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Conference Paper

Marketing Mix Strategy for Health Services Business: Bibliometric Analysis on Scopus Database

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ABSTRACT

Marketing is all the activities and processes that create, communicate, deliver, and offer value to clients, customers, colleagues, and the general public. Hospitals are semi-business healthcare organizations, which deal with marketing. Hospitals must use marketing to address problems and capitalize on opportunities, including the marketing mix. In finding the appropriate and most effective marketing plan to implement, any of the components of the marketing mix can be considered. Marketing has been considered the basis of strategic development in every industry around the world, regardless of whether the organization is engaged in products or services. This study aims to determine the development of marketing mix methods used by healthcare organizations from 2014 to 2023. The method used in this research is quantitative research with a literature study approach - analysis and visualization of literature using VOS viewer software. Data was collected by querying the Scopus database using relevant keywords, namely "healthcare" "marketing mix" AND "marketing management". The results showed an increase in publications on marketing mix over the past decade; in 2020, the highest number of research publications was found. The country that contributed the most to this theme was the United States and the authors who contributed the most were Eirod, J.K and Fortenberry, J.L. The discussion revealed that one of the aspects that companies can pay attention to in achieving the optimal and best marketing plan to implement is the marketing mix component. The conclusion of this study emphasizes the importance of the marketing mix as one of the most important factors for customers when making purchases. Suppose the company pays attention to what the customer is looking for. In this case, it is almost certain that the company will retain many opportunities to gain customers, and the goods offered will be well spent. The main limitation of this study is the use of data derived from the Scopus database.

Keywords: Healthcare, marketing mix, marketing management

Introduction

The concept of marketing has been considered as the core of strategic development in any industry across the globe regardless of whether the business is a product or service business. The marketing opportunity starts from understanding the needs of the flow of goods and services from producers to consumers by gaining a competitive advantage and achieving satisfaction and profit for the company (Mathew et al., 2022). Hospitals as businesses in the field of health services must have the right marketing strategies and programs to retain existing customers because finding new customers is more difficult and requires higher costs (Wijaya & Adriansyah, 2020). Today, the increasing public awareness of healthcare and the large number of healthcare providers make patient attraction, retention, and satisfaction more difficult than ever, as they can choose from a wider range of healthcare services. Given their direct experience at each stage of the care pathway, patients are in the best position to evaluate the care and services received, or whether or not their

needs and preferences are being met (Abedi et al., 1970). An appropriate marketing mix strategy is urgently needed to support the increase or stability of hospital revenues under these conditions (Irham, 2016).

Marketing is a set of processes for creating, communicating, and delivering value to customer relationships in a way that offers mutual satisfaction between customers and marketers, where marketing is one of the functions of an organization (Devi & Triyuni, 2021). According to marketing, brands have a very important role, one of which is to facilitate and connect consumer expectations when companies provide expectations of what consumers will get. Thus, it can be seen that there is an emotional connection created between consumers and product manufacturers through brands (Rahmah et al., 2018; Hariyati et al., 2020).

In determining the best sales strategy to use, companies can look at sales volume. This is important because consumer purchasing decisions are influenced by the marketing mix. The hospital marketing mix is a set of marketing tools used by hospitals to influence and know the response of service buyers (Farantika et al., 2019; Salsabila et al., 2023). If the company does not listen to its consumers, the company will have difficulty satisfying consumers and the products it sells will lose competition or decline. According to the opinion, of Kwol et al. (2020), Yanghoubian et al. (2020) the results of the 7P marketing mix factor analysis can help service businesses such as hospitality and so on to develop differentiation and positioning strategies for the products they manage. Therefore, the existence and implementation of a good marketing strategy can make or determine the success of selling a product. If the company's marketing strategy can sell products well and satisfactorily, it will affect the company's goal of increasing customer loyalty. Where the loyalty of each generation is very different, in the past loyal customers were measured by making regular repeat purchases, now loyalty can be measured in various ways such as consumers buying between product lines and services that refer to others and show immunity to competitor attraction (Agung, 2020; Gümüs, 2022). A strategy of marketing mix elements is necessary in medical organizations to increase the competitive advantage of primary healthcare institutions, and thus ensure their success (Budrevičiute et al., 2021).

