



Human Resources in Health Management: A Bibliometric Review

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Received: 04.04. 2024

Accepted: 25.06.2024

Research Article

Abstract

Aim: The complex relationship between health management and human resources requires extensive study. Effective management, productivity, and quality increase in this field is possible through the strategic management of human resources. This study aimed to classify and analyze articles in health management journals under various subheadings.

Methods: In this study, the contents of human resources-themed articles in the field of health management in journals registered in the DergiPark system, published between 2018 and 2023, with the phrase "health management" or "health administration" in the journal name, were examined by bibliometric analysis. The collected data were processed in Microsoft Office 365. The field of human resources was divided into various subheadings.

Results: 181 articles selected were analyzed. Because of the bibliometric analysis, it was determined that the highest number of publications on human resources in health management were in the Hacettepe Journal of Health Administration, the years with the highest number of publications were 2023, the most studied sub-topic was the behavioral dimension, there were more

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Cite This Paper:

Mermerkaya, S., Söyük, S. (2024). Human resources in health management: A bibliometric review. *International Journal Of Health Management And Tourism*, 9(2): 126-141.

double-authored publications, research articles, and quantitative methods were more preferred. The two scales were the most used quantitative methods.

Conclusion: The analyses in this study are expected to provide guiding information to researchers, policymakers, and health managers.

Keywords: Health management, human resources, bibliometric analysis.

INTRODUCTION

Health management is a complex and dynamic field. The World Health Organization has classified the main components of the health input system as human resources, service delivery, information, medical products, vaccines, drugs, technology, financing, and management. Human resources are recognized as one of the health system most fundamental and essential components (World Health Organization, 2006). Human resources have been described as "the heart of the health system", "the most important aspect of health systems" and "a critical component in health policy", as health professionals have a special responsibility to take care of the health of the population (Pham, 2021).

Despite the importance of human resources, there is consensus that they are a neglected component of health system development in many countries (Hongoro and McPake, 2004). However, there has been a growing interest in human resource management in healthcare services in recent years. Since human resources are recognized as one of the most critical inputs in health care services, it is crucial to manage human capital differently from physical capital (Kabene et al., 2006). The complex relationship between human resources and healthcare services is an area that needs to be studied extensively. Effective management, efficiency, and quality increase in this field is possible through the strategic management of human resources. Effective human resource management is also critical for quality service delivery and organizational efficiency. Successful human resources management in health services includes qualified personnel's employment, training, and motivation.

Considering the importance of human resource management in healthcare services, this study conducted a bibliometric analysis of the studies published on the subject. The bibliometric analysis method examines trends, authors, most cited studies, and methods in this field by using numerical data from scientific publications. Bibliometric studies are methods used to determine the status and development of the research field. In other words, the bibliometric method provides

a general picture of the research field (Merigó and Yang, 2017).

Many studies have been conducted on human resources with the bibliometric analysis method. Examples of these studies are as follows: digitalization in human resources management (Karaboğa and Karaboğa, 2022), employee experience concept (Gerçek, 2022), green human resources management (Korkmaz and Gültekin, 2023), artificial intelligence in human resources management (Kişi, 2022) and training and development in human resources management (Man et al., 2023).

Studies have also been carried out using this method in the field of health management. The topics of some of these studies are as follows: Graduate theses on organizational justice in healthcare workers (Korkmazer and Pırol, 2021), theses on organizational commitment in healthcare institutions (Özyurt and Özgen, 2020), research on strategic cost management in the field of healthcare management (Ünal and Çil Koçyiğit, 2023), articles published in national and international journals in the field of healthcare management (Eke et al., 2020), studies in the field of strategic management in health management (Öztürk and Ünal, 2023), theses conducted in the discipline of health management in Turkey (Şahin and Ocak, 2019), methods in articles published in Hacettepe Journal of Health Administration (Yılmaz et al., 2019), postgraduate theses on health tourism (Canik and Güneren Özdemir, 2019) and studies in the field of health tourism (Kazak and Kazak, 2023).

This research aims to determine the strengths and weaknesses of the studies on human resources in the national literature by analyzing the situation through parameters such as sub-topic, number of authors and citations, type, method, and year of publication and to provide comprehensive information for future studies on the subject.

Studies in the DergiPark system were examined to draw a general framework for studies on human resources in health services at the national level. To limit the scope of the research, in addition to the year criterion, special attention was paid to the fact that the journal names included the word phrases "health management/administration" or "healthcare management" and that the research topic was related to healthcare human resources.

It is thought that the analyses in this study will provide guiding information to researchers, policymakers, and health managers.

