



Teleconsultation contribution to hospital patient satisfaction: Bibliometric analysis

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ABSTRACT

During the COVID-19 pandemic, telemedicine is considered a health service solution. Teleconsultation is an innovation that makes it easy for patients to consult with specialist physicians without having a face-to-face meeting. This study aims to determine developments related to research on the effectiveness of teleconsultation in an effort to increase patient satisfaction. The research results can be implemented to improve post-pandemic teleconsultation services, whether this teleconsultation is still needed. Methods: research using quantitative methods with a bibliometric analysis approach. The literature used is based on journal articles obtained through the Scopus database. Using the VOSviewer software, the results of a literature search conducted through the Scopus database were also visually evaluated. Result: Based on an analysis of the year of publication of the contribution of teleconsultation to patient satisfaction, a total of 673 publications were successfully entered into the Scopus database in the period 2018-2022. The most commonly used method commonly used method is controlled study. Conclusion: the level of satisfaction with teleconsultation services needs to be measured by conducting another study during the post-pandemic period, where face-to-face meetings were no longer restricted. Is there still a need for teleconsultation for now.

Kata kunci:

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ABSTRAK

Di masa pandemi COVID-19, telemedicine dianggap sebagai salah satu solusi layanan kesehatan. Telekonsultasi adalah sebuah inovasi yang memberikan kemudahan bagi pasien untuk berkonsultasi dengan dokter spesialis tanpa melakukan pertemuan tatap muka. Penelitian ini bertujuan untuk mengetahui perkembangan terkait penelitian tentang efektifitas telekonsultasi dalam upaya peningkatan kepuasan pasien. Hasil penelitian dapat diimplementasikan untuk meningkatkan layanan telekonsultasi pasca pandemi, apakah telekonsultasi ini masih diperlukan. Metode: penelitian menggunakan metode kuantitatif dengan pendekatan bibliometrik analisis. Literatur yang digunakan berdasarkan artikel jurnal didapatkan melalui database Scopus. Dengan menggunakan perangkat lunak VOSviewer, hasil pencarian literatur yang dilakukan melalui database Scopus juga dievaluasi secara visual. Hasil: berdasarkan analisis tahun penerbitan publikasi tentang kontribusi telekonsultasi terhadap kepuasan pasien, didapatkan total 673 publikasi yang berhasil masuk pada database Scopus dalam periode tahun 2018 hingga tahun 2022. Metode yang paling sering digunakan adalah controlled study. Kesimpulan: tingkat kepuasan terhadap layanan telekonsultasi perlu dilakukan pengukuran dengan melakukan penelitian kembali saat pasca pandemi, dimana pertemuan tatap muka sudah tidak dilakukan pembatasan lagi. Masih perlukah adanya telekonsultasi untuk saat ini, perlu di kaji kembali faktor-faktor yang mendasari kegiatan layanan tersebut untuk saat ini dan bagaimana tingkat kepuasan pasien terhadap layanan telekonsultasi untuk saat ini dan dimasa yang akan datang.



INTRODUCTION

The COVID-19 pandemic has accelerated the transformation of healthcare services around the world, including Indonesia (Sutarsa et al. 2020). During the COVID-19 pandemic, telemedicine is considered a health service solution (Lubis 2020). Telemedicine is the use of technology to communicate with patients and their health care provider. Various applications for internet, video conferencing, and telephony make it possible to offer consultation, assessment, and intervention services remotely with telemedicine technology (SPEYER 2018). Telemedicine is the delivery of health services through the use of electronic communication technology; this is one of the methods used in many countries to stop the spread of COVID-19. Telemedicine can take many forms, including online consultations, screening, and chatbots, so patients and medical professionals do not have to meet in person (Lubis 2020). Patients can report their symptoms and receive treatment guidance through a variety of remote treatment options (Vidal-alaball et al. 2020).

During the COVID-19 pandemic, a new type of telemedicine known as teleconsultation quickly emerged (Fitriana and Achadi 2022). Clinical teleconsultation is a subset of telemedicine that provides remote clinical consultation services to assist with diagnosis and/or offer advice on treatment. Teleconsultation is an innovation that makes it easy for patients to consult with specialist physicians without having a face-to-face meeting. The results of the discussion will make it easier for patients to receive information on suspected diagnosis, treatment, or first aid, as well as information on health improvement, community fitness and mental health (Donaghy et al. 2019).