This research using bibliometric analysis techniques aims to provide a broad overview of the topic of marketing mix strategies used in companies in the service sector during the period 2014 to 2023. The specific purpose is as a way to identify several questions related to the study of the topic "Marketing Mix Strategy for Health Services Business: A Bibliometric Analysis of the Scopus Database", namely: 1) who are the names of researchers who published scientific articles related to the topic, 2) what are the most popular keywords and the development of these keywords over the last ten years, 3) who are the most productive researchers over the last ten years, and which article publications have contributed the most or the top publications on research on the topic.

The results of this study are useful as important implications for academics, researchers, and professionals in the field of marketing as well as for owners of a business, especially in the service sector. Because with knowledge of the marketing mix strategy, especially for health service business actors, will be useful in optimizing the progress of their business. It is through research that the application of the marketing mix is indispensable for the success of their business and further researchers can use this literature study as a reference for broader research (Ravangard et al., 2020). In this study, bibliometric analysis was used with the help of the VOSviewer application to present a visualization of the results of data analysis from articles found in the process of this literature study (Cui et al., 2018; Yu et al., 2020; Luo et al., 2022).

Material and Methods

This study is structured using normative legal study methods, is a study performed by examining the sources of library materials (secondary data) which are used as the basis for the study, in the form of legislation and associated study reports and the issues raised. The primary source of the constitution used is the 1945 Constitution of the Republic of Indonesia, Constitution no. 1 of 1946 regarding the Criminal

The researcher used a quantitative descriptive method and a bibliometric approach in conducting this research. The unit of analysis used is scientific articles, and the research data sources come from scientific publications that review the marketing mix in the health service business. This research focuses on the marketing mix strategy in service companies by retrieving data using a database accessed from Scopus (www.scopus.com) in the period 2014 to 2023. This research integrates quantitative methodology with a literature review approach. Data for this study was sourced from the Scopus database using the keywords "health" "marketing" AND "mix" with have total of 655 articles and screening within the last 10 years (January 2014 - December 2023) and collected initial findings from 301 articles. The screening was done by limiting the scope to the field of Medicine and Health Professions and selecting document article types at the final publication stage from the journal sources. Selecting languages that exclusively used English. In the end, there were a total of 147 documents.

Like the research method of Nurfauzan & Faizatunnisa Faizatunnisa (2021), where this literature review research uses a bibliometric analysis approach and VOSviewer, bibliometric analysis in this study is useful for displaying in-depth trends in the research topic of marketing mix strategies in service marketing based on co-authorship which consists of the names of researchers, co-occurrence which consists of research keywords that appear on the topic of organizational diversity as well as keyword development for ten years and the last is about co-citation which is about the top ten documents that get the most citations (Nurfauzan & Faizatunnisa, 2021). The citations will be processed using the VOSviewer application, which has a function to display bibliometric maps in an easy-to-interpret way (Yu et a., 2020).

The data analysis method in this research uses quantitative descriptive approaches. The analysis process begins with data processing using the Scopus database through the *analyze* menu. From this menu, researchers obtained results in the form of statistical data or processed statistics presented in graphical form with image format (JPEG). In addition, Scopus also provides secondary data in CSV format. Furthermore, researchers processed the data using Ms. Excel.

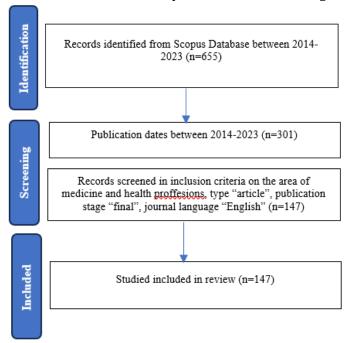


Figure 1. The steps of searching and selecting articles.

