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Research Article

A Comprehensive Bibliometric Analysis Of Mobile Health (M-Health) Research

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Abstract

The term m-health has been flourishing in the field of health after the growth of mobile phone usage. The increase in phone and internet usage led us to the gateway of various opportunities including m-health applications. These applications help mankind who are unable to access quality healthcare services. These technologies aid the government in transforming their country's healthcare opportunities it also helps the individuals as well in maintaining and monitoring their health data. This article picturizes the area of m-health using the bibliometric data available in the Scopus database as it is trustworthy. Using this as the base, we examined authors' keywords, citations, annual scientific production, Bradford's law, countries coupling, and more using RStudio's biblioshiny software. This analysis revealed that there is a huge growth in various fields such as mobile health, m-health, telemedicine, digital health, and smartphone applications. Furthermore, emerging trends such as mobile health units, behavioral health, and physiotherapy can be concentrated in the future. This study provides valuable insights to researchers and practitioners in the field of healthcare.

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Introduction

According to WHO, m-Health has been defined as "the use of wireless mobile technologies for public health" because it offers wide coverage of various facilities to boost the healthcare sector (WHO,2016). As the Indian healthcare market is projected to reach US\$638 billion by 2025, there is a strong need for technology interference. Because of the shortage of nurses and doctors, the government plans to allocate US\$10.93 billion in 2024-25(IBEF,2023). The development of new technologies such as digital health, m-Health, and virtual assistants may help people to get various employment

opportunities. On the other side, using m-health technologies yields numerous possibilities such as reducing health spending, a healthy population, investment opportunities, increased connectivity, chronic disease management, and so on. So, knowing about m-health technologies to improve the m-health market is important.

The government has launched its m-health application called the ABHA app under the scheme "Ayushman Bharat Scheme" which facilitates creating our own UHID (Unique Health Identification Number) (Vikaspedia,2022). This app previously known as

NDHM has been improvised which allows its users to upload all the documents related to their health such as Cowin certificate etc. As this application maintains the personal health records of the users, reimbursing their medical expenses becomes much more hassle-free. It also provides various treatment types such as Ayurveda, Yoga, Unani, Siddha, and Homoeopathy. Thus, the government has also looked into these m-health applications which opens the gateway for patients, healthcare professionals, and providers of the same technologies to invest more (Future Generali,2023).

Bibliometrics is the study of published information such as books, journals, databases, blogs, and its metadata using statistical tools to show the relationship between the works published(Ninkov et al., 2022). (Lewison & Devey1, 1999) pointed out that” Bibliometric is to scientific papers as epidemiology is to patients”. This shows the importance of bibliometric study in the research field that we have studied.

The objective of the study is to picture the m-health, its usefulness, and new trends in this field. The questions below can be formed and answered according to the analysis.

RQ1: What are the scientific production and citations per year annually?

RQ2: What is the association between authors, references, and keywords?

RQ3: What are the most pertinent affiliations and their creations in m-Health?

RQ4: How has the theme of m-Health unfolded?

RQ5: Which countries got more citations and their appropriate keyword coupling networks?

Research strategy

In this study, the articles were retrieved from the Scopus database, one of the most updated databases. It has more than 5000 research fields covering multidisciplinary and cross-disciplinary research that help the researchers know about the current trends and research gaps that need to be filled. To conduct bibliometric analysis, the Rstudio software was used as it is free of cost. Rstudio is an integrated development built upon the r programming software which enables the users to get continuous updates. In that, a package called biblioshiny has to be installed to run the analysis.

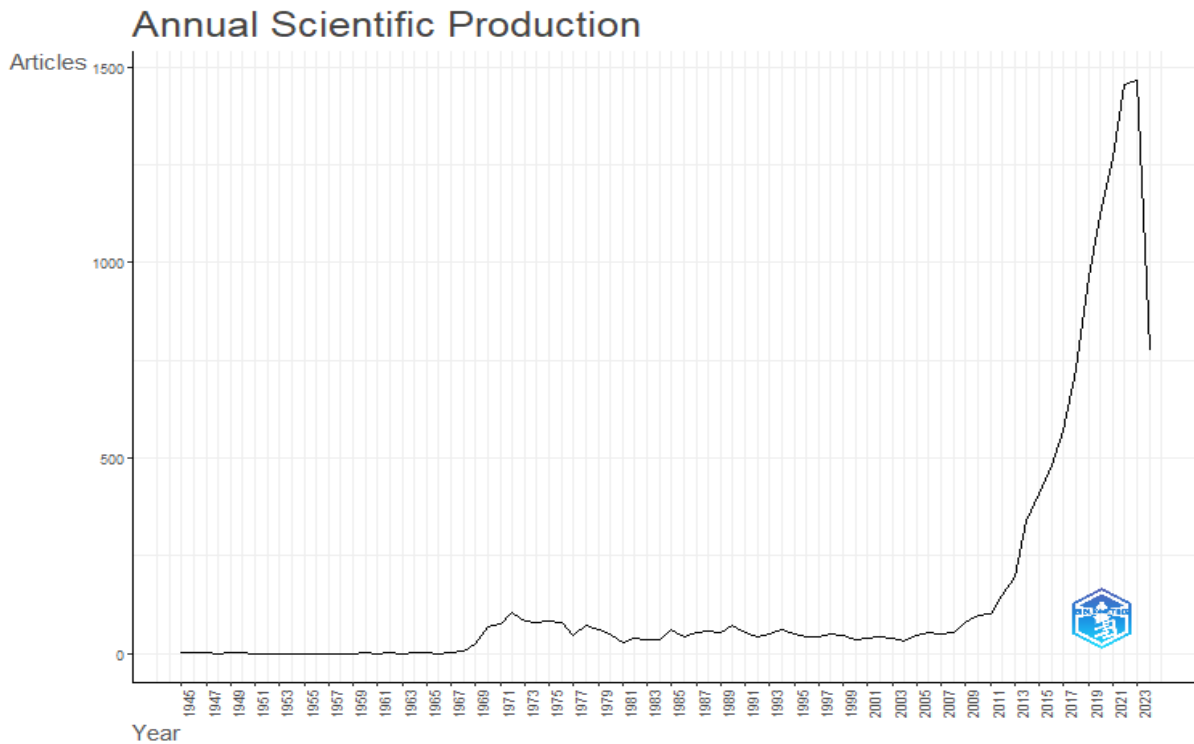
Our article uses the “Article title, Abstract, Keywords” option to search “**m-health apps**”, “**digital health apps**”, “**e-health apps**”, “**mobile health apps**”, and “**m-health**” terms which were used to retrieve the data from the database. In this study, we use “OR” as an operator to search the documents. Various types of documents are available in the database including articles, conference papers, reviews, book chapters, and conference reviews.

