



African Journal of Biological Sciences

Journal homepage: <http://www.afjbs.com>



Research Paper

Open Access

OUT-OF-POCKET HEALTHCARE EXPENDITURE: A SCOPUS-BASED SYSTEMATIC REVIEW

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Article Info

Volume 6, Issue 14, August 2024

Received: 11 June 2024

Accepted: 14 July 2024

Published: 9 August 2024

doi: [10.33472/AFJBS.6.14.2024.2613-2629](https://doi.org/10.33472/AFJBS.6.14.2024.2613-2629)**ABSTRACT:**

Background: The 70:70 paradox limits access to healthcare in India: people incur 70% of their healthcare expenses out of their pockets, of which 70% of the amount goes only toward medications, leaving them in debt and impoverished. Some of India's main health obstacles are high out-of-pocket expenses (OOPE), inadequate or ambiguous quality of medical care, restricted access, and lack of proper medical care availability. It was discovered that bibliometric evaluation of scientific articles about OOPE on health is lacking, even though various academics have generated multiple research publications emphasizing the role that healthcare plays in bolstering the health systems.

Methodology: The available literature was thoroughly reviewed using the PRISMA standards for systematic reviews. The Scopus database was used to collect academic literature on "Out-of-pocket healthcare expenditure" for the study since it provides wider access to relevant publications. R-studio and Vos-Viewer were both used in the study's bibliometric analysis to display visualizations and deliver clarity through the interpretation of the findings.

Results: The study identified 323 sources, including journals, reviews, and other publications, and compiled a total of 858 articles by 2707 authors. The findings demonstrate that between 2003 and 2023, scholarly research on out-of-pocket expenses increased gradually, highlighting the importance of healthcare. It was found that more comprehensive research on OOP expenses on health and other topics related to health is needed to gain more knowledge to better the healthcare system, as there have been relatively few studies conducted on issues, such as poverty, income level, education, the elderly, adolescents, pregnant women, inpatients and outpatients, rural-urban regions, etc. This implies that there is further scope for research as these problems haven't been fully explored yet.

Conclusion: Academic research on OOPE indicated the significance of healthcare protection for growing OOPE in the areas of healthcare spending and universal health coverage. Individuals' OOP payments for healthcare services can undermine equity and drive vulnerable groups into poverty. It's critical to lower OOPE in systems for healthcare, which is the further reason for more in-depth research in this field. Besides, providing public awareness and offering financial assistance to the population, the government must adopt a holistic approach that includes policy changes, infrastructural development, and research & development to adequately address the health challenges caused by high OOPE on health.

Keywords- Out-of-pocket health expenditure, Scopus, bibliometrics, RStudio, Vos-Viewer, and biblioshiny

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1. INTRODUCTION

Health is a fundamental human right, and all nations must prioritize providing quality, affordable basic healthcare to achieve universal health coverage and the Sustainable Development Goals. The World Health Organization emphasizes that universal health care and protection from financial risks are necessary for enhancing the quality of life and well-being. The term "health spending" refers to several different arrangements, such as government spending, employer-sponsored health programs, out-of-pocket expenditures (OOPs), voluntary health insurance, as well as additional initiatives by non-governmental organizations (Jasarevic, 2019). The array of health spending sources for healthcare reflects the intricate nature of health financing and the vital role played by the sectors (public and private) in sustaining healthcare management across the globe. However, some studies (Hsiao et al., 2007; Sirag and Nor, 2021) pointed out that insufficient resources impede fair access to health services, especially among low-income and middle-income countries. This frequently results in patients incurring high spending out of their own pockets, causing financial strain as they prioritize health costs over other essential requirements. Out-of-pocket expenses are paid for with one's own money, whether they are reimbursed or not. These could be out-of-pocket healthcare costs one incurs before meeting the insurance deductible. Patients must pay the difference out of their pocket when their insurance fails to fully cover the cost of a medical service or facility (Patel et al., 2015). The major health problems faced by the nation are limited access, lack of availability, inconsistent medical care, and excessive out-of-pocket expenses (OOPE). It is imperative to address these discrepancies to advance health equity and enhance population well-being.

Although economic growth has a favorable link with improved health indicators, this trend has not been seen in India. India is currently the world's third-largest economy in terms of GDP and has the potential to grow more equitably. Despite India's economic growth and standing as one of the world's largest economies, health indices have not improved proportionally. This implies that economic progress does not always result in better healthcare results for the population (Ridhwan et al., 2022). Furthermore, the incidence of the OOPE on health continues to rise and has become a key driver of poverty. Garg & Karan (2009) reported that in addition to being an ineffective method of paying for healthcare, out-of-pocket expenses can harm fairness and drive disadvantaged populations into poverty. Overspending on healthcare expenses can drain funds and have a detrimental impact on adherence to medication, the standard of living, and several health consequences (Hunter et al., 2016).