1. RESEARCH METHODOLOGY

Purpose of the Study: This study aimed to conduct a content analysis of human resources-themed studies in journals published in health management. This study aims to classify the recent studies under various sub-headings and create awareness of health human resources. The question "What is the distribution of studies on human resources in health management according to subheadings, and what are the methods of these studies?" was determined as the research question.

Method: Pritchard defined the bibliometrics used in this study as "the application of mathematics and statistical methods to books and other means of communication." Also, Fairthorne defined it as "the quantitative study of the characteristics of recorded discourse and related behaviors." (Pritchard and Wittig, 1981). Bibliometric analyses allow for a discussion of past research trends, problems, or corrections in the field of study and help to make accurate predictions about the direction of future trends (Eke et al., 2020).

DergiPark is a project of the Scientific and Technological Research Council of Turkey (TÜBİTAK), which provides hosting and publishing services to journals in Turkey and enables the journal publishing process to be realized more easily and quickly (Aslan, 2019).

In this study, the contents of human resources-themed articles in the field of health management in journals registered in the DergiPark system, published between 2018 and 2023, with the phrase "health management (sağlık yönetimi)" or "health administration (sağlık idaresi)" in the journal name, were examined by bibliometric analysis. The collected data were processed in Microsoft Office 365 application. The field of human resources was divided into various subheadings based on expert opinion and literature. These are the behavioral dimension, management, and leadership, training-development and career, performance evaluation, job evaluation and wage management, bureaucratic procedures, occupational health and safety, industry 4.0-artificial intelligence, health workforce, and communication. These articles were then classified according to their method (quantitative, qualitative, etc.), type (research article, review, etc.), number of authors, journals, and years of publication. In addition, classification was made according to whether the article was derived from a paper or a thesis. The number of scales used in the quantitative studies was also added as a parameter. Finally, the number of citations of the included studies was accessed and classified via "Google Scholar" on 15.03.2024.

Limitations of the Study: Among the journals publishing in the field of health management, those that do not include the phrase "health management (sağlık yönetimi)" or "health administration (sağlık idaresi)" in the journal name or publications on the subject before 2018 and after 2023 were not included in the study. In the journals included in the research, it was observed that studies on human resources increased after 2018 compared to previous years. For this reason, publications before 2018 were not included in our study. Studies on human resources not related to health management in journals meeting the criteria were also excluded. The fact that the number of publications in the six years of the journals meeting the requirements differed was also a limitation when comparing the journals.

Ethics Committee Permission: Because the bibliometric analysis method used in the study is based on a literature review and has no direct effect on any living creature, ethics committee permission was not obtained.

2. ANALYSIS

A total of 9 journals that met the criteria determined in the study were identified. These are Hacettepe Journal of Health Administration, International Journal of Health Management and Strategies Research (USAYSAD), Journal of International Health Sciences and Management (JIHSAM), International Journal of Health Administration and Education Congress (Sanitas Magisterium), International Journal of Health Management and Tourism (IJHMT), Journal of Healthcare Management and Leadership (JOHMAL), SDU Healthcare Management Journal, Journal of Health Sciences and Management (JOHESAM), and Journal of Health Management. A total of 896 articles published in these journals in the last 6 years were analyzed. 181 articles on human resources were included in the analysis. The studies included in the analysis were classified according to the total number of publications made in this process, the name of the journal in which they were published, the year of publication, the subtopic title, the number of citations, the number of authors, the type of article, the method used, and the number of scales. The numerical data obtained here were visualized using various graphs.