Results and Discussion

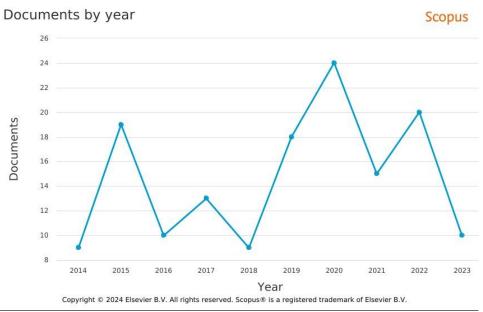
This research aims to analyze the sources of literature studies that are related and have a relationship with the keywords "marketing mix for service businesses". Several articles on the

topic of marketing mix strategies in business companies in the service sector in the period 2014 to 2023 are presented in three forms of presentation which include, coauthor ship which discusses the research network and the name of the researcher, co-occurrence which examines keywords and their development, and citations which examine the researchers and article documents that have the most influence on research on the topic of "marketing mix in the field of health services". The database used in this study was taken from the Scopus source (www.scopus.com), besides that the journal articles selected in this study were articles published in English. Researchers use a minimum occurrence limit of 1 and 2 for presenting the results of co-authorship and co-occurrence analysis so that the research displayed on the network is more diverse. The data that has been stored in RIS form is then analyzed with VOSviewer software to display the co-authorship and co-occurrence network map.

Table 1. Trends in scientific publications on healthcare business marketing mix

		0
Year of Publication	Number of Publications	Percentage (%)
2014	9	6.12
2015	19	12.93
2016	10	6.80
2017	13	8.84
2018	9	6.12
2019	18	12.24
2020	24	16.33
2021	15	10.20
2022	20	13.61
2023	10	6.80
 Total	147	100

Source: Processed secondary data, 2024



Source: Scopus.com (2024)

Figure 2. Trends in Healthcare Marketing Mix Scientific Publications

The most Scopus-indexed scientific publications of the Health Services Business Marketing Mix occurred in 2020, namely 24 publications (16.33%). The next order of the number of publications is 2021 with 20 publications (13.61%); 2015 with 19 publications (12.93%); 2019 with 18

publications (12.24%); 2021 with 15 publications (10.20%), 2017 with 13 publications (8.84%), 2016 and 2023 with 10 publications (6.80%), and 2014 and 2018 with 9 publications (6.12%). Figure 1 shows more clearly the trend of scientific publications on the health business marketing mix

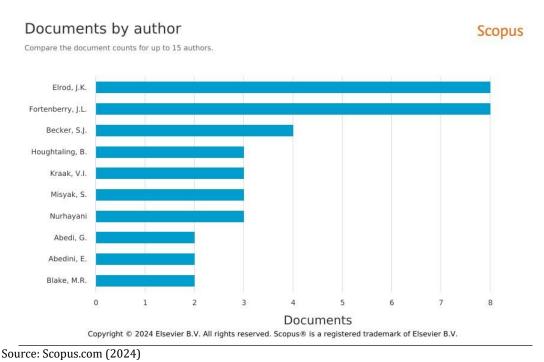
Number of Productive Researchers Conducting Scientific Publications on Marketing Mix of Health Services Businesses

The search results show that of the 147 publications on the Marketing mix of health services businesses indexed in the Scopus *database* from 2014 - 2023, ten researchers have productively published research results on the Marketing Mix of the Health Services Business.

Table 2. Number of productive researchers with scientific publications on Sharia hospitals

Researcher Name	Number of Publications
Elrod, J.K	8
Fortenberry, J.L	8
Becker, S.J.	4
Hougtaling, B	3
Kraak, V.J.	3
Misyak, S	3
Nurhayani	3
Abedi. G	2
Abedini, E	2
Blake, MR	2

Source: Processed secondary data, 2024



 $Figure\ 3.\ Number\ of\ productive\ researchers\ with\ scientific\ publications\ about\ healthcare\ business\ marketing\ mix$

Table 3 shows that Elrod, J., Fortenberry, J.L. made eight scientific publications, Becker, S.J. made four scientific publications, Hougtaling, B., Kraak, V.J, Misyak, S., and Nurhayani made three scientific publications. Abedi, G.; Abedini, E.; Blake, M.R. have made two scientific publications.