Results



The Scopus database was searched and secured data from 1945 to 2024 with 3375 sources including journals. The annual growth is 8.78% with 10.2 as the published higher than 16000 in that 1312 articles were single-authored.

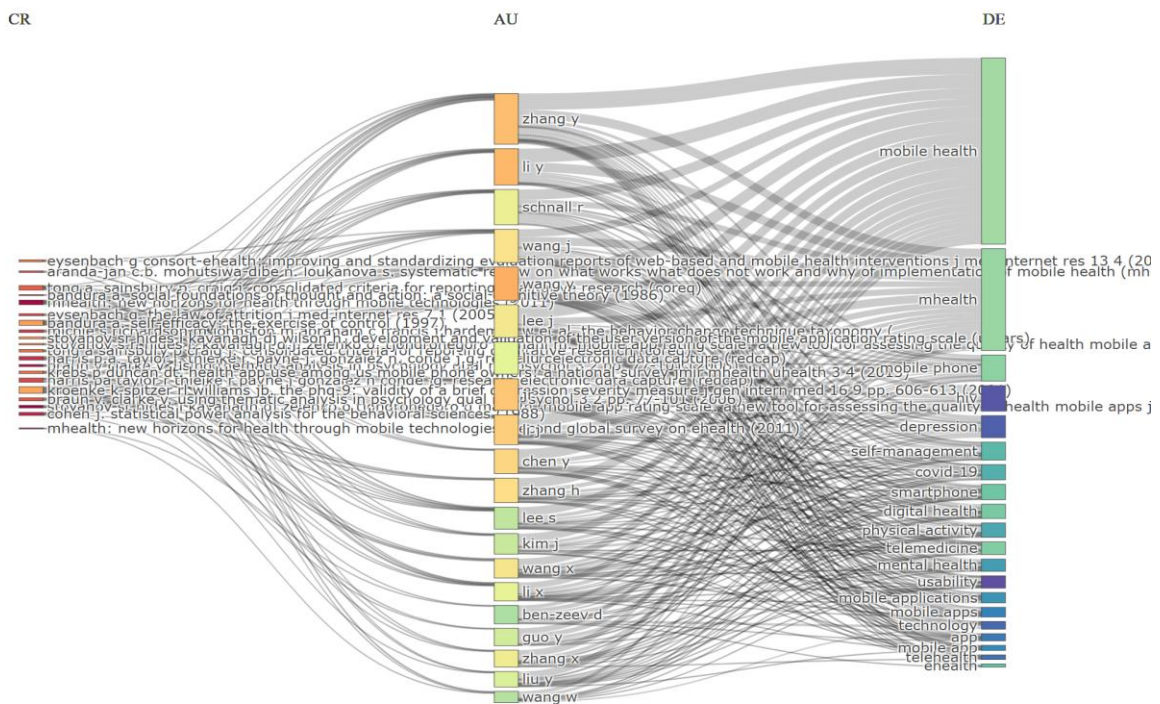
work's mean age. The mean citation per document is 16.37 with a key phrase



The publications started to increase in the year 2011 and its gaining importance to date. The data shows a drastic boom of articles in 2020 (i.e. from 961 to 1123 articles) due to the COVID-19 pandemic. After the lockdown of

one and half years, most of them preferred to switch from offline doctor visits to virtual mode for general medical problems. Due to this, the concept of m-health started to gain its importance.

Three-field Plot



Herein, the connection between authors and the bibliometrics employed by them according to their key phrases is scrutinized. The predominant keywords were

mobile health and mhealth by zhang.Y. The various other keywords used in this context include depression, self-management, COVID-19, smartphone, digital health,

clinics, behavioral health, physiotherapy, and body sensor networks can be more promising in the future to expand the m-health area in research as well as in business.

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