Studies by Purohit & Siddiqui (1994); Bhatia (2001); Whitehead et al., (2001); Devadasan et al., (2006); and Madhukumar et al., (2012) indicated the proof of a "medical poverty trap" in developing nations like India, even the illiterate people in rural and urban regions seek health-related advice from the private healthcare providers more often than public health physicians, leading to twice as much spending on hospitalization and treatment. The government health scheme 'the Rashtriya Swasthya Bima Yojana' (RSBY) was India's largest health experiment by the public sector before the foundation of Ayushman Bharat; the latter is believed to be an improved RSBY version. The government of India openly acknowledged that earlier iterations of the RSBY were inadequate and barely had any impact on financial protection (Ghosh & Gupta, 2017). Every year, approximately 63 million individuals face poverty because of healthcare costs. The 70:70 paradox affects healthcare access in India which states that OOPE on health accounts for a significant portion (about 70% of total healthcare spending) paid directly by the individuals from their own pockets, out of which medicines only contribute 70%, resulting in financial strain and debt (Jayakrishnan, 2015). Factors contributing to this excessive reliance on OOP expenditure include low health insurance coverage, low public healthcare awareness, and poor-quality public healthcare establishments. Consequently, in the

event of a health crisis, households are primarily responsible for bearing the associated expenses.

Many countries have implemented health finance reforms to address concerns about high out-of-pocket expenses. Although there is no prevention, the knowledge that is currently available indicates that countries can effectively lower OOP and its negative impacts by implementing well-thought-out health policies and measures (World Health Organization, 2017). Thus, to lessen the financial strain on the community and enhance overall health outcomes, OOP health spending trends are essential to understand. Enacting efficient regulations can safeguard people from the high expenses of healthcare management (Kutzin, 2012). An array of publications and research articles have examined Indian healthcare delivery and financing structures critically (Planning Commission, 1989; Berman, 1993; Reddy, 2011; Kumar et al., 2011; Patel et al., 2015; Karan et.al., 2017). These investigations have all revealed several policies made to mitigate grave problems related to the accessibility and quality of healthcare delivery. It was found that bibliometric examination of scientific papers is lacking even though numerous researchers have produced multiple research outputs by noting the significance of healthcare in bolstering the health system. Moreover, no research that is currently known to exist has examined the patterns of OOPE on health to understand the lack of effectively reducing OOP medical expenditures. As a result, this study used the systematic review to examine trends in OOP payments in healthcare in India using bibliometric analysis between the last two decades (2003 and 2023). There are five sections in the paper's framework. Section 2 outlines the methodology, which is followed by Section 3 with results, the discussions are covered in Section 4, and Section 5 addresses the conclusion.

2. METHODOLOGY

For conducting a systematic review of the available literature, the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) method for systematic reviews was taken up (Moher et al., 2009). The Scopus database was used to gather academic research on "Out-of-pocket healthcare expenditure" for the study. While Medline Ovid, PubMed, Cinahl, JSTOR, EconLIT, WorldCat, IBSS, ISI Web-of-Science, and Embase are additional databases that can be experimented with, the study relies on "Scopus" due to its greater accessibility to documents related to our research topic (OOPE on healthcare) than other databases. Moreover, Scopus offers citation analysis in addition to being a valuable engine for searching with more coverage than a Web-of-Science database (Falagas et.al., 2007). Through the search strategy, every OOPE on health-related publications carried out from 2003 to 2023 has been retrieved (Table 1).

Based on study relevancy, the original English keywords that were suitable for the research objectivity were chosen. The initial stage in bibliometric analysis is to identify keywords that assist in finding the most relevant publications. To find documents from the years 2003 to 2023, the current research used the Boolean keywords ("Out of pocket healthcare expenditure" OR "Healthcare spending" OR "OOP" OR "Out of pocket health spending" OR "Out of pocket costs" OR "Health coverage" OR "Out of pocket payment" OR "Medical expenditure" OR "Out of pocket" AND "India"). These terms were identified using the "title-abstract-keywords" options in the Scopus document searching box. Figure 1 depicts a PRISMA flow diagram that illustrates the procedure for selecting the studies. Using the Boolean keywords, 1,998 papers were explored in the first step. The total number of papers that were examined was 1,923 after roughly 75 duplicate records were removed. 623 articles were dropped based only on the abstract and title. Later, 1,140 papers were assessed for eligibility, and 858 articles of those were included in this study of systematic research analysis.

The retrieved articles after passing the eligibility criteria were downloaded and uploaded to the RStudio and Vos-Viewer software for bibliometric analysis. The study used both R-studio and Vos-Viewer to provide more features and clarity via depicting visualizations. The open-source Biblioshiny R package is versatile for thorough science mapping analysis (Derviş, 2020).