As a new service model, the creation of a quality management system that can guarantee the safety and effectiveness of services to satisfy customers is urgently needed. Ineffective communication, limited service coverage, lack of medical support facilities, technological limitations, lack of understanding of service flow, and affordability are obstacles in hospital teleconsultation services (Ernawati and Agustina 2022).

This study uses a bibliometric analysis method with VOSviewers. The reviewed literature uses that comes from the Scopus database. Data processing uses VOSviewers software which aims to find out the latest developments and characteristics related to research on the effectiveness of teleconsultation services in an effort to increase hospital patient satisfaction from 2018 to 2022 so that the results of this study can be implemented to improve post-pandemic teleconsultation services, is this teleconsultation still needed.

LITERATURE REVIEW

Bibliometric analysis

Bibliometric analysis provides information on trends in research activity over time and compares the contributions of scholars, journals, institutes, countries. It uses the literature system and the metrological characteristics of the literature as research objects and analyses publications quantitatively and qualitatively (Baas et al. 2020). Bibliometric analysis is a scientific method used to conduct retrospective research with a wide and varied range. Bibliometric analysis is increasingly popular because of its

ability to cover the most recent, extensive and large amounts of data in a short time (Donthu et al. 2021).

VOSviewer

In network mapping, innovative indicators, such as coauthorships links, bibliographic coupling links, and cocitation links, are used to build clusters or themes based on bibliometric studies (van Eck and Waltman 2010). VOSviewer has been widely used to carry out bibliometric mapping investigations in various research domains compared to other bibliometric software. VOSviewer analysis, based on VOS visualisation-likeness techniques, condenses large amounts of data into a single graphical image. As a result, text mining routine maps are made up of related terms, forming clusters or themes (Effendy et al. 2021). As a result of citation connection, bibliographic coupling, and co-occurrence analysis, the researcher can derive the theme or group of countries, institutions, and keywords used in the titles and abstracts of published articles. These themes use a single colour to reflect the affinity of particular keywords, authors, journals, organisations, or countries in different research streams, allowing scholars to examine many aspects of the underlying research topic (da Silva et al. 2018).

Teleconsultation

Remote clinical consultations known as clinical teleconsultation help in the diagnosis process and/or offer suggestions for treatment (Fitriana and Achadi 2022).

Clinical teleconsultation is a subset of telemedicine that provides remote clinical consultation services to assist with diagnosis and/or offer advice on treatment (Frankowska et al. 2022). Teleconsultation is an innovation that makes it easy for patients to consult with specialist physicians without having a face-to-face meeting. The results of the discussion will make it easier for patients to receive information on suspected diagnoses, treatment, or first aid, as well as information on health improvement, community fitness, and mental health (Donaghy et al. 2019).

According to Minister of Health Regulation No. 20 of 2019, teleconsultation or clinical online consultation is a consultation service that is carried out remotely to help make a diagnosis and/or provide considerations or suggestions for similar treatment. Teleconsultation is part of telemedicine, so the scope is narrower. The scope of teleconsultation includes communication with respect to patient complaints to doctors, providing diagnoses from doctors to patients, and providing treatment advice from doctors to patients, such as medications and medical procedures. (Kementerian Kesehatan RI 2021)

Satisfaction Level

Satisfaction of customers or service users is their response to each service provided. The level of customer or patient satisfaction can be used as a benchmark for evaluating the quality of hospital services. family, caring for the patient, the state of the physical environment, and responding to the patient's needs so that it can last a long time (Sesrianty, Machmud, and Yeni 2019). Evaluation of feeling level based on performance results is called satisfaction. Compare the results to what was expected and what was actually achieved (Yussoff and Nayan 2020). Patient satisfaction after getting health services at the Jogja City Hospital is a feeling of pleasure. Satisfaction occurs

when patients receive the service they expect (Kusumo 2017). According to Budiastuti, factors that influence satisfaction are product or service quality, service quality, emotional factors, prices and costs.

METHODS

This research is a quantitative research with a bibliometric analysis approach (Donthu et al. 2021). The literature used based on journal articles was obtained through the SCOPUS database, and the search began on February 14, 2023. SCOPUS is the largest database that collects and selects various types of peer-reviewed scientific publications from around the world (Aksnes and Sivertsen 2019). Data from review articles and journals published between 2018 and 2022 were used for the characteristic analysis process. Data is presented as data by year, data by country, data by type of article, data by publishing institution, data by name of researcher, and data by research subject (Effendy et al. 2021) . A total of 673 reviews and journal articles containing publication information, abstracts, bibliographies and other information were obtained. By using the VOSviewer software, the results of a literature search conducted through the Scopus database were also visually evaluated.