Figure 4 shows more clearly the number of productive researchers who have made scientific publications on the Marketing Mix of the Health Service Business.

Core Journal of Scientific Publication at Healthcare Business Marketing Mix

The search results show that of the 147 publications on Health Business Marketing Mix indexed in the Scopus *database* from 2014 - 2023, the publications were published in 5 journals. Table 3 shows the order of the five journals with the highest number of publications, namely:

Table 3. Scientific Journal Publications on Health Business Marketing Mix

Journal Name	Number of
	publications
BMC Healthcare Research	10
International Journal of Environmental and Public Health	7
Research	
Obesity Review	5
BMC Public Health	3
Indian Journal of Public Health Research and Development	3

Source: Processed secondary data, 2024

The order of the journals is BMC Health Services Research with 10 publications, International Journal of Environmental Research and Public Health with 7 publications, Obesity Reviews with 5 publications, BMC Public Health with 3 publications, and Indian Journal of Public Health Research and Development with 3 publications. Figure 3 clearly shows the scientific journal publications on the Marketing Mix of Healthcare Businesses.

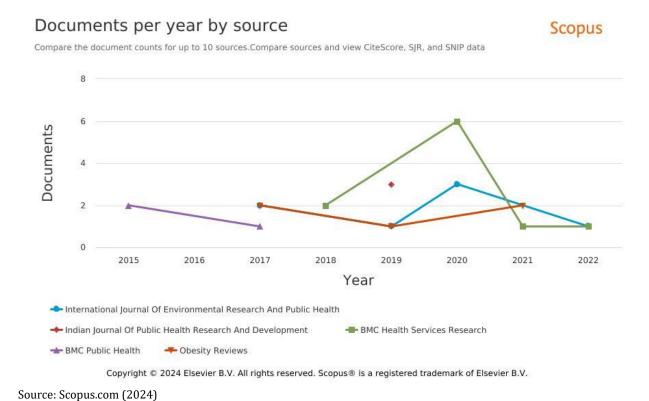


Figure 4. Journal of Scientific Publications on the Marketing Mix of Healthcare Businesses.

Number of Scientific Publications of Healthcare Business Marketing Mix by Affiliation / Institution

The search results show that of the 147 publications on Islamic hospitals indexed in the Scopus *database* from 2014 - 2023, there are ten affiliates/institutions that are productive in publishing research results on the Marketing Mix of the Health Services Business.

Table 4. Affiliations/Institutions that are Productive in Scientific Publications Affiliations/Institutions that are Productive in Scientific Publications at Healthcare Business Marketing Mix

Name of Affiliation/Institution	Number of Publications
Willa-Knighton Health System	9
Lousiana State University at Shreveport	9
University of North Carolina	5
Virginia Polytechnic Institute	5
Brown University	4
Tehran University of Medical Sciences	4
London School of Hygiene & Tropical	4
Hasanuddin University	4
University of Manchester	3
University of Wollongong	3

Source: Processed secondary data, 2024

Healthcare Businesses

Based on the table above, it can be explained that the affiliates/institutions that are productive in making scientific publications on Marketing Mix of Health Services Business from the top order are Willa-Knighton Health System and Lousiana State University in Shreveport with 9 publications, then the University of North Carolina and Virginia Polytechnic Institute with 5 publications, Brown University, Tehran University of Medical Sciences, London School of Hygiene & Tropical, Hasanuddin University with 4 publications, The University of Manchester and University of Wollongong with 3 publications, Tropical, Hasanuddin University with 4 publications, The University of Manchester, and University of Wollongong with 3 publications, Figure 5 clearly shows the affiliations/institutions that are productive in publishing research results on the Health Business Marketing Mix.