Table 1: Search strategy for the research

Database	Scopus
Period	2003-2023
Keywords	"Out of pocket healthcare expenditure" OR "Healthcare spending" OR " OOP" OR "Out of pocket health spending" OR "Out of pocket costs" OR "Health coverage" OR" OOP payment" OR" Medical expenditure" AND" India"
Limits	▪ Language- English ▪ Published after- 2003

Source: Scopus database (2003-2023)

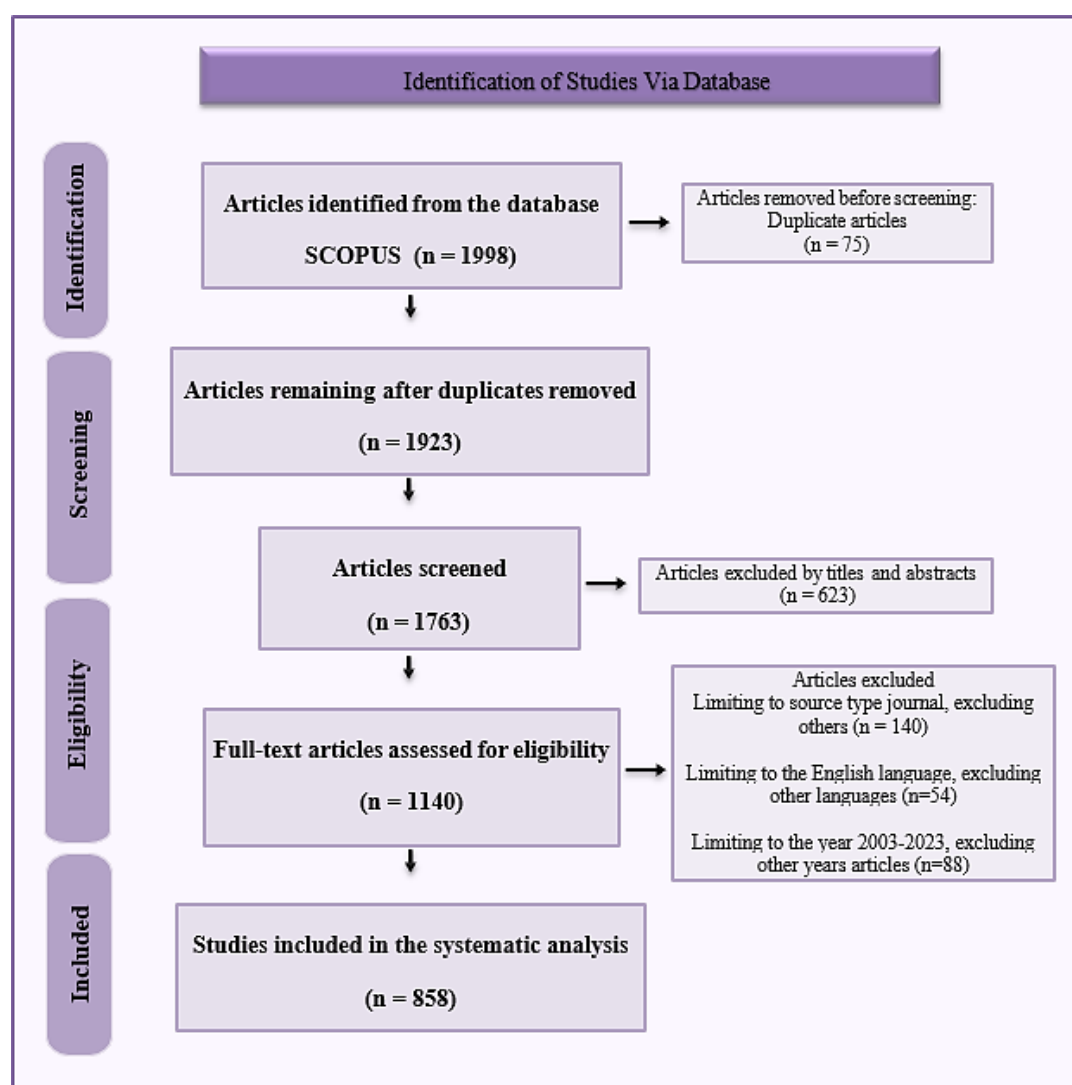


Figure 1: Search criteria for bibliometrics analysis using flow chart PRISMA 2020.

3. RESULTS

The insights drawn from the bibliometric analysis of 858 studies provide bibliometric evidence such as the authors with the highest output in terms of articles published, the country's most scientific production, the studies that have received the most citations, often published journals with the number of published papers, the most global cited papers, the most used keywords in articles, keyword clusters, & conceptual mapping, and author's keywords/keyword plus co-occurrence networks. Table 2 displays a comprehensive review of the bibliometric information. A total of 858 articles published by 2707 authors have been gathered from 323 publications i.e. journals, reviews, etc. Further, the table shows that it takes around 5 years to publish a paper, and the average number of references for each article has been 19.05. Single authors published 69 articles, whilst 2638 articles were published by many authors. The number of co-authors per article is 4.41, and the percentage of collaboration index is 35.8. Table 3 reveals the frequency of authors of the most productive countries and by corresponding author's country. India accounts for a total of 1840 authors, with the USA (322), the UK (174), and other nations following. It also demonstrates the involvement of authors from a variety of nations in research on OOPE in healthcare, including China, Australia, Bangladesh, Iran, Ethiopia, Germany, etc. Moreover, Furthermore, India has the highest number of publications by corresponding authors (337 articles), along with a huge quantity of articles released as publications in single countries (272 documents) and publishing in multiple countries (65 documents).