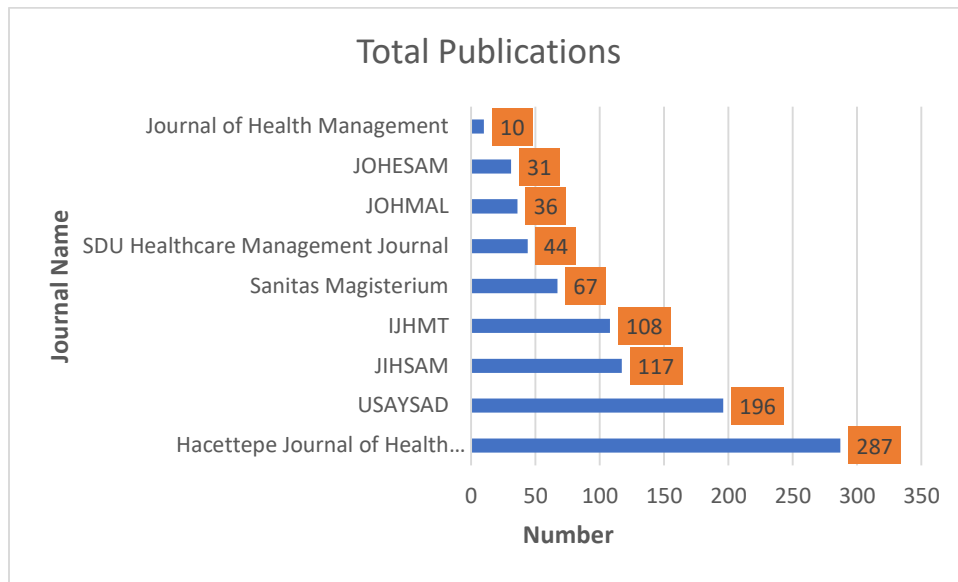


Figure 1. Total Publications

The number of articles published by the journals in the last six years is shown in Figure 1. Hacettepe Journal of Health Administration has published the most articles (287), while the Journal of Health Sciences and Management (31) and the Journal of Health Management (10) have published the fewest articles.

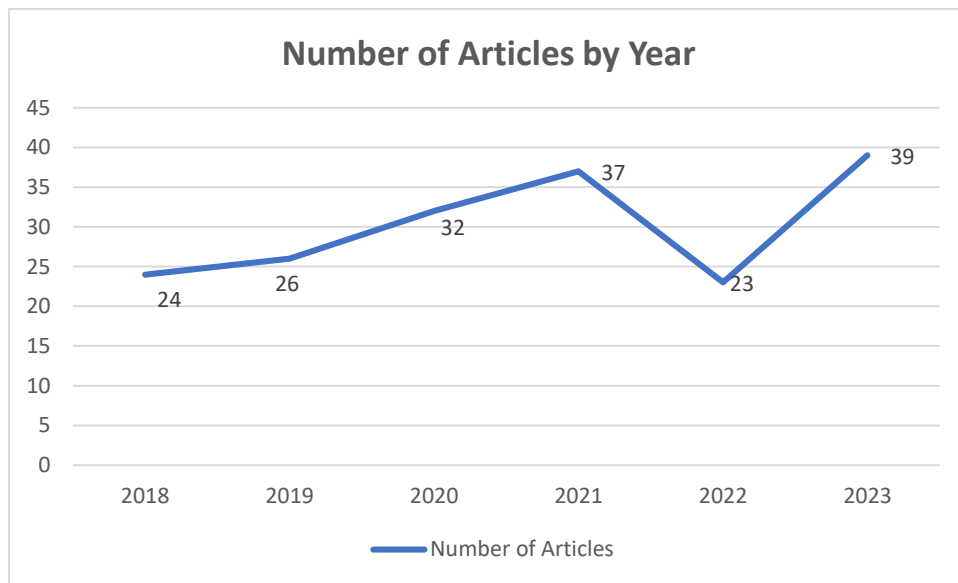


Figure 2. Number of Articles by Year

Looking at the number of publications of human resources studies by year, the most published year was 2023 with a total of 39 articles, while the least published years were 2018 (24) and 2022 (23) (Figure 2).

