



EXAMINING THE EFFECTS OF COVID-19 ON HEALTH SERVICES MARKETING RESEARCH WITH A BIBLIOMETRIC ANALYSIS

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Abstract

Aim: The Covid-19 pandemic has triggered serious socio-economic, social, and political crises as well as an important public health crisis in infected countries. The studies in the literature before and after the Covid-19 pandemic were examined with bibliometric analysis method by considering the Coronavirus from the perspective of health services marketing. Thus, the articles written in the field of health care marketing from the past to the present were examined in detail, and it is aimed to contribute to the development of the field and further research

Methods: The bibliometric analysis method was used to uncover the current situation in health care marketing and to determine research gaps.

Findings: A total of 1669 studies were identified using the keywords "health service and marketing," "health management and marketing," "health marketing," and "healthcare and marketing".

This research examines studies published since 1981, when the first study in health marketing was conducted. Before the Covid-19 pandemic, medical tourism, social marketing, and pharmacovigilance were among the most common keywords used by authors.

Conclusion: In the studies carried out during the Covid-19 pandemic, it is seen that the keywords ‘hospitals, marketing communication, machine learning, and artificial intelligence’ are preferred, respectively.

Keywords: Health Marketing, Health services marketing, Covid-19, Bibliometric analysis

Introduction

The development of health care marketing shows parallelism with the political, social, and economic structural changes in the world and with marketing development. Health care marketing refers to the systematic implementation of marketing principles in the field of heterogeneous and complex health (Crié and Chebat, 2013). Healthcare marketing is a concept directly linked to the management of any health institution or service to ensure quality and effectiveness. It determines the needs of patients and healthy people to reach the desired level of satisfaction in a particular health service. In addition, the pharmaceutical, biotechnology, and medical device industries are the main area of healthcare marketing (Stremersch, 2008). Health marketing uses commercial marketing and strategies to promote products such as evidence-based health information and treatments. The ultimate goal of health marketing is to benefit consumers and the public, while the eventual aim of commercial marketing is to advantage the product sellers and shareholders (Bernhardt, 2006). Health marketing mainly developed from two disciplines, which are social marketing and health improvement. Social marketing, which uses commercial marketing principles and techniques to influence an audience, is a consumer-oriented health marketing component. Thus, individuals can voluntarily accept, reject, modify or abandon an act of their interests, groups, or society (Pralea, 2011; Chichirez and Purcărea, 2018).

The Covid-19 outbreak caused by the SARS-Cov-2 coronavirus was declared a pandemic by the World Health Organization on March 11, 2020 (WHO, 2020). Covid-19 can be thought to be a global health crisis that affected the world after World War II, such as economy, society, culture, politics, education, tourism, and security (Arslan and Karagül, 2020). In other words, the

Covid-19 pandemic is considered the most important global health disaster of the century and the biggest challenge facing humanity since World War II. (Chakraborty and Maity, 2020).

The Covid-19 pandemic is still being fought worldwide, and approximately 240 million people worldwide have been infected, 5 millions of whom have died since October 2021 (WHO, 2021). Although it is known that the main transmission source of Covid-19 is the droplet pathway, contact of infected objects with the mouth, nose, and eyes after manual contact is also considered transmission (Evren and Us, 2020). The most effective way to protect against Covid-19 is not to be exposed to the virus. Therefore, the use of personal protective equipment such as masks, social distancing, and isolation measures have been adopted. Accordingly, countries have developed various policies that create radical changes in social life and business life to fight against the pandemic (Deb et al., 2020). These measures include mandatory and voluntary quarantine practices, flight restrictions, closing borders, working online at home for appropriate sectors, flexible working, suspension of education or distance education, suspension of artistic and sports activities, closure of public areas such as shopping malls, restaurants, etc. (Çöl and Güneş, 2020). In addition, some hospitals have been converted into pandemic hospitals to use health resources effectively, elective procedures and non-emergency surgeries have been postponed, and the number of outpatient clinics has been reduced to reduce the crowds in hospitals (Diaz et al., 2020; Hacikerim Karşıdağ et al., 2020). Maintaining physical distance, isolation, and stay-at-home measures are important in keeping the health system's capacity (Gostin and Wiley, 2020). In the effective fight against the pandemic, citizens must comply with Covid-19 precaution, be trained and informed. At this point, public spotlights used as a tool in social marketing activities have played an important role in informing the community and adapting to pandemic conditions. In the Covid-19 pandemic, it has been observed that public spotlights are used in areas such as awareness, compliance with hygiene rules, home care, disease monitoring of national and international institutions such as WHO, CDC, Ministry of Health (Yeşilyurt, 2021).