Dr. Sankar Prinja, who works at the PGIMER in Chandigarh's School of Public Health, is listed as one of the most productive and relevant authors from 2003 to 2023 presented in Table 4. Mohanty SK, Yadav J, John D, Singh A, and others are also listed as top authors. The author Prinja S. has written in publications titled " Out-of-pocket Expenditure on Healthcare among the urban poor in India", "Out-of-pocket expenditure and catastrophic health expenditure for Hospitalization due to Injuries in public sector hospitals in North India", "Out-of-pocket expenditure for health care: District level estimates for Haryana state in India", "What is the out-of-pocket expenditure on medicines in India? An empirical assessment using a novel methodology", etc., that have made a substantial contribution to the area of health care. The significance of financing healthcare has been underlined by author Mohanty SK in her paper, "Disease-specific out-of-pocket and catastrophic health expenditure on hospitalization in India: Do Indian households face distress health financing?". Accordingly, Yadav J, the author, has contributed substantially to "Disease-Specific Out-of-Pocket Payments, Catastrophic Health Expenditure, and Impoverishment Effects in India: An Analysis of National Health Survey Data", among other related topics. All these authors have contributed significantly to India's out-of-pocket healthcare expenditure.

Table 2: Summary statistics for the bibliometrics analysis (2003-2023)

Particulars	Findings
MAIN INFORMATION ABOUT DATA	
Timespan	2003:2023
Sources (Journals, Books, etc)	323
Documents	858
Annual Growth Rate %	35.43
Average years from publications	4.97
Average citations per doc	19.05
References	40349
DOCUMENT TYPES	

Article	772
conference paper	5
Editorial	2
Review	79
DOCUMENT CONTENTS	
Keywords Plus (ID)	2645
Author's Keywords (DE)	1617
AUTHORS	
Authors	2707
Authors Appearances	3236
Authors of single-authored docs	69
Authors of multi-authored docs	2638
AUTHORS COLLABORATION	
Single-authored docs	78
Document per author	0.317
Co-Authors per Doc	4.41
Collaboration index %	35.8

Source: Scopus database (2003-2023)

Table 3: Top 15 cited countries

Country	Authors (No.)	Articles (No.)	Single Country Publication	Multiple Country Publication
India	1840	337	272	65
USA	322	61	29	32
UK	174	36	12	24
China	157	31	17	14
Australia	131	26	8	18
Banglade sh	104	9	3	6
Iran	83	17	9	8
Ethiopia	46	10	8	2
Germany	42	7	4	3
Ghana	41	9	5	4
Netherlan ds	39	11	3	8
Nigeria	38	9	5	4
South Africa	38	7	2	5
Malaysia	32	8	4	4
Canada	29	5	3	2

Source: Scopus database (2003-2023)

Table 4: Top 15 relevant authors

Authors	Number of documents	Number of documents fractionalized
Prinja S	45	7.90
Mohanty SK	22	7.8
Yadav J	15	4.1
John D	15	3.6
Singh A	14	2.2
Sharma A	13	3.1
Bahuguna P	13	2.1
Garg S	12	3.2
Kumar R	12	2.5
Kumar S	12	2.1
Pradhan J	11	4.6
Thakur R	10	3.6
Mahal A	10	3
Karan A	10	2.8
Chauhan AS	10	1.7

Source: Scopus database (2003-2023)