Research Stage

The following are the stages of the analysis process in this study.

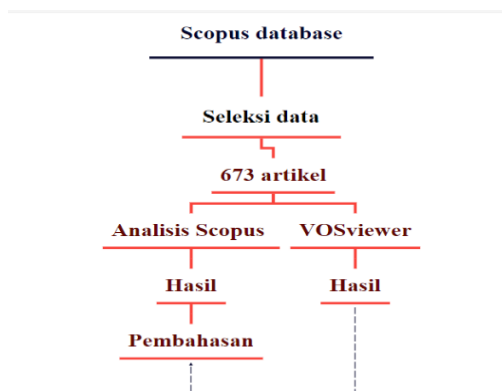


Figure 1. Research Stages

This research started by looking for research articles using advanced search on the Scopus database with a range of 2018 to 2022, a total of 843 articles were obtained. The articles were then selected for data related to the research focus, then 673 articles were obtained related to the keywords included in the advanced search on the Scopus database. The following are the stages of the search process of the Scopus database using the advanced search method.

(REF (teleconsultation) AND REF (patient AND satisfaction)) AND PUBYEAR > 2018 AND (LIMITTO (PUBYEAR , 2022) OR LIMIT TO (PUBYEAR , 2022) OR LIMIT TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018)) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE ,

"re") AND (LIMIT-TO (SUBJAREA , "MEDI) OR LIMIT-TO (SUBJAREA , "HEAL) OR LIMIT-TO (SUBJAREA , "NURS)) AND (LIMIT-TO (LANGUAGE , "English")).

After obtaining 673 articles, an analysis was performed using the analysis facility search results from the form of analysis of literature characteristics based on year, analysis based on the country of origin of the article, analysis based on type of publication, analysis based on publication subject, analysis by author and analysis by institution that published the publication (Mukherjee et al. 2022).

Analysis was also performed using the VOSviewer software, which serves as a representation of the relationships of the bibliometric data, including the relationships between several study topics, key phrases and citations. The results of the VOSviewer visualisation are in the form of a mapping with three important components: node size, distance from each other, and colour. The number of publications for each element is represented by the size of the node, and the distance between nodes connected by lines shows how much the relationship between elements is. The relationship between these elements is getting stronger the closer and thicker the connecting lines between the nodes, and the color of the nodes (Huang et al. 2023) Researchers will be able to interact and easily understand the results of this visualization procedure thanks to the advantages of the VOSviewer software (Orduña-Malea and Costas 2021).

RESULTS

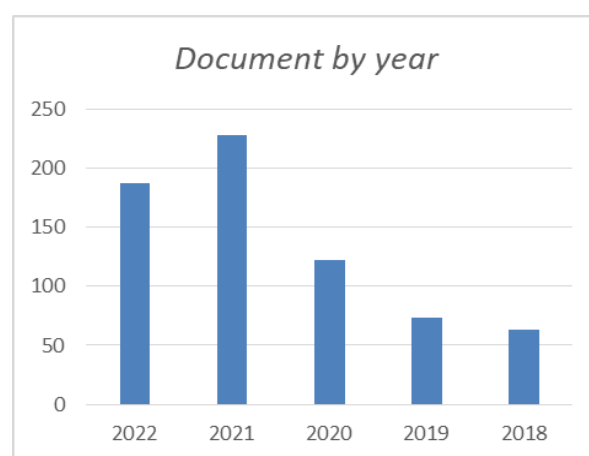


Figure 2. Documents by year

Based on an analysis of the year of publication on the contribution of teleconsultation to patient satisfaction, a total of 673 publications were successfully entered into the Scopus database in the period 2018-2022. A total of 63 publications were published in 2018 then experienced an increase in the number of publications in 2019 (73 publications), in 2020 there were 122 publications, in 2021 there were 228 publications as the most publications and in 2022 there were 187 publications.