With an introduced product, intensive promotional work is carried out to counter customers' doubts about the quality of the product. Covid-19 vaccines are new brands of consumer health technology that have been introduced to the market. From a marketing perspective, these are new products designed and purchased by various governments around the

world. Currently, it is known that there are various concerns and anti-vaccination concerns about vaccines around the world (Erkekoğlu et al., 2020). Like other consumer health products launched, pharmaceutical companies, healthcare organizations, and even policymakers should communicate and position the vaccine as an effective option to normalize the ideas about vaccines. In other words, vaccines should be marketed (Mogaji, 2021). In line with this information, the studies in the literature before and after the Covid-19 pandemic were examined with bibliometric analysis method by considering the coronavirus from the perspective of health services marketing. Thus, the articles written in the field of health care marketing from the past to the present were examined in detail, and it is aimed to contribute to the development of the field and further research. There are few bibliometric analyses on health care in the literature. A study conducted by Butt, Iqbal, & Zohaib (2019) identified the most prolific cited journals and authors who published in these journals. Therefore, this study will address the gap in this field in the literature, thus providing a broad overview of the field and guiding potential researchers in the same field.

1. Research Methodology

Literature reviews aim to show the current status of the subject by identifying the studies on the subject and highlighting the research gaps for subsequent studies (Tranfield, Denyer, and Smart, 2003). The bibliometric analysis method was used in this study to emphasize the current situation in health care marketing and to determine research gaps. Bibliometric analyses as quantitative analysis (Broadus, 1987) offer the opportunity to synthesize literature in detail in all areas (Zupic and Cater, 2015). Accordingly, studies published in the Journals of the Social Science Citation Index (SSCI) in the Web of Science database have been examined. A total of 1669 studies were reached using the keywords "health service and marketing," "health management and marketing," "health marketing," and "healthcare and marketing" in this research, which examined the studies published in the 40 years since the first study on health care marketing was conducted in 1981.

In the Web of Science database, searches were done under the heading "topic" for the Social Science Citation Index studies. A total of 1669 studies were reached by selecting the "article" option (excluding congress papers, books, book chapters, etc.) for predetermined

keywords. Search results are stored to include all basic article information such as title, abstract, author(s), keywords, references, and more.

2. Analysis

Studies on health care marketing published in the Web of Science database journals and scanned in the SSCI index have been examined. First, the distribution of these studies by year is shown in Figure 1.