Figure 2: Top-15 relevant publications

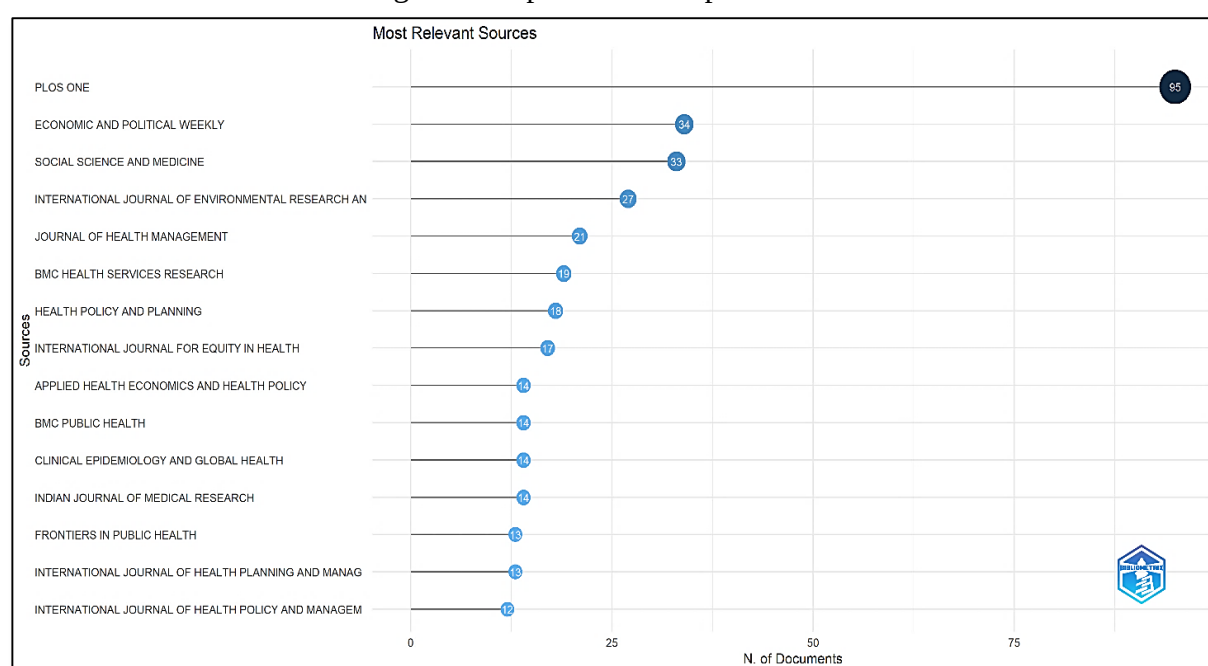


Figure 2 depicts the 15 peer-reviewed Scopus journals that published the most articles on OOPE and health from 2003 to 2023. "Plos One" held the record for publishing the most articles (n=95) about out-of-pocket medical expenses. "Social Science and Medicine" and "Economic and Political Weekly" were the second-best publications, each with around 34 documents on the subject matter.

The most frequently used keywords and keywords-plus articles are highlighted in Table 5. it was identified that 'India' was the most cited keyword in 171 articles, subsequently followed by 'out-of-pocket expenditure' in 81 articles, Additionally, it reflects articles about catastrophic health expenditures, universal health coverage, poverty, health expenditures, impoverishment, etc. highlighting significant obstacles to India's goal of establishing universal health coverage.

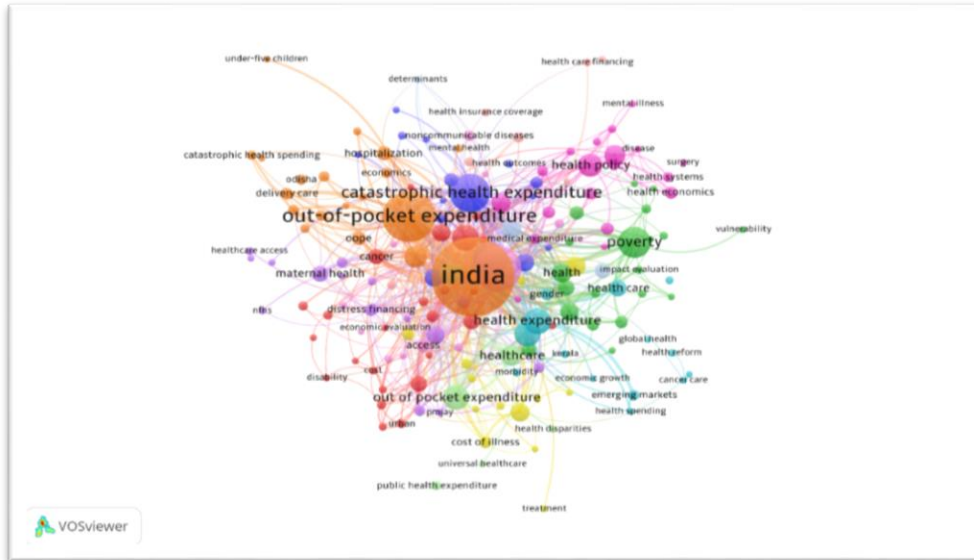


Figure 3: Co-occurrence clusters map and author’s keywords

The study conducted a keyword, author, and source analysis. Figure 5 illustrates a three-field plot (Sankey diagram) of the connections between the writers, keywords, and primary sources. The results showed that the following research topics (the author's keywords taken into consideration) such as India, healthcare expenditure, OOE, health financing, universal health coverage, a catastrophic situation due to health expenditure, and poverty were linked to the sources including Journals of Health Management, Plos One, Economic & Political Weekly, BMC Health Services Research, Health Policy and Planning, and Indian Journal of Medical Research and the authors like John D., Prinja S., Menon GR, Bahuguna P, Tripathi N, Mohanty SK, Pradhan J, Garg S., and Sharma A. The collaborative effort of various country authors writing articles is illustrated in Figure 6. Strong cooperation and communication among authors were indicated by the line's thickness, darker linkages mean more associations, which served as a measure of collaboration. This interaction can be seen among several countries such as the US, the UK, Australia, and Switzerland. Writers from India were found to have strong ties to authors from the US and the UK, Australia, the Netherlands, Switzerland, South Africa, Sweden, Thailand, Germany, & so on.