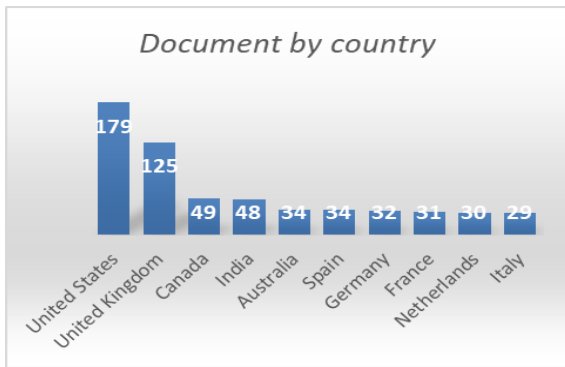


Figure 3. Document by country

Based on an analysis of the country of origin of publications on the contribution of teleconsultation to patient satisfaction, the researchers chose the top 10 countries where publications were published that made it into the Scopus database in the period 2018-2022. The fewest publications about teleconsultation with the aim of increasing patient satisfaction came from Italy with 29 publications, Netherlands 30 publications, France 31 publications, Germany 32 publications, Spain and Australia 34 publications, India 48 publications, Canada 49 publications, United Kingdom 125 publications, while the most publications came from the United States with 179 publications.

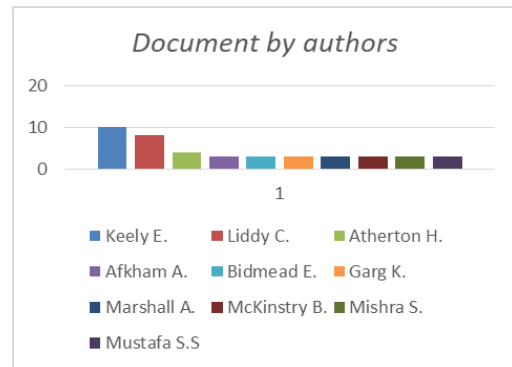


Figure 5. Documents by authors

Based on the analysis of researchers who made publications on the contribution of teleconsultation to patient satisfaction, it was found that the top 10 researchers made the most publications. The researchers who made the most publications were Keely E. with 10 publications, Liddy C. with 8 publications, Atherton H. with 4 publications and the number of researchers who made 3 publications was Afkham A., Bidmead E., Garg K., Marshall A., McKinstry B., Mishra S., Mustafa SS.

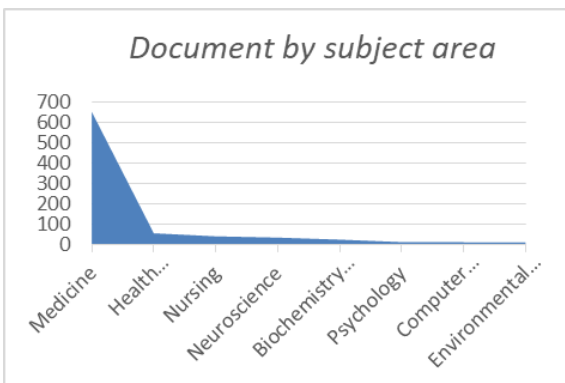


Figure 4. Document by subject area

Based on the analysis of publication topics regarding the contribution of teleconsultation to patient satisfaction, the researcher chose the top 10 topics with the highest percentage, namely medicine 651 publications, health professions 57 publications, nursing 42 publications, neuroscience 36 publications, Biochemistry Genetics and Molecular Biology 26 publications, psychology 14 publications, computer science 13 publications, environmental science 12 publications, social sciences 8 publications, and dentistry 5 publications

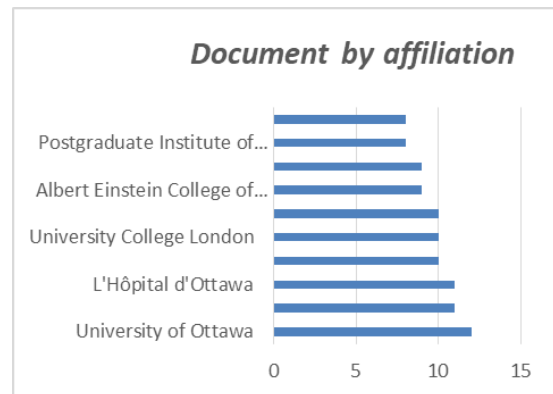


Figure 6. Document by affiliation

Based on an analysis of the author's affiliation with the contribution of teleconsultation to patient satisfaction, the researcher selected the top 10 affiliations as the place of publication. The most affiliates came from the University of Ottawa with 12 publications, and the least was The University of British Columbia with 8 publications in the same period.