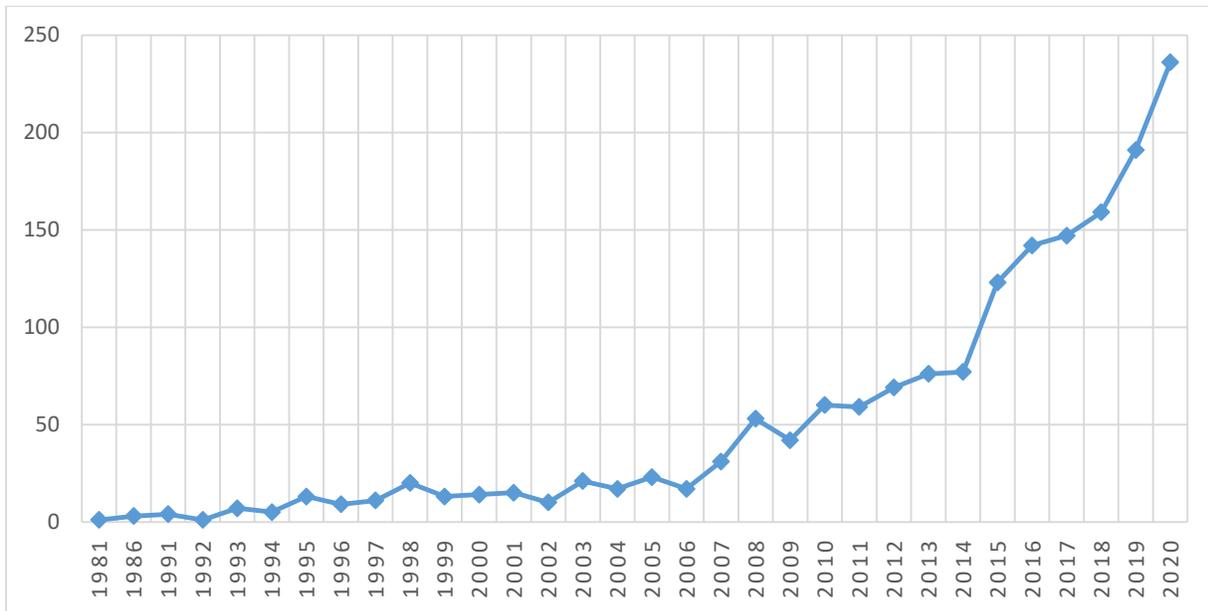
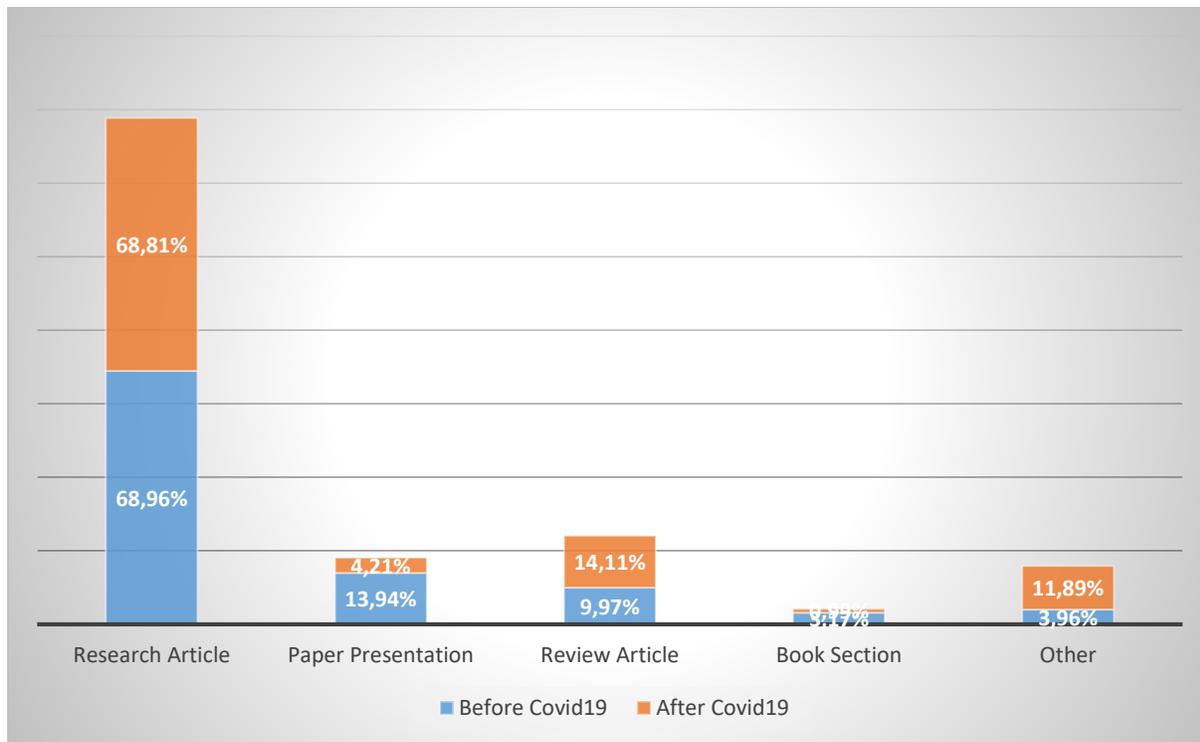


Figure 1. Yearly representation of studies on health care marketing

When the data in X are examined, it is seen that studies on health care marketing have been in the literature since 1981. Health care marketing studies, which have been increasing in general since the early 2000s, have gained a very high momentum since 2015 and reached the highest number with 236 studies in 2020. As of October 1, 2021, the Web of Science database contains 127 studies on healthcare marketing.

The types of studies carried out before and after March 11, 2020, which were declared a pandemic by the World Health Organization to determine how the Covid-19 outbreak caused by the SARS-CoV-2 virus affected the literature of health care marketing, were examined and shown in Figure 2.



Graphic 1. Comparison of studies before and during Covid19

The bar chart in Graphic 1 shows percentage comparisons of studies conducted from 1981 to March 2020 and from March 2020 to October 1, 2021. According to this graph, it is noted that research articles before and after Covid-19 remain at the same rate (the number of research articles is divided by the total number of publications). In post-epidemic studies, although the number of paper presentation decreased by about 1/3, review articles showed an increase of about 50%.