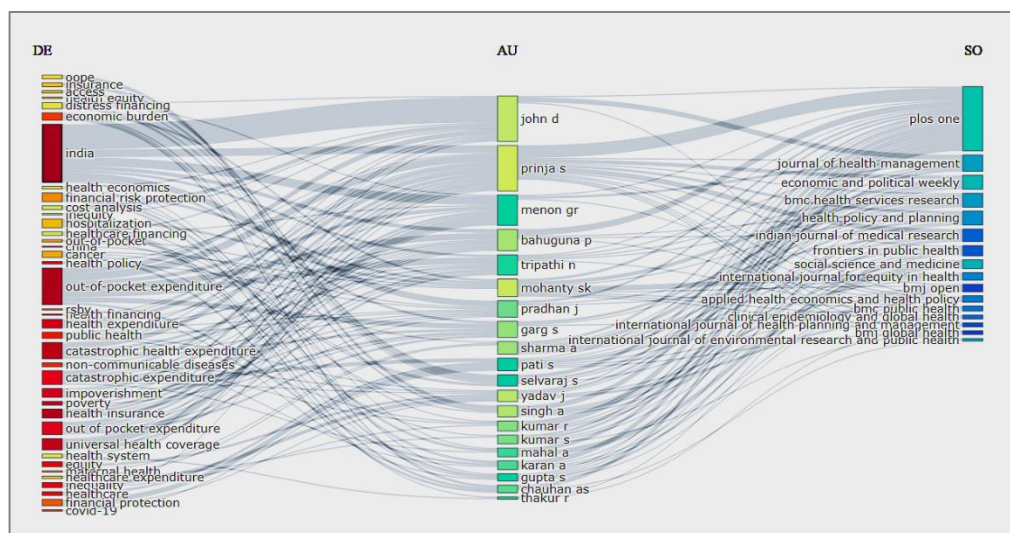


Figure 5: Associations between the sources (right), authors (center), and keywords (left) with healthcare-related OOPE, according to Scopus from 2003 to 2023

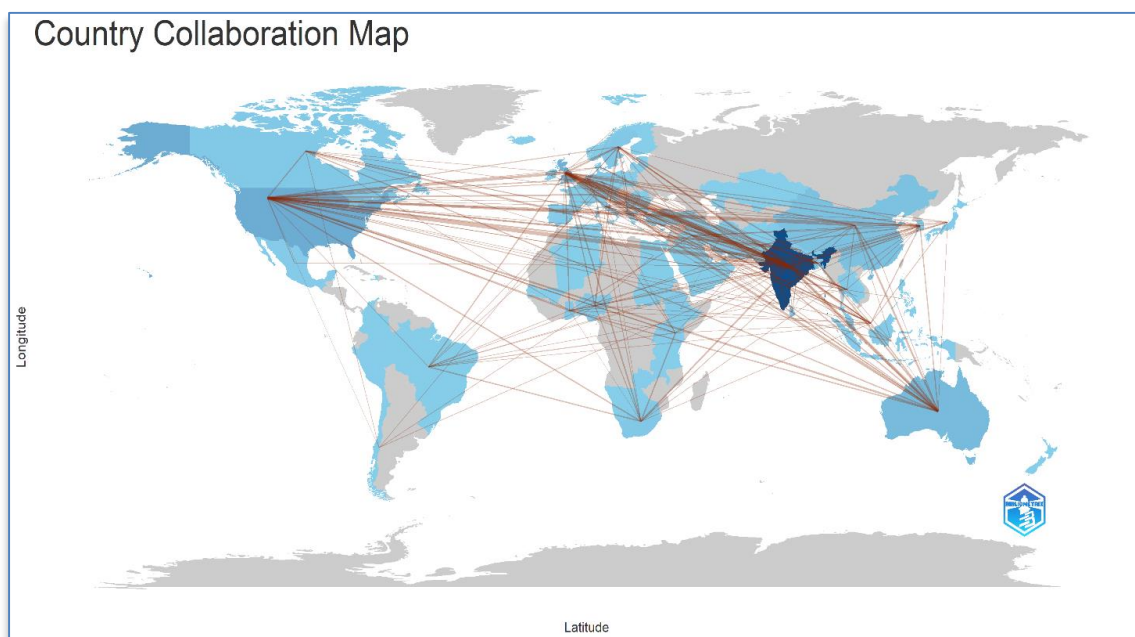


Figure 6: Countries collaboration map of the authors

The top 10 worldwide cited research articles about out-of-pocket healthcare expenditure are mentioned in Table 6. A literature review by Balarajan et al. (2011) is the document with the highest global citation count with total citations and total citations per year being 620 and 44 approximately in count. A research paper by Wirtz et al., (2017) is the second-highest cited document (365 total citations), followed by Prasad et al. (2017), Garg et.al., (2009), Baru, (2010), and so forth.

Table 6: Top 10 globally cited documents about out-of-pocket healthcare expenditures

	Title	Year	Source	Total Citation	TC per Year
1	Health Care and Equity in India	2011	The Lancet	620	44.29
2	Essential Medicines for Universal Health Coverage	2017	The Lancet	365	45.63
3	The High Price of Anticancer Drugs: Origins, Implications, Barriers, Solutions	2017	Nature Reviews Clinical Oncology	277	34.63
4	Reducing Out-of-Pocket Expenditures to Reduce Poverty: A Disaggregated Analysis at Rural-Urban and State Level in India	2009	Health Policy and Planning	261	16.31
5	Inequities In Access to Health Services in India: Caste, Class and Region	2010	Economic & Political Weekly	205	13.67