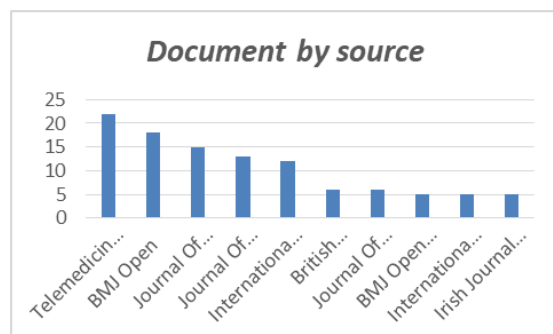


Figure 7. Document by source

Based on an analysis of journal publishing sources on the contribution of teleconsultation to patient satisfaction, the researchers selected the 10 most successful journal publishers published in the period 2018-2022 period. Most journal publishers come from Telemedicine And E Health with 22 publications, BMJ Open 18 publications, Journal Of Medical Internet Research 15 publications, Journal Of Telemedicine And Telecare 12 publications, British Journal Of General Practice and Journal Of Allergy And Clinical Immunology In Practice 6 publications and the fewest published publications were BMJ Open Quality , International Journal Of Medical Informatics and Irish Journal Of Medical Science each with 5 publications in the same period.

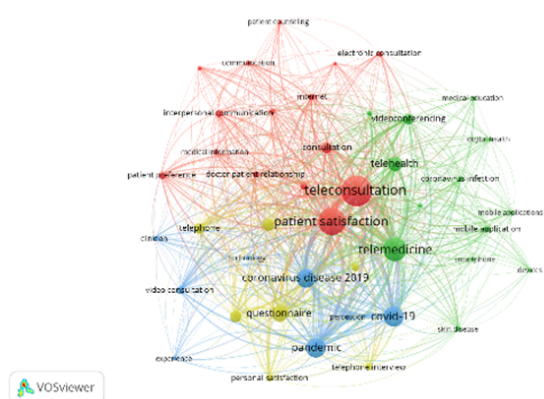


Figure 8. Mapping Visualization Networking

This study found as many as 5270 keywords that then used a minimum number of keyword thresholds that were analysed in the VOSviewer software as many as 10 keywords. Figure 3.7.1 shows that 43 keywords have been identified and divided into 4 clusters. Cluster 1 consists of the keywords communication, consultation, doctor patient relationship, ehealth, electronic consultation, internet, interpersonal communication, medical information, patient counseling, patient participation, patient preference, patient satisfaction, personal experience, social status and teleconsultation. Cluster 2 consists of the keywords coronavirus infection, devices, digital health, medical education, mobile applications, mobile applications, mobile phones, skin disease, smartphones, telecommunications, telehealth, telemedicine, and videoconferencing. Cluster 3 consists of the keywords clinician, coronavirus disease 2019, covid-19, experience, pandemic, perception, technology and video consultation. Cluster 4 consists of the Likert scale, personal satisfaction, questionnaire, satisfaction, surveys and questionnaire, telephone, and telephone interview keywords. Colour identifies cluster differences; cluster 1 is red, cluster 2 is green, cluster 3 is blue, and cluster 4 is yellow. Nodes and lines between nodes identify keywords that are interconnected with one another, the larger the nodes, the more often these keywords are used in a study. The thicker the connecting line between nodes, the stronger the relationship between these keywords perception, technology and video consultation. Cluster 4 consists of the Likert scale, personal satisfaction, questionnaire, satisfaction, surveys and questionnaire, telephone, and telephone interview keywords. Colour identifies cluster differences, cluster 1 is red, cluster 2 is green, cluster 3 is blue, and

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Table 1
Cluster 1 Occurrence and Total Link Strength of the the Keyword

Keywords	Occurrence	Total Link Strength
Cluster 1		
Teleconsultation	642	3057
Patient Satisfaction	511	2566
Consultation	86	500
patient preferences	41	269
Personal experience	36	258
Doctor patient relationship	33	230
Interpersonal communication	35	230
Internet	32	180
Medical information	17	126
Communications	20	123

Table 2
Cluster 2 Occurrence and Total Link Strength of Keyword

Keywords	Occurrence	Total Link Strength
Cluster 2		
Telemedicine	380	2101
Telehealth	138	848
Video conferencing	87	551
Mobile application	30	191
Coronavirus infection	24	179
Telecommunications	22	153

Table 3
Cluster 3 Occurrence and Total Link Strength of Keyword

Keywords	Occurrence	Total Link Strength
Cluster 3		
Covid-19	271	1748
Pandemic	257	1714
Coronavirus disease 2019	251	1677
Video consultations	44	308
Perception	22	144

Table 4
Cluster 4 Occurrence and Total Link Strength of Keyword

Keywords	Occurrence	Total Link Strength
Cluster 4		
Questionnaires	197	1182
Satisfaction	111	618
Surveys and questionnaires	91	577
Likert Scale	36	239
Personal satisfaction	31	212
Telephone interview	29	189

Notes. The teleconsultation keyword is the keyword that is ranked top in the first cluster with a total link strength of 5359, in second place is the keyword patient satisfaction of 4460 and in third place is the keyword tetelemedicine of 3479.