Bibliometric analysis was carried out on healthcare marketing to determine the keywords used in the publications made before the Covid-19 pandemic. A bibliometric map showing the frequency of keywords used at least three times is shown in Figure 3.

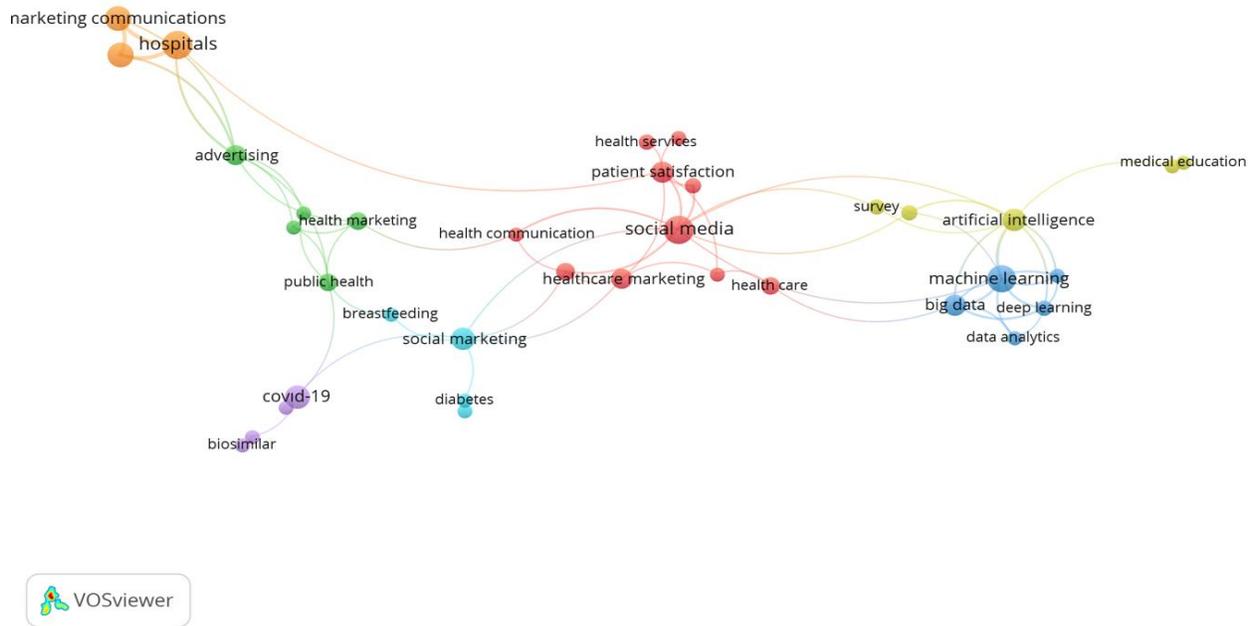


Figure 3. Keywords used in studies after the Covid-19 pandemic was declared

Looking at the bibliometric map in Figure 3, it is seen that the most commonly used keywords in the post-Covid-19 pandemic are hospitals, marketing communication, machine learning, and artificial intelligence, respectively.

In the nearly 40 years from 1981 until October 1, 2021, when the data was collected, the keywords used in the studies on health care marketing were determined and shown in Figure 4.

