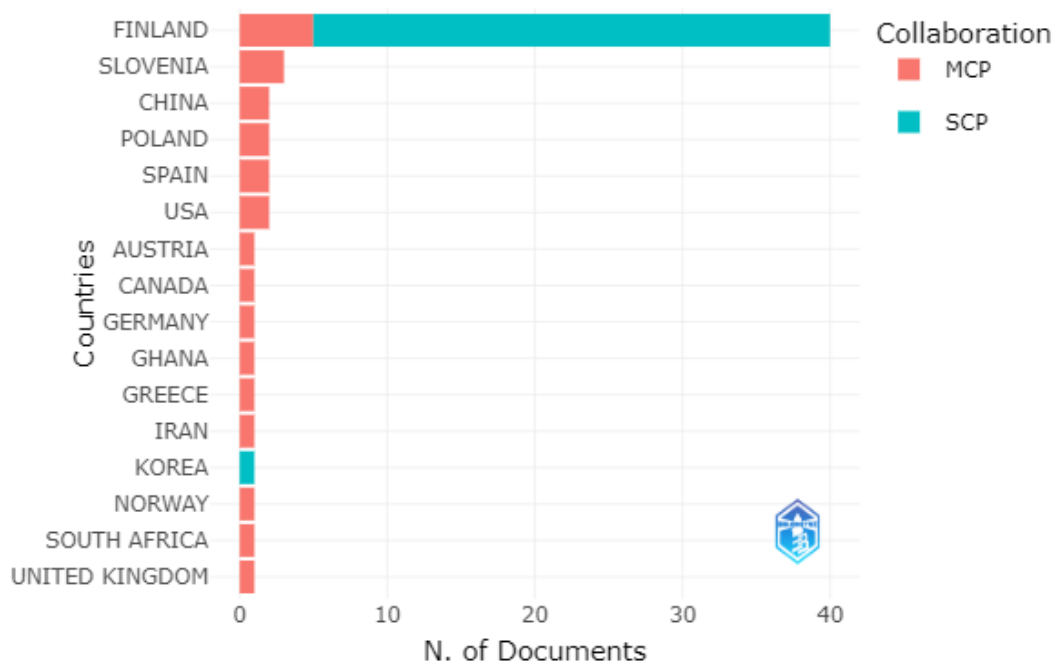


Figure 7. Corresponding authors' country for well-being literature.

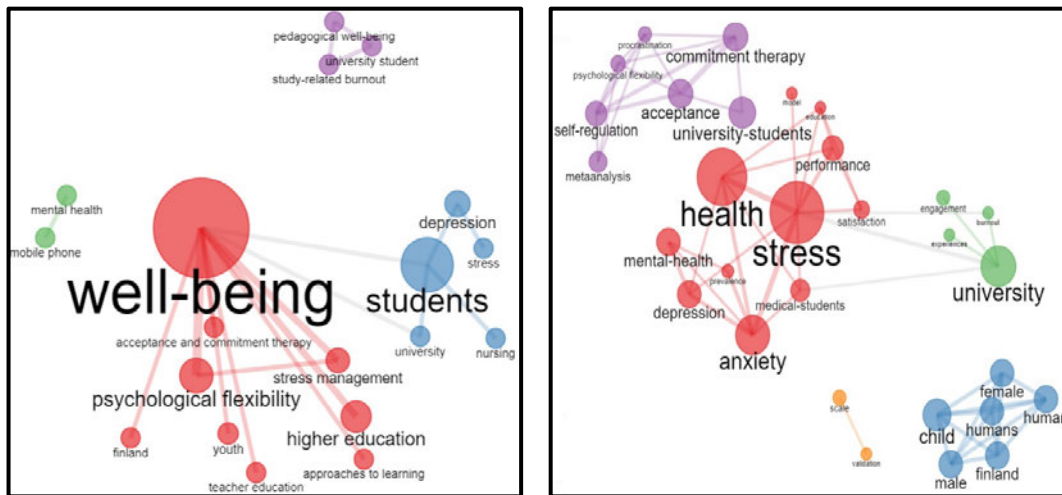


Figure 8. Author's and keywords plus co-occurrence networking.

The result also reveals four distinct clusters of well-being for author's keywords but five clusters for author's plus. The cluster of author's keywords showcased study-related burnout, stress, and mental health that pertains to teachers and students (Figure 7). Surprisingly, the quest for well-being is more predominant for the students than for the teachers. Keywords plus in the bibliometric analysis is the output of article titles. The keywords plus algorithm showcase the health, anxiety, stress, burnout, and academic achievement of students and teachers in Finland. It also shows acceptance, self-regulation, commitment therapy, satisfaction, engagement, and gender. Some of these keywords have the element of PERMA theory.

4 CONCLUSIONS

In the Finnish context, there was a publication spike in 2021 as the results recorded 13 publications. This result is a distance from the three publications of 2020. This result shows the limited number of authors' activeness in well-being research and the need for more authors and studies in Finland. Among the active researchers, the results reveal Pyhalto K. as the most consistent author in the well-being research domain between 2012 and a half year of 2022.

In 2019, due to the importance of well-being, World Health Organization (WHO) defined well-being as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” In 2009 and 2002, [24] and [25] mentioned three components of well-being. They are emotional or subjective well-being, psychological well-being, and social well-being. These classifications of well-being resonate with the definition of WHO in 2019. In Finland, the Ministry of Social Affairs and Health explained the economics of well-being and emphasised that “taking well-being into account in all policies is vitally important for economic growth, productivity, long-term fiscal sustainability and societal stability”.

The three research questions proposed in the introduction section were answered through the bibliometric analysis conducted in this study. First, the lessons learned from the over-time production of scholarly works in well-being research in Finland show intermittent literature gaps and less academic paper production, leading to a zero per cent annual growth rate.

There is a need for more active authors and publications in the research domain of well-being to create more awareness of well-being for students and teachers in higher education institutions. Second, health is a focal keyword and central to the other keywords generated from the literature on well-being in Finland. Third, single country publication dominates the literature on well-being in Finland, which shows the gap in foreign collaboration with the researchers of well-being in Finland.

The intercontinental collaboration will add flavour to the research of well-being. This study contributes to the well-being literature by connecting the bibliometric output to the PERMA theory. Also, this study fills the gap in single case country of bibliometric analysis and shows the progress of well-being literature in the Nordic region. Also, this study shows how well-being literature evolves and grows in Finland. Managerially, this study may help the higher institutions' policymakers and administrators to formulate policies that promote the well-being of teachers and students. It will also help the oncoming researchers to know the importance of well-being literature and encourage them to fill the existing gaps.

4.1 Limitation and Future Study

For contextual insights, this study was limited to Finland, and this step prevents clarity on the Annual Growth Rate (AGR) of the global well-being literature. Further, this study only focused on the well-being of students and teachers in higher institutions. Future research should focus on global bibliometric analysis of well-being literature and consider the well-being of the higher institution's administrators and management. Future research can also use the quantitative data generated with the Biblioshiny App to conduct further data analysis with Microsoft Excel, SPSS, Minitab, STATA, Nvivo and many more to throw light on the phenomenon of well-being.

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