The large number of occurrences of keywords and the large number of total link strengths shows that the keywords that appear the most and are interconnected with each other in research related to the contribution of teleconsultation to patient satisfaction

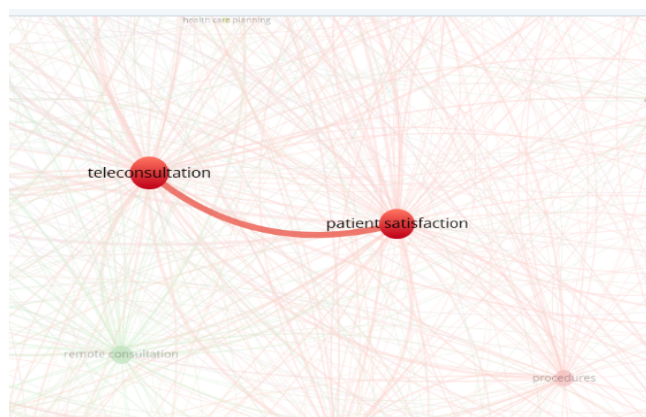


Figure 9.
Link Strength Teleconsultation and Patient Satisfaction

Notes. Shows that there is a strong relationship between teleconsultation and patient satisfaction, having a link strength of 4460. This is evidenced by the results of studies showing the level of patient satisfaction with consulting services during a pandemic.

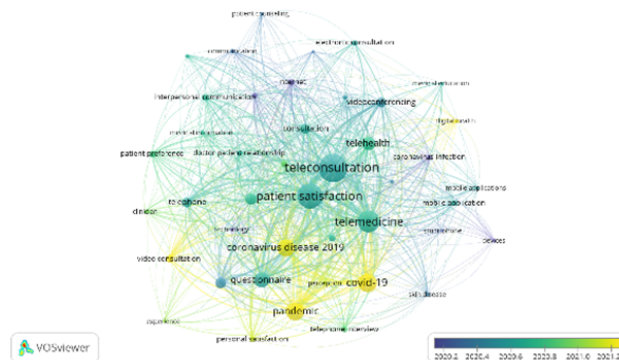


Figure 10. Mapping Visualization Overlays

Notes. It can be seen that the keyword teleconsultation is the keyword most often used in the 2018-2022 research period, in second place the keyword patient satisfaction is the keyword most often used in the 2018-2022 research period and in the last order is the word. The keywords COVID-19 and pandemic are the keywords that are often used in research before the 2020 period. Telemedicine and telehealth are the keywords that appear most frequently in the 2020-2021 research year 2020-2021.

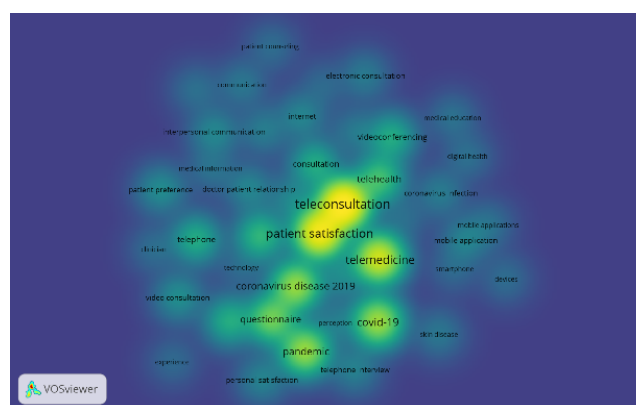


Figure 11. Mapping Overlay Density

Based on the analysis of Figure 3.9, it is evident that certain keywords are frequently used in research topics related to the contribution of teleconsultation to patient satisfaction. These keywords, represented by yellow areas in the figure, include teleconsultation, patient satisfaction, telemedicine, COVID-19, pandemic, and controlled studies. The prominence of these keywords suggests that they play a significant role in discussions and investigations regarding the impact of teleconsultation on patient satisfaction in the context of healthcare services.