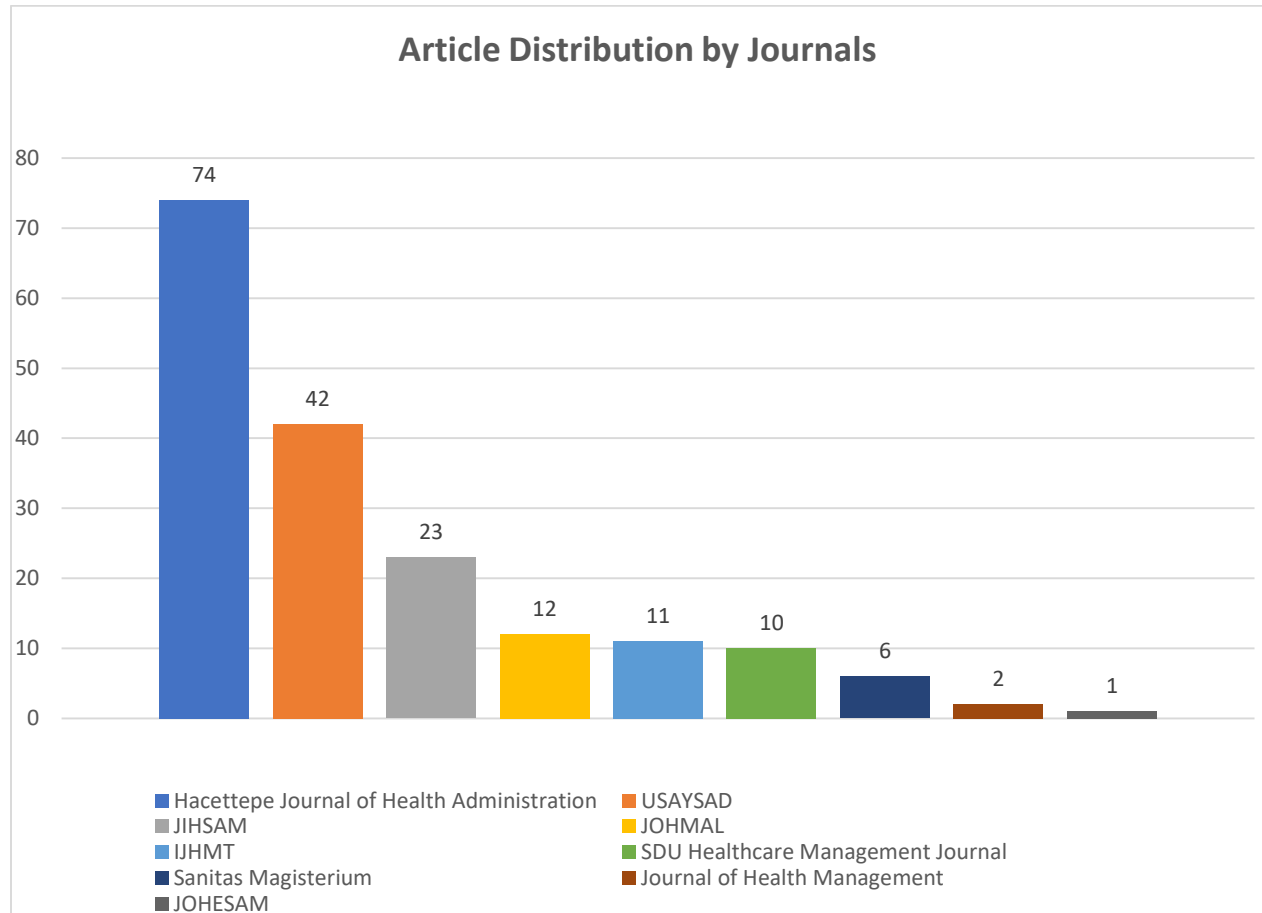


Figure 3. Article Distribution by Journals

As seen in Figure 3, the journal with the highest number of human resources studies was the Hacettepe Journal of Health Administration, with 74 articles. This was followed by USAYSAD (42), JIHSAM (23), JOHMAL (12), IJHMT (11), SDU Healthcare Management Journal (10), Sanitas Magisterium (6), Journal of Health Management (2) and JOHESAM (1).

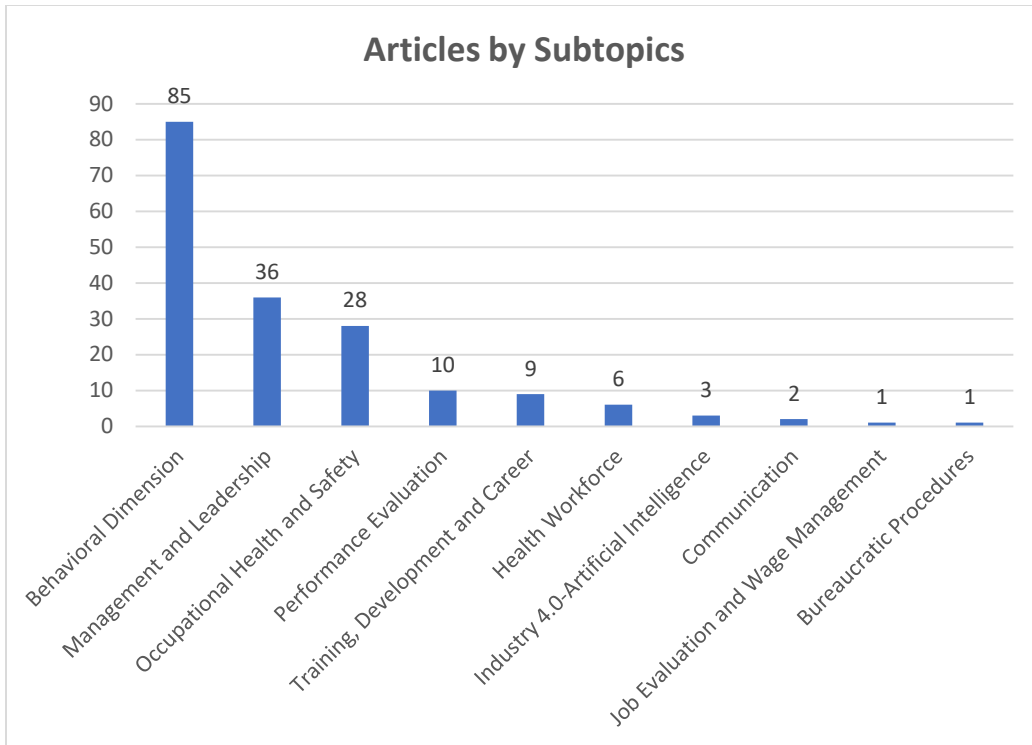


Figure 4. Articles by Subtopic

Figure 4 shows the distribution of studies according to subtopics in human resources. While the highest number of studies were on the behavioral dimension (85) and management and leadership (36), the lowest number of studies were on industry 4.0-artificial intelligence (3), communication (2), bureaucratic procedures (1) and job evaluation and wage management (1).