6	The Impoverishing Effect of Healthcare Payments in India: New Methodology and Findings	2010	Economic & Political Weekly	189	12.60
7	Insured Yet Vulnerable: Out-Of-Pocket Payments and India's Poor	2012	Health Policy and Planning	183	14.08
8	Impact Of Noncommunicable Disease Multimorbidity on Healthcare Utilisation and Out-Of-Pocket Expenditures in Middle-Income Countries: Cross-Sectional Analysis	2015	Plos One	176	17.60
9	Extending Health Insurance to The Poor in India: An Impact Evaluation of Rashtriya Swasthya Bima Yojana on Out-Of-Pocket Spending for Healthcare	2017	Social Science and Medicine	168	21.00
10	Assuring Health Coverage for All in India	2015	The Lancet	165	16.50

Source: Scopus database (2003-2023)

4. DISCUSSION

Even though the nation has made significant strides toward establishing a robust healthcare system, out-of-pocket healthcare expenses remain a substantial portion of healthcare sector financing. This explains why, from 2003 to 2023, academic production on out-of-pocket expenses has grown progressively. This study's main objective was to evaluate the last 20 years' OOP-related healthcare publication trends. Using specific inclusion-exclusion criteria, 858 journal publications were included in the present analysis. With the help of the Scopus database, the bibliometric results were compiled for the accessible publications on out-of-pocket healthcare expenditures from 2003 to 2023. Figure 7 displays the number of publications every four years. A total of 28 papers were published between 2003 and 2007, which dropped to 22 papers between 2007 and 2011, after which, research indicates that the number of publications rose yearly. This increase can be the result of changes in the health reforms as well as the introduction of certain government health policies such as the Pradhan Mantri Jan Dhan Yojana (PMJDY), Jan Arogya Revolution, Draft National Health Policy (2014) leading to the formation of National Health Policy (NHP), Ayushman Bharat (PMJAY), etc. The findings are in line with Patel et al., (2015), Prinja et.al., (2017), Govt. of India (2017), National Health Authority (2019).

India, Australia, the US, the UK, Bangladesh, China, Iran, Switzerland, and Germany appear to be at the forefront of OOP health research globally, as evidenced by their contributions to most publications and citations received. India spent a meager 1.9% of its GDP on health as of the fiscal year 2022–2023. India's total health expenditure is anticipated about 3.8 percent of GDP, according to the budget for 2024. India's healthcare system is mainly financed by OOP payments borne by the people, as the country has one of the lowest public health expenditures. Collaboration with the private sector is demanded to improve healthcare delivery. Public-private collaborations can increase effectiveness and improve the accessibility of high-quality healthcare. Expand coverage under health insurance programs funded by the government. Citizens pay less out of pocket as a result, while equitable availability of healthcare is encouraged. The Economic Survey 2023 reports that from 28.6% in FY14 to 40.6% in FY19, the government's portion of total health expenditures (THE) has grown over time. Even so,

OOPE is the highest among the nations, accounting for 48.2% of total spending. The same is reported by Kumar, (2023), Shukla & Arora, (2023) and Gupta, (2024).

The most productive peer-reviewed journals in India about OOPE were Plos One, Economic and Political Weekly, Social Science and Medicine, Journals of Health Management, BMC Health Services Research, Health Policy and Planning, and Indian Journal of Medical Research. PLOS ONE is possibly appreciated by academics who investigate health-related issues because of its open-access format, dedication to rigorous peer review, and concentration on a variety of health-related themes. Similarly, these periodicals frequently cover economics and policy related to health. OOPE is an important part of healthcare financing, making it appropriate for these platforms. Additionally, these journals have a high impact factor. Other elements that define these journals as relevant sources include reaching a global audience, regional focus studies, and editorial procedures. In agreement with (Hassan, 2023).

Most of the research cooperation on out-of-pocket healthcare spending occurs amongst countries for example India, Australia, the US, the UK, etc. It was discovered that international collaboration is lacking in health-related research and that this should be encouraged. This is because international collaboration enhances the possibility that papers will be referenced and published in high-impact journals while also helping to improve the standard of their content. The same is reported by Falagas et.al., (2007). 'Out-of-Pocket Expenditure', 'Human', 'Health Care Cost', 'Health Insurance', 'Catastrophic Health Expenditure', 'Universal Health Coverage',