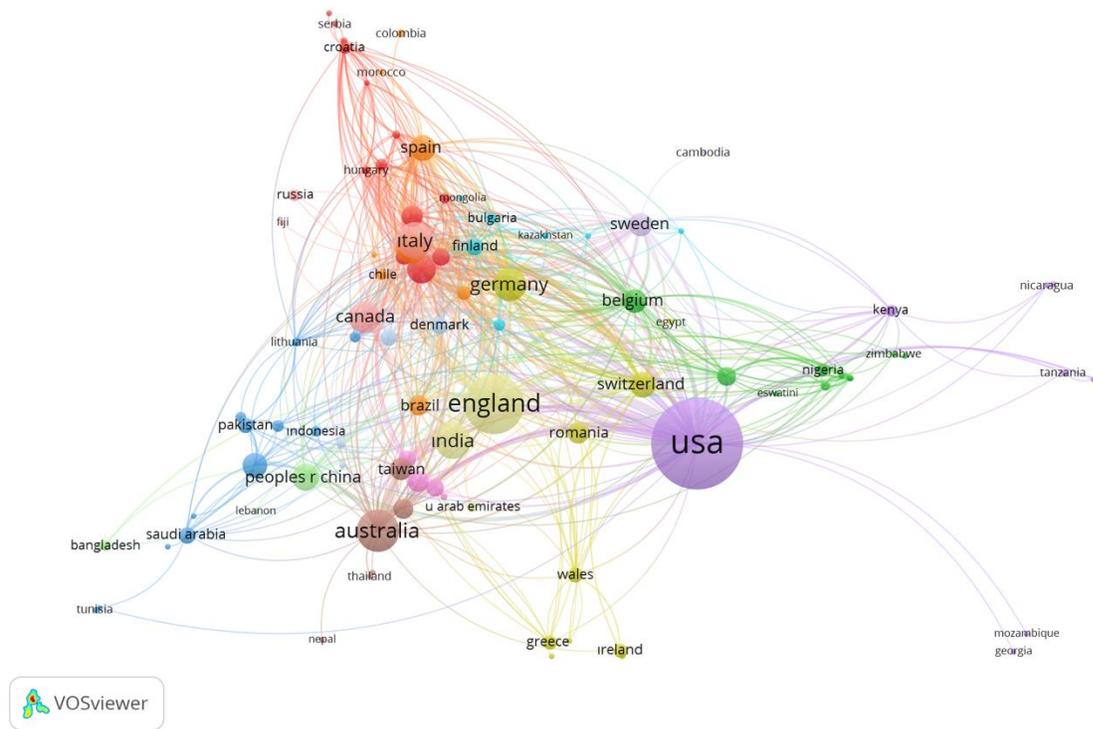


Figure 5. Countries where studies have been carried out since 1981

When looking at Figure 5, which includes mapping for countries, there are studies in health care marketing in a total of 110 different countries. The United States ranks first among these countries, with 587 publications. Following the US, the UK is second with 255 broadcasts, and Australia is third with 124 broadcasts. India with 95 publications and Italy with 93 publications follow the top three countries. Turkey hosted 24 articles published in the Web of Science database and published in journals scanned in SSCI indexes.

Finally, the results of the bibliometric analysis to determine the universities where the researches were carried out are shown in Figure 6.

science-based strategies to create, communicate and present health information and interventions (Lovell and Jochen, 2004). To pioneer in the market share of patients in the health sector, it is becoming increasingly important for health professionals to provide high-quality healthcare experiences. As the quality of service improves, patient satisfaction will also tend to increase, followed by behavioral intentions (Platonova, Kennedy, and Shewchuk, 2008). Over time, patient and customer concepts have been discussed, and the topics of patient satisfaction in the health sector (Gill and White, 2009; Tosun and Söyük, 2019), patient experience (LaVela and Gallan, 2014; Çamlıdere and Söyük, 2019), patient loyalty (Ramli and Sjahruddin, 2015), customer relationship management (Chahal, 2010), public relations (Valjak and Draskovic, 2011) service improvement (Schweikhart, Strasser and Kennedy, 1993) and brand (Chahal and Bala, 2012) have received attention. In addition, social marketing is an important tool in the delivery of health services. This tool aims to help people change their behavior to be healthier or to improve society in some way. Community and consumer solidarity are necessary for health programs or projects to be successful. The four principles of social marketing lead policymakers and healthcare providers to successfully plan and implement health programs (Aras, 2011). One of the issues closely related to health care marketing is health tourism because the foundations of health tourism are based on target market determination, promotion, branding, and, in fact, marketing of health services (Tontuş, 2018; Tosun et al., 2020).

Since 1981, studies on health care marketing, which entered the international literature, have been encountering increasing interest in the nearly 40-year period. In this study, studies in the Social Science Citation Index Journals were examined in the Web of Science database during the 40 years. In this way, it is aimed to make a general map of international studies on healthcare marketing. A total of 1669 studies using the keywords "health service and marketing," "health management and marketing," "health marketing," and "healthcare and marketing" were distributed by year, comparison of research types before and during Covid19, keyword grouping, country grouping, and university grouping were performed.

As a result of the research, it can be said that health care marketing studies, which have a place in the international literature since 1981, gained a very high momentum as of 2015 and reached the highest number with a total of 236 studies in 2020. The comparison of research types

before and during Covid-19 and the ratio of articles prepared by academics remains almost the same rate. In contrast, the difference seen in the congress papers and review articles is noted. Due to the impact of the SARS-Cov-2 outbreak, scientific congresses could not be held in the first moments of the pandemic, so the number of congress papers can be considered a result that is expected to decrease by about 1/3. Another noteworthy point in this comparison is the approximately 50% increase in the number of research articles. It can be said that this situation is related to the fact that academics who had to work at home at the time of the epidemic turn to secondary data.