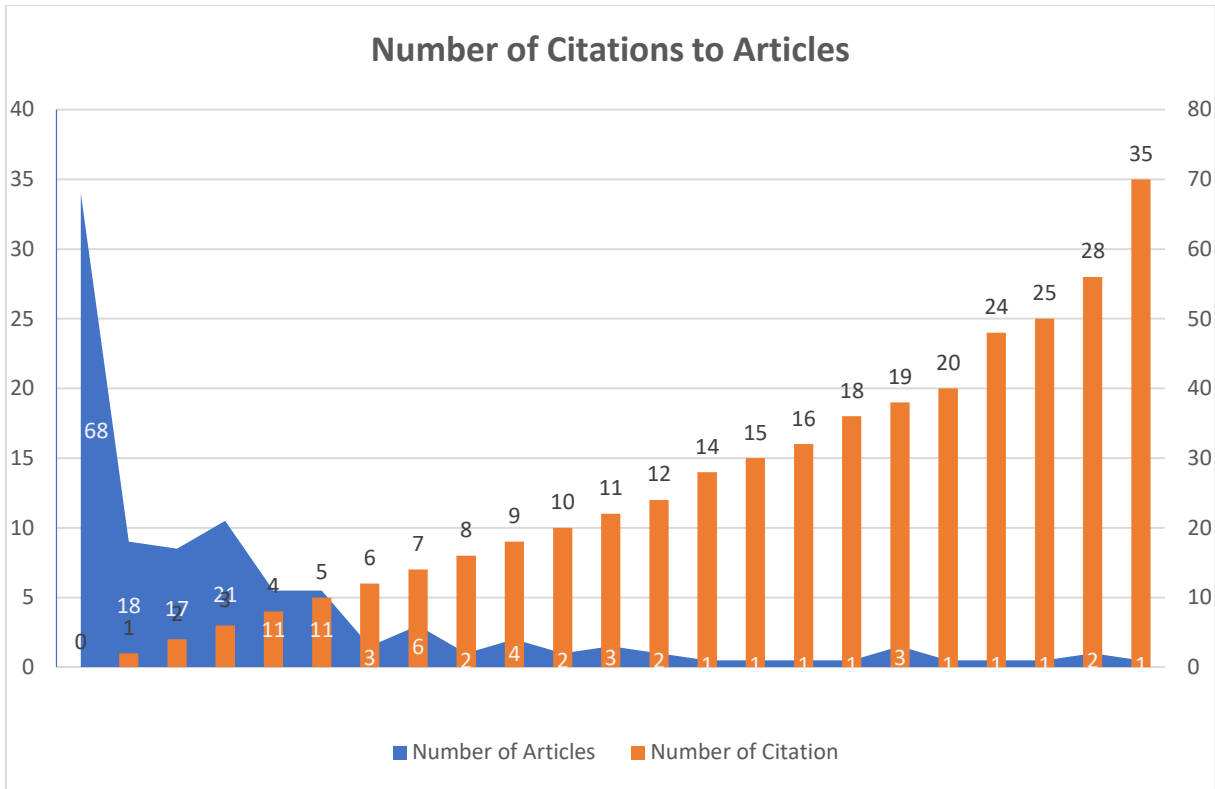


Figure 5. Number of Citations to Articles

Figure 5 shows the number of citations to the articles. Accordingly, 68 studies were not cited at all, 18 studies were cited once, 17 studies were cited two times, 21 studies were cited three times, and 20 studies were cited ten times or more. The most cited study topics were "management and leadership" and "behavioral dimension".