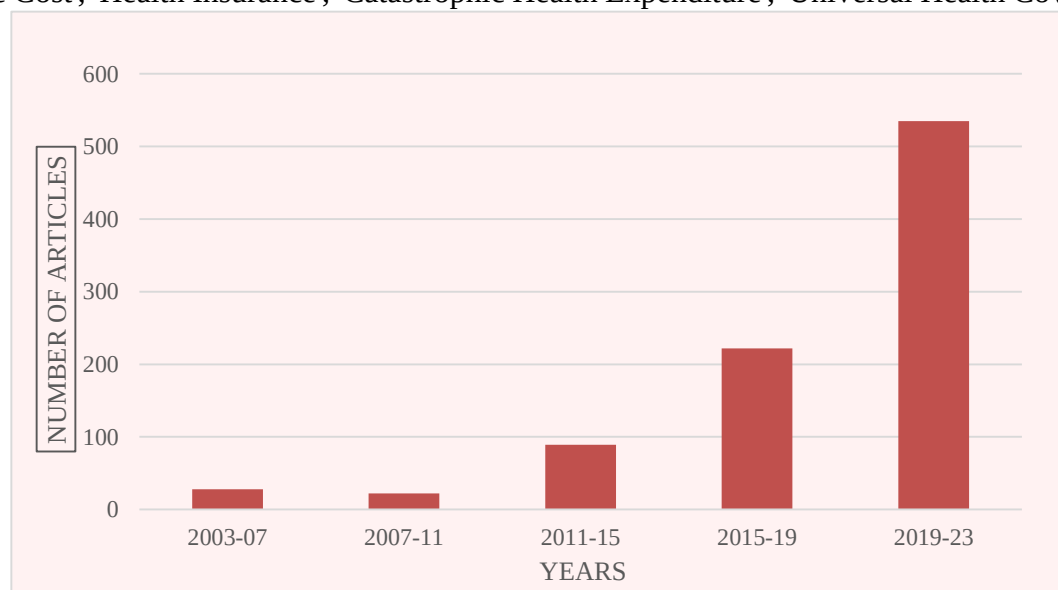


Figure 7: Evolution of the no. of documents published per 4 years on OOPE on health

and 'Poverty' were the most frequently occurring keywords in the OOPE on health articles. This may indicate the significance of these concerns in the nation. Thus, to gain knowledge on how to better the healthcare sector, it is important to conduct more in-depth research on this topic. Similar reports were given by Ambade et.al., (2022) and Nanda & Sharma (2023).

Of the fifteen most frequently cited articles, eight were research papers and seven were reviews. Balarajan et al., Wirtz et al., Prasad et al., and Berman et al. studies were among the most cited review papers. The academic papers by Garg et al., Baru et al., Shahrawat et al., Lee et al., etc received the most citations. The reason for high citations is that when research tackles real-world issues and provides possibilities, it gains value in the world of knowledge. The most referenced review article 'Health Care and Equity in India' by Balarajan et al., and the research article "Reducing out-of-pocket expenditures to reduce poverty: A disaggregated analysis at rural-urban and state level in India" were the most cited, this is because these papers contain

significant knowledge that helps explain healthcare disputes such as high OOPE, lack of health facilities, financial distress on Indian households, poverty, etc and highlight health financing, health reforms, and government policies in the healthcare sector. The results are consistent with Tahamtan et.al., (2016), Pixabay (2020), and Gillam (2021).

Ultimately, the bibliometric analysis exhibits several shortcomings. The publications in the analysis were from the Scopus database rather than databases like Web of Science, PubMed, etc. Scopus is among the most effective tools for conducting bibliometric analyses. Similar to what was reported by Falagas et.al., (2007). Also, it might be difficult to distinguish between articles that directly address out-of-pocket expenditure on health and those that only reference it. This study offers a thorough image of OOPE academic productivity on health in India when appropriate keywords are included, and its original subject matter is taken into consideration. Furthermore, providing a comprehensive picture that can be used to monitor trends in the OOP healthcare expenditure.

5. CONCLUSION

Scholarly publications on out-of-pocket healthcare expenses have steadily increased from 2003 to 2023 showing the importance of healthcare protection in the growth of OOPE on health-related academic studies in the fields of healthcare expenditure and universal health coverage. Examining the many aspects of OOPE health research in India and the key topics that often interest researchers in this field can be aided by quantitative analysis based on bibliometrics. Numerous researchers have written many research papers after discovering how crucial it is to boost government healthcare programs and mitigate high out-of-pocket medical expenses to strengthen the country's healthcare sector. However, there is an absence in the bibliometric analysis of academic publications. Thus, this study examined research publications on out-of-pocket expenses for healthcare using bibliometric analysis.

Using bibliometric analysis, academic research on OOPE on health enables us to better understand the economic implications of health expenses, locate vulnerable populations, and develop policies based on evidence to enhance access to healthcare and financial risk management. It came to light that there is a dearth of studies on topics such as disease-specific insights, the influence of poverty, inpatients and outpatients, rural-urban regions, etc., which is the further reason for more in-depth research in this field. Additionally, the way that the country finances healthcare needs to be reviewed. Individuals' OOP payments for health services can drive vulnerable groups into poverty. It's critical to lower out-of-pocket expenses (OOPE) in health systems. For that, the government should invest in enhancing public healthcare infrastructure, facilities, and services. This would lessen individuals' OOPE and lessen their dependency on costly private medical facilities. Additionally, raising awareness of health education and providing financial aid to vulnerable populations such as seniors, low-income households, and individuals with disabilities to cover healthcare costs. By continuously monitoring health expenditure patterns, performing research, and gathering data on OOPE, evidence-based policymaking requires precise information.

To properly address the issues faced by OOPE on health, a comprehensive approach comprising infrastructure development, policy changes, and boosting public awareness is crucial. Although this study has methodological accuracy. It also has some drawbacks that should be considered for further research. Only OOPE on health, which has an impact on Indian healthcare, has been examined in the present study. The findings drawn from the present study may not apply to other emerging economies and can only be broadly applied to India. The report will serve as a guide for policymakers and researchers looking to identify knowledge gaps in the area of out-of-pocket healthcare expenses in India.

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