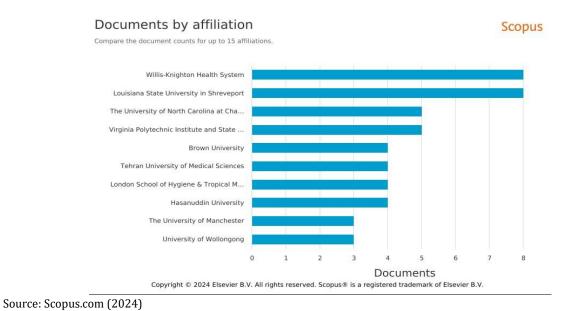


Figure 5. Productive Affiliations/Institutions in Publishing Research Results on the Marketing Mix of

Number of Scientific Publications on Healthcare Business Marketing Mix by Country

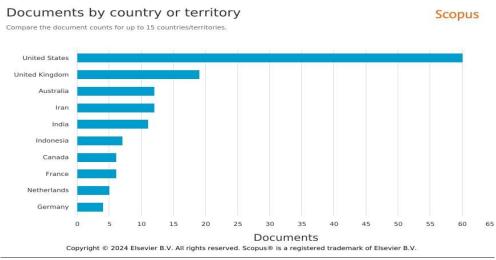
The search results show that out of 147 publications about Health Business Marketing Mix indexed in the Scopus *database* from 2014 - 2023, 10 prolific countries published research results about Health Business Marketing Mix.

Table 5. Countries that are productive in scientific publications at healthcare business marketing mix

Country	Number of Publications
United States of America	60
United Kingdom	19
Australia	12
Iran	12
India	11
Indonesia	6
Canada	6
France	6
Netherlands	5
Germany	4

Source: Processed secondary data, 2024

Based on the table above, it can be explained that the order of countries that are productive in conducting scientific publications on the Marketing Mix of the Health Services Business from the top is the United States with 60 publications, the United Kingdom with 19 publications, Australia and Iran with 12 publications, Indonesia, Canada, and France with 6 publications, the Netherlands with 5 publications, and Germany with 4 publications. Figure 6 clearly shows the countries that are productive in publishing research on the Marketing Mix of Healthcare Businesses.



Source: Scopus.com (2024)

Figure 6. Scientific publication by country in publishing research results on the marketing mix of healthcare businesses

Number of Scientific Publications on Health Business Marketing Mix by Subject

The search results show that out of 147 publications on Marketing Mix of Healthcare Business indexed in the Scopus *database* from 2014-2023, there are 10 subjects with the highest order.

Table 6. Subject Scientific Publication on Health Business Marketing Mix

Subject	Number of Publications
Medicines	116
Nursing	18
Pharmacology, Toxicology, and Pharmaceuticals	16
Environmental Science	11
Health Professions	10
Agricultural and Biological Sciences	9
Psychology	9
Social Science	7
Biochemistry, Genetics, and Molecular Biology	6
Business, Management and Accounting	4

Source: Processed secondary data, 2024

Based on the table above, it can be explained that the subjects of scientific publications on Healthcare Business Marketing Mix with the most publications are Medicine with 116 publications, Nursing with 18 publications, Pharmacology, Toxicology, and Pharmaceutics with 16 publications, Environmental Science with 11 publications, Health Professions with 10 publications, Agricultural and Biological Sciences and Psychology with 9 publications, Social Sciences with 7 publications Biochemistry, Genetics, and Molecular Biology with 6 publications, Business, Management, and Accounting with 4 publications. Table 6 shows more clearly the number of scientific publications on Healthcare Business Marketing Mix by subject.

Author collaboration analysis

Collaboration in research is desirable, so cooperation between researchers and institutions is needed in terms of ideas, funds, facilities, and infrastructure, as well as opportunities to share knowledge and certain techniques in science (Rohanda et al., 2019). This study found several clusters and items. Cluster One is red with 35 items, Cluster Two is green with 25 items, Cluster Three is blue with 20 items and Cluster Four is yellow with 15 items. The visualization of the authors' collaboration in this research can be seen in Figure 7.