Before the Covid-19 pandemic, medical tourism, social marketing, and pharmacovigilance were among the most common keywords used by authors. Medical tourism is one of the most important issues in health care marketing. When the studies in this field are examined, the importance of developing marketing strategies that will effectively ensure the competitive advantage of countries is emphasized (Rerkrujipimol and Assenov, 2011; Sousa and Alves, 2019; Zarei et al., 2019). As part of social marketing, healthcare marketing should voluntarily influence individuals through various social programs in a way that prompts them to accept, reject, change or abandon a behavior to create a healthier lifestyle. In this respect, social marketers are primarily focused on reducing obesity in individuals, encouraging smoking cessation, walking, and cycling, while in Africa, the focus is on solving some important health problems such as malaria prevention, poliomyelitis eradication, reducing infant mortality, and stopping the spread of HIV/AIDS. Social marketing, which acts according to individual behavior change, can also affect those who decide public policies with positive effects on social change (Chichirez and Purcărea, 2018). Another area that often works in healthcare marketing is pharmacovigilance (Mammì et al., 2013; Nwaiwu et al., 2016; Beninger, 2018). The pharmaceutical industry is under pressure to improve the scientific quality of its decisions regarding the benefits and risks of its products while ensuring compliance with acceptable marketing standards (Edwards, 2004). Pharmacovigilance has been defined as the process of identifying and responding to drug safety issues and has grown significantly as a discipline in the last 30-40 years (Talbot and Nilsson, 1998). Pharmacovigilance plays an important role in the health system by evaluating, monitoring, and discovering interactions between drugs and their effects on humans. Pharmaceutical and biotechnological drugs are designed to cure, prevent or

treat diseases; however, adverse drug reactions, in particular, have risks of causing serious harm to patients (Suke et al., 2015). The increase has influenced increased interest in this field at the rate at which serious adverse drug reactions are discovered after marketing a medical product. This point is also important that pharmacovigilance studies are carried out after the product is marketed.

In the studies carried out in the Covid-19 pandemic, it is seen that the keywords hospitals, marketing communication, machine learning, and artificial intelligence are preferred, respectively. This difference between keyword analyses and the results reached in this study is also reciprocated in the literature. The studies on hospitals in the Covid-19 pandemic are among the leading studies in health care marketing. When these studies are examined, it is seen that the expanded marketing mix (7p) is focused on its application and effects in hospitals (Ravangard et al., 2020; Kusumapradja, 2020; Djawoto and Soekotjo, 2020; Siripipatthanakul and Puttharak, 2021). Another of the studies carried out in recent years is that effective communication with existing and potential patients is an absolute necessity for healthcare organizations and that health organizations must work hard to succeed in marketing communication (Elrod and Fortenberry, 2020). With the Covid-19 process, the number of studies using artificial intelligence and machine learning methods in health care studies is increasing (Kern, et al., 2020; Faes, et al. 2020; Verhaar, et al., 2020; Turner, et al. 2021; Wang, et al., 2021; Sheikh, et al., 2021). Artificial intelligence (AI) and machine learning (ML), especially its subcomponent, can improve healthcare systems worldwide by optimizing workflows in hospitals, providing more accurate diagnoses, and delivering better medical treatments to patients. In recent years, it has been important to use machine learning (Chatterjee et al., 2021) and artificial intelligence (Khanna et al., 2020) in healthcare marketing because it is seen that artificial intelligence technologies and machine learning methods play an important role in eliminating undesirable situations such as pandemics (Sheikh et al., 2021) and are vital in the detection, classification, and interpretation of SARS-Cov-2 virus in this process (Wang et al., 2021).

As with any research, this research has limitations. The first winter of the study is related to the data collection process. The research data covers the period from 1981, when the first study on health care marketing was carried out, to October 1, 2021. The second limitation is the

keywords used in the research process. The keywords "health service and marketing," "health management and marketing," "health marketing," and "healthcare and marketing" were used during the research. Another limitation is the database used. During the data collection process, studies published in the Journals of the Social Science Citation Index (SSCI) were examined in the Web of Science database. The last limitation of the research is the type of data examined. Only the type of article for the keywords used is included in the review. Differentiation of keywords to be used in further studies, diversity in databases, and reviews of different types of data will contribute to the expansion and generalization of the research.

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