The utilization of the keyword "teleconsultation" signifies the central focus of these studies, emphasizing the use of remote communication technologies for medical consultations. "Patient satisfaction" is another pivotal keyword, highlighting the researchers' interest in evaluating and understanding the level of contentment experienced by patients who receive healthcare services through teleconsultation. The inclusion of 'telemedicine' as a keyword further reinforces the notion that the research

addresses the broader field of telehealth, which encompasses various aspects of remote medical care provision.

Moreover, the incorporation of keywords such as "COVID-19" and "pandemic" underscores the specific context within which these studies were conducted. The global health crisis caused by the COVID-19 pandemic necessitated the widespread adoption of teleconsultation as a means to ensure continuity of care while minimizing the risk of viral transmission. Consequently, researchers sought to explore the effectiveness and impact of teleconsultation on patient satisfaction during this unprecedented period.

Furthermore, the presence of "controlled studies" as a keyword indicates the scientific rigour applied in investigating the relationship between teleconsultation and patient satisfaction. The inclusion of controlled studies suggests that the researchers wanted to conduct rigorous and controlled experiments or observational studies to gather empirical evidence and draw more reliable conclusions.

Overall, the mapping of keywords in Figure 4.9 provides compelling evidence that teleconsultation is intricately linked to patient satisfaction within the realm of healthcare services. The frequent utilization of these keywords highlights the significance of understanding the impact of teleconsultation on patient satisfaction, particularly in the context of the COVID-19 pandemic. By examining and analyzing these keywords, researchers can gain valuable insights into the factors influencing patient satisfaction in teleconsultation settings and contribute to the ongoing advancements in remote healthcare delivery.

DISCUSSIONS

Based on bibliometric analysis using VOSviewer software, the results for cluster 1 consist of 15 keyword items that are interconnected with each other. Cluster 1 discusses a lot about communication, participation, supporting factors such as the internet to be able to conduct a teleconsultation. Patient involvement seems very high, including in providing satisfaction ratings for teleconsultation services.

Clusters 2 discusses a lot about the development process of telemedicine and telehealth. The facilities and infrastructure that support the implementation of telemedicine and telehealth include mobile applications, smartphones, and devices. All are interrelated, and services with telemedicine and telehealth require support and facilities that are more advanced and modern than face-to-face consultations.

Cluster 3 talked a lot about the Covid-19 pandemic. Where there is a pandemic that results in social restrictions including health services. With advances in technology, teleconsultation services are increasingly developing during a pandemic, this also directly changes people's perceptions of remote consultations.

Clusters 4 here are many keywords that discuss the evaluation of teleconsulting services. Much research is done by giving a questionnaire using a Likert scale to assess patient satisfaction in obtaining teleconsultation services.

Based on Scopus analysis, the results showed that in the 2018-2022 period, it most of the research carried out to determine the effect or contribution of teleconsultation on patient satisfaction was carried out mainly in the United States and United Kingdom. The most frequently used method is controlled study. Where the instrument to

measure patient satisfaction uses a questionnaire with a Likert scale.

Israa's research (2022) shows an overall positive experience among patients with the use of telemedicine. Telemedicine is a safe and futuristic approach to patient care management and, as such, provides a platform for healthcare professionals to further educate patients and the physician (Elhakeem et al. 2022).

After one year of the COVID-19 pandemic and the implementation of regular telehealth visits, patients with gynecological cancer are very satisfied with the use of telemedicine. During this period, relapse was most often diagnosed by patient-reported symptoms (Mojdehbakhsh et al. 2022).

Telemedicine is a useful alternative in paediatric surgery for complex patients who require multidisciplinary care. Providers showed confidence with the use of video telemedicine and parents showed high satisfaction, with the majority preferring telemedicine visits over in-person visits (Knaus et al. 2022).

Most patients are satisfied with their television. In addition, telephone-and video-television according to the patient's opinion, patient characteristics, and the results of the visit. Efforts to improve telehealth telehealth access and coverage, especially telephone television, should continue after the COVID-19 pandemic (Allen et al. 2021).

Patients who use telephone consultations are more likely to choose them over traditional in-person visits in the future. This increased preference, coupled with higher patient satisfaction scores and shorter visit durations, suggests that teleconsultation has a role in orthopedic surgery, which may even outpace the COVID-19 pandemic (Melian et al. 2021).