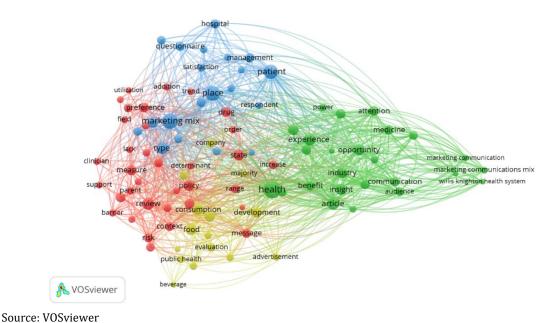


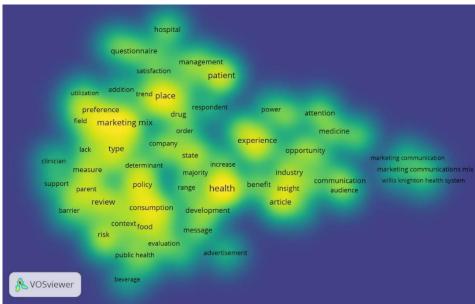
Figure 7. Visualization of Author's Collaboration

Keyword analysis

The keyword analysis in this study is from 182 keywords, then selected with the number of keyword occurrences of at least 2 so that 23 keywords are obtained that have a strong relationship. The keyword most used by the author is adult. Visualization of keyword analysis in this study can be seen in Figure 8.

Based on Figure 8, it can be seen that the search results using the marketing mix keywords, and the development map of research publications on the marketing mix indexed in the Scopus *database* from 2014 - 2023 form 4 clusters. Cluster 1 is red and consists of 35 keywords, with the top details being addition, adoption, awareness, and barrier. Cluster 2 is green and consists of 25 keywords with the top details being advertising, article, attention, and audience. Cluster 3 is blue and consists of 20 keywords, with the top details being attitude, choice, condition, and health services.

VOSviewer can display keyword density as indicated by *density visualization*. The higher keyword density illustrates that the research topic in that field has been widely researched. Conversely, if the density is low, then it can be an opportunity for new research. The complete keyword density can be seen in Figure 9.



Source: VOSviewer

Figure 9. Keyword density visualization

This research discusses the perceptions of several authors on the topic of the marketing mix in the service sector to analyze related topics in more depth using 147 articles from the Scopus database. By using the data criteria taken, namely the period 2014 to 2023, it is easy to get the latest data for related topics. The author considers this research important as a literature study to create uniformity and agreement on the theme of the marketing mix, especially in the field of services, both traditional (4P) and (7P) so that there are no gaps such as the opinion of Salman et al. (2017) that there are often several gaps in the literature relating to and having a relationship with the use of marketing mix models in times of crisis. Crises can occur in various forms. Therefore, this study aims to cover and clear up the gaps in the literature relating to marketing mix models that can be used in various times including normal times and crisis times.

The bibliometric analysis using VOSviewer on co-occurrence shows whether there has been keyword development in articles on the topic of the marketing mix in services in the last ten years. The research findings from the results of this analysis are that there is no significant keyword development on the topic of the marketing mix in the service sector. With this research, it is hoped

that in the future there will be many studies on the topic of marketing mix in services, especially for researchers, especially in Indonesia, to link all the findings in their research to produce more varied keywords to facilitate reference searches in related fields.

Conclusion

Marketing is a series of processes to create, communicate, and deliver value to customer relationships in a way that offers mutual satisfaction between customers and marketers. To achieve the right marketing strategy and appropriate to implement, companies can look at the marketing mix factor. This is important because the marketing mix is taken into consideration by consumers to make decisions to purchase products and services. If the company cannot understand what consumers want, then the company will certainly be abandoned by consumers.

This research discusses the perceptions of several authors related to the topic of marketing mix in the service sector to analyze related topics in more depth using 147 articles from the Scopus database. By using the data criteria taken, namely the period 2014 to 2023, it is easy to get the latest data for related topics. Therefore, this study aims to resolve some gaps in the literature related to marketing mix models that can be used at various times including normal and crisis times. From the bibliometric analysis of the literature study, there are three aspects analyzed using the VOSviewer application.

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