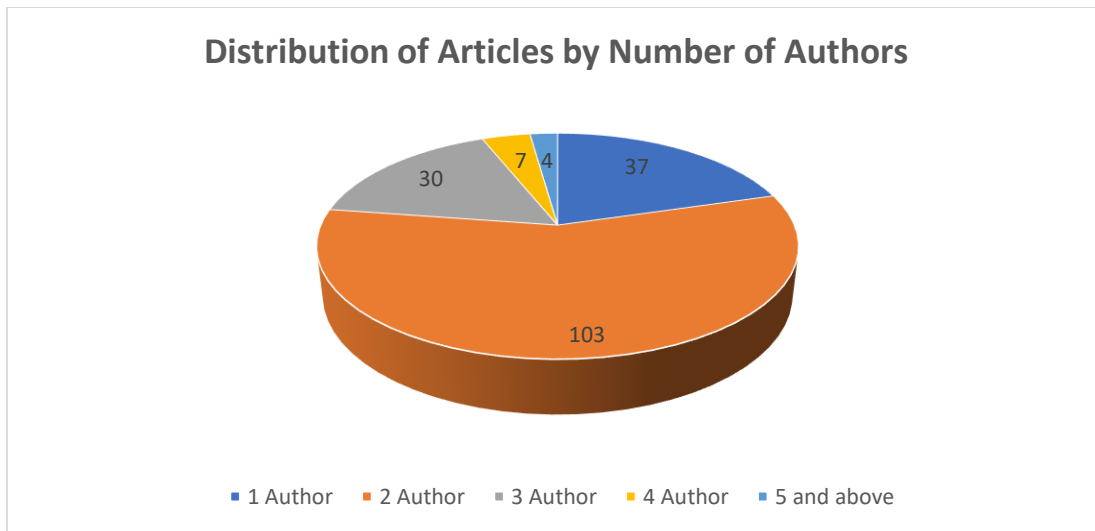


Figure 6. Distribution of Articles by Number of Authors

Considering the number of authors in the studies, it is seen that the highest number of publications were made with two authors (103). In comparison, the lowest number of publications were made with four authors (7) and five or more authors (4) (Figure 6).

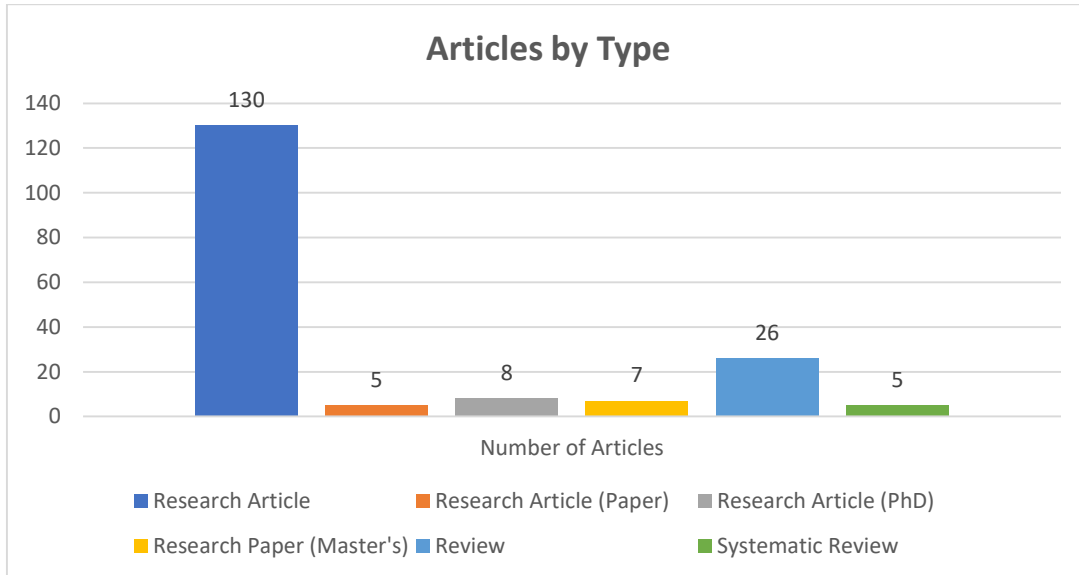


Figure 7. Articles by Type

The types of articles published were categorized as research articles (separate category for those derived from papers, master's and doctoral dissertations), reviews, and systematic reviews (Figure 7). Accordingly, the most common type is a research article with 150 articles. Of these, five were research articles from papers, eight from doctoral theses, and seven from master's theses. The least preferred article type was systematic review (5).