The United States is the country that has conducted the most research on teleconsultation and patient satisfaction. From 179 publications, it can be concluded that the use of teleconsultation makes a high contribution in efforts to increase patient satisfaction and the use of teleconsultation is considered to be used post-pandemic. Teleconsultation in the United States is carried out, among others, for otolaryngology services, post-abortion care, elective orthopedics, neurosurgery, gynecology, and immunological evaluation during COVID-19.

There are 99 publications in the United Kingdom on teleconsultation and patient satisfaction. It can be concluded that the existence of teleconsultation services has an effect on the level of patient satisfaction. In addition, conclusion states that teleconsultation is also effective after the pandemic.

From the Ummul 2022 study, a total of 333 patients consulted with vascular consultants between April and June 2020, 178 of whom were teleconsultation. Contact was established established successfully with 72 patients, 68 of whom agreed to participate; 10 patients underwent video consultations, while the rest underwent telephone consultations. Teleconsultation is widely considered acceptable, and over 90% of patients find it beneficial. 91% feel that not having to travel to book an appointment is to their advantage. Although all interviewees felt that teleclinics should continue during the pandemic, the majority (74%) also wanted to use teleconsultation to make clinic appointments after the pandemic. Telemedicine is seen by vascular patients as generally acceptable and useful for use during a pandemic. Most patients want telemedicine appointments in the future after the pandemic. Telemedicine services started as a result of the COVID-19 pandemic, which can be viewed as a temporary measure, should be planned to continue in the long term (Contractor et al. 2022).

Yap's research results, 2021 show that patient satisfaction with telephone consultations is comparable to face-to-face reviews and has the added service benefit of remote work during the COVID-19 era. Remote telephone consultation is a very useful tool even in the post-pandemic era (Yap and Hunt 2021).

The results of Horgan's research, 2020 stated that 83.48% of patients said that they were willing to do telephone consultations in the future. The majority of patients in this study reported high levels of satisfaction with telephone consultations. New patients report lower adherence rates, which may indicate that this type of consultation is less suitable for telephone consultations (Horgan et al. 2021).

This study demonstrated a significant increase in patient satisfaction and an increased preference for telephone consultations through the use of a structured consultation model. The potential benefits in terms of infection control and impact on outpatient workloads could make telephone consultations viable in the post-coronavirus era (Zammit et al. 2020).

STUDY LIMITATIONS

Although bibliometric analysis provides valuable information on research trends and literature networks, limitations of this method include the reliance on available data, the inability to evaluate the quality or relevance of content, as well as exclusion of sources of information not found in bibliographic databases. The limitations of the authors' interpretations in inferring the true significance or impact of the linkages between publications, as this method cannot describe the context, quality, or practical implications of the research conducted.

CONCLUSIONS

Based on bibliometric analysis, it can be concluded that a substantial amount of research, consisting of 673 publications, was carried out during the pandemic. This surge in research activity can be attributed to the limitations of face-to-face meetings, which led to a greater reliance on teleconsultation services. In comparison, prior to the pandemic, there were only 136 publications addressing this topic, indicating a significant increase in research output during the pandemic period.

Furthermore, the analysis reveals that the majority of research in this field continues to be conducted in developed countries. These countries have demonstrated a higher level of progress in the use of technology, which likely contributes to the greater availability and accessibility of teleconsultation services. On the contrary, developing countries can face challenges in implementing and adopting such technologies, resulting in a disparity in research output.

It is worth noting that the analysis highlights a high level of satisfaction with teleconsultation services, given the circumstances under which they were used predominantly during the pandemic. However, to obtain a comprehensive understanding of the satisfaction levels, it is essential to conduct further research during the post-pandemic period, when face-to-face meetings are no longer restricted. This will allow for a comparison of satisfaction levels between teleconsultation and traditional in-person consultations, providing valuable information for future healthcare practise.

ETHICAL CONSIDERATIONS

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The authors did not receive support from any organization for the submitted work.

Conflict of Interest Statement

We would like to inform that in the process of submitting this publication, we acknowledge that we work in a hospital that has launched a teleconsultation service program since January 2023. As medical personnel involved in this program, we strive to provide optimal teleconsultation services to patients, especially to the families of patients who are unable to be physically present to meet directly with the Doctor in Charge (DPJP). However, we also recognise that as part of the hospital team, our interests may influence the assessment and interpretation of our study results. Therefore, we are committed to transparently disclosing this and maintaining integrity and objectivity in our publication process. We hope that this study can provide a comprehensive picture of teleconsultation and patient satisfaction levels as an important reference in the development of future hospital service programs.

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