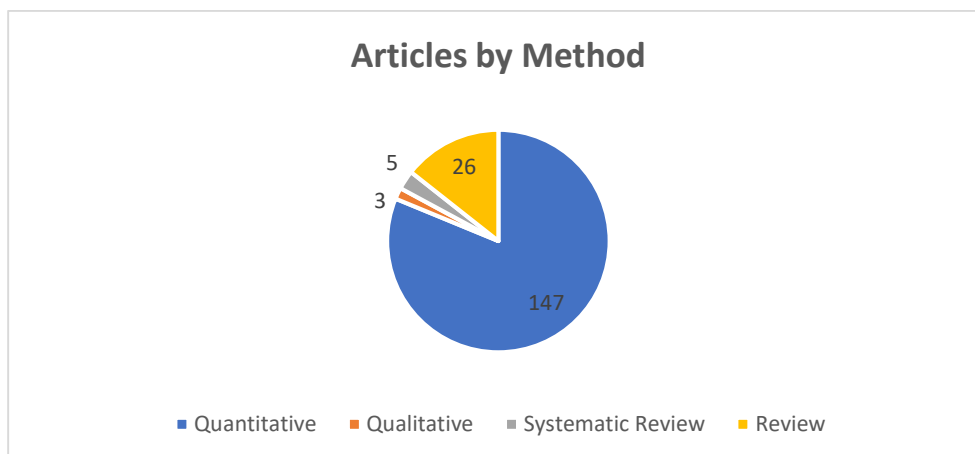


Figure 8. Articles by Method

When analyzed according to the method of the studies (quantitative, qualitative, review, and

systematic review), the quantitative method was used the most (147 times). In contrast, only three qualitative studies were found (Figure 8).

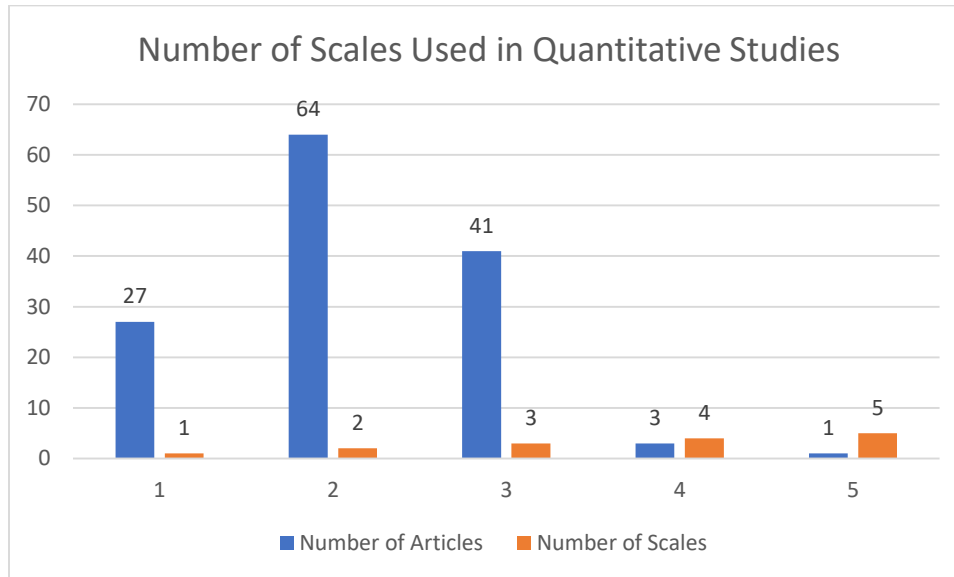


Figure 9. Number of Scales Used in Quantitative Studies

The number of scales used in the quantitative studies is shown in Figure 9. Accordingly, while two scales were preferred the most, four and five scales were used the least.

3. CONCLUSION/DISCUSSION AND RECOMMENDATIONS

In the first stage of our study, journals published in Turkish or English with the title of health management or health administration were searched in DergiPark, one of the systems that contains the largest number of journals in Turkey. A total of 9 journals were found, including Hacettepe Journal of Health Administration, International Journal of Health Management and Strategies Research (USAYSAD), Journal of International Health Sciences and Management (JIHSAM), International Journal of Health Management and Tourism (IJHMT), International Journal of Health Administration and Education Congress (Sanitas Magisterium), Journal of Healthcare Management and Leadership (JOHMAL), SDU Healthcare Management Journal, Journal of Health Sciences and Management (JOHESAM), and Journal of Health Management. In the second stage, a total of 896 articles published by these journals between 2018 and 2023 were analyzed. A total of 181 articles on human resources in health management were included in this study. Finally, these studies were classified according to various experts' opinions and literature. These classifications are as follows: Total number of publications made in this process, publications on

human resources in health management, journal name, year of publication, sub-topic, number of citations, number of authors, type, and method of the article.

In our study, a total of 896 articles that met the specified criteria were examined. Hacettepe Journal of Health Administration, International Journal of Health Management and Strategies Research (USAYSAD), Journal of International Health Sciences and Management (JIHSAM), International Journal of Health Management and Tourism (IJHMT), International Journal of Health Administration and Education Congress (Sanitas Magisterium), Journal of Healthcare Management and Leadership (JOHMAL), SDU Healthcare Management Journal, Journal of Health Sciences and Management (JOHESAM), and Journal of Health Management, which were published between 2018 and 2023, were examined by bibliometric analysis. Within the scope of the study, the journals were classified by the total number of publications made in this process, the name of the journal in which they were published, the year of publication, subtopic title, number of citations, number of authors, and type and method of the article.

When the total number of publications in the years included in the analysis was examined, Hacettepe Journal of Health Administration had the highest number of publications. The journal published its first issue in 1999 and is the oldest among the journals included in the study. In addition, the high number of articles can be considered the result of publishing four issues a year. While the Journal of Health Sciences and Management published its first issue in 2021, the Journal of Health Management published only in 2018 and 2019. The Journal of Healthcare Management and Leadership publishes one issue per year. This has led to a quantitatively negative outlook in the number of articles included in the analysis and other analyses.

Looking at the publication status of human resources-themed studies by year, while there was a steady increase until 2021, there was a significant decrease in 2022. However, it increased again in 2023 and exceeded the number in 2021.

In the human resources-themed studies classified according to journals, it can be easily said that Hacettepe Journal of Health Administration ranks first with a big difference because it is both a well-established journal and there are many publications, as mentioned above. Since the second-ranked International Journal of Health Management and Strategies Research is also the second journal with the highest number of publications, the same connection can be established here. The two journals with the fewest publications did not publish in all the years included in the analysis.

When the included studies are classified according to subtopics, the most studied topic is

the behavioral dimension, which has a significant difference. The behavioral dimension can be shown as the reason that the literature on issues such as management and leadership is enormous, and there are many types of measurement in these areas. This result in our study is in line with the results of the study in which bibliometric analysis of theses conducted in the discipline of health management in Turkey was conducted (Şahin and Ocak, 2019). Industry 4.0 and artificial intelligence, which are among the least published topics, are still very new fields. The low number of publications in areas such as communication, wage management, and bureaucratic procedures can be attributed to the limited number of measurement tools compared with other topics and the fact that these topics have a narrow literature in the field of health management.

When the studies are classified according to the number of citations, it can be said that the high number of studies that have never been cited is due to the publication years being new. The fact that the most cited studies are from studies on management, leadership, and behavioral dimensions can be attributed to the high number of studies on these subjects. It was also observed that there was a positive relationship between studies with ten or more citations and journals with the highest number of publications.

When the number of authors in the studies was examined, studies ranging from 1 to 10 authors were identified. However, it was observed that most of the articles had two authors, with a significant difference, followed by studies with one or three authors. The results of a study conducted on articles published in national and international journals in the field of health management indicate that the top three ranks are the same. The high number of co-authors in international publications was interpreted as the harmony of a common working culture. (Eke et al., 2020).

When the types of articles published were analyzed, it was observed that research articles were preferred in the fields of health management and human resources. Research articles were categorized as research articles (separate category for those derived from papers, master's and doctoral dissertations), reviews, and systematic reviews. Accordingly, it was determined that the most common type was a research article, with 150 articles. Of these, five were research articles from papers, eight from doctoral theses, and seven from master's theses.

One of the most critical issues in academic studies is the study method. When the studies were analyzed according to the method (quantitative, qualitative, review, and systematic review), the quantitative method was used the most, while only three qualitative studies were found. In

another bibliometric analysis study conducted in the field of health management, these were examined and it was determined that qualitative research methods were used in only three theses out of sixty theses. It was concluded that almost all of the thesis studies analyzed were conducted using quantitative methods (Korkmazer and Pirol, 2021). This may be because quantitative techniques are preferred in the field of health. Finally, the number of scales used in the quantitative studies was classified. Accordingly, the 2, 3, and 1 scale were mostly preferred in the studies. It can be said that the high number of scales makes it challenging to collect research data, which is why such a result was obtained.

Our study is the first study to analyze human resource management issues in health management journals. For this reason, it is thought that our study will be helpful, especially for academicians working in health management. When the results of the study are analyzed, it can be suggested that more studies should be conducted on this subject since there are fewer studies in human resource management in the health management literature compared to other fields. Human resources are the resources that manage, bring together, and use all resources in the organization. Therefore, management success can only be achieved with good human resources.

In the field of human resource management, not only in health management journals but also in all journals in general, the number of publications on specific topics is relatively low. Therefore, there is a significant gap in the literature on workforce planning, job analysis and job design, career planning, industrial relations, and job evaluation. Increasing the studies on these topics can be recommended to new researchers.

One of the most important findings of the research is that the qualitative method was used very little in the studies, and the qualitative-quantitative mixed method was not used at all. Today, the number of mixed design studies is increasing in many fields. It is recommended that qualitative and mixed-design studies on human resources in health management be conducted.

Conflict of Interest: The authors have no conflicts of interest to declare.

Funding: The authors declared that this study had received no financial support.

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