Special Issue 0n Multidisciplinary Research

The Impact Of Telehealth Services On Healthcare Accessibility And Quality; A Systematic Review

Dr. Khalid Abdu Rajhi[1], Dr. Hanan Mohammed Atyah[2], Hailah Ali Yahya Hazazi[3], Ali Essa Murwahi[4], Mansor Ali Mohammed Kariri[5], Meqren Saud Alotaibi[6], Abdullah Solan Mhnashi[7], Abdullah Shfloot Al Asmri[8], Areej Ahmed Ali Faqehi[9], Abdulaziz Yahia Ali Albasheer[10], Salha Yousif M Qumosany[11], Fatimah Hadi A Salem[12], Hassan Ahmed Hassan Aqeeli[13], Tareq Saud Alotaibi[14]

[1]Jazan Specialist Hospital
[2]Pediatric Consultant, Head of Pediatric Department , Baish General Hospital, Jazan
[3]Ahad Almasarha Hospital
[4]Endodontist, Jazan Dental Center
[5]Ahad Almasariha General Hospita, Ahad Almasariha
[6]Dawadmi General Hospital
[7]Samtah General Hospital
[8]King Faisal Medical Compliex in Taif, Home Health Care
[9]Ahad General Hospital
[10]Samtah General Hospital
[11]Iradah and Mental Health Complex, Mental Services, Jeddah
[12]Iradah and Mental Health Complex, Mental Services, Jeddah
[13]Samtha General Hospital
[14]Dawadmi General Hospital

Abstract

Background: Telehealth has emerged as a transformative solution to mitigate disparities in healthcare accessibility and quality, particularly among underserved populations and rural communities. This systematic review aims to comprehensively evaluate the impact of telehealth services on healthcare accessibility and quality, synthesizing evidence from ten selected studies.

Aim: The study aims to identify key trends, themes, and findings regarding the effectiveness of telehealth interventions in addressing healthcare disparities and improving quality of care.

Method: A systematic search of literature was conducted to select relevant studies focusing on telehealth interventions and outcomes related to healthcare accessibility and quality. Data from the selected studies were synthesized to discern common patterns and significant findings.

Results: The review findings underscore the substantial potential of telehealth services in enhancing healthcare accessibility and quality. Telehealth interventions demonstrated positive outcomes, including increased access to care, heightened patient satisfaction, and improved health outcomes, particularly in rural and remote areas.

Conclusion: Telehealth emerges as a promising tool in healthcare delivery, offering opportunities to narrow gaps in access and enhance the overall quality of care. Despite its benefits, challenges such as disparities in access, technological limitations, and policy barriers persist and necessitate further attention. Moving forward, concerted efforts are imperative to optimize the benefits of telehealth while mitigating its limitations, ensuring equitable access to high-quality healthcare for all.

Keywords: Telehealth, healthcare accessibility, healthcare quality, disparities, systematic review.

Introduction

Accessible and high-quality healthcare could be revolutionized via telehealth, a fast developing aspect of contemporary healthcare that is attracting more and more attention (Dandachi et al., 2019). The term "telehealth" refers to a broad range of methods, such as remote monitoring, teleconsultations, and mobile health applications, that are used to offer healthcare services and information using telecommunications technologies (Khoshrounejad et al., 2021).

Technology breakthroughs like mobile devices, high-speed internet access, and remote monitoring tools have made it

possible for healthcare practitioners to give care remotely, which has led to the growth of telehealth services. Interest in learning more about how telehealth affects healthcare quality and accessibility on a national and global scale is growing as the practice continues to gain traction (Westby et al., 2021; Al Ali et al., 2022; Alotaibi et al., 2022).

The field of telemedicine, which first appeared in the second half of the 20th century as a way to increase access to healthcare services and get beyond geographic restrictions, is where telehealth got its start (Blandford et al., 2020). Nevertheless, telehealth has really taken off in the digital age, where easy remote patient-provider interactions are made possible by the broad use of digital communication tools (Harvey et al., 2019). In light of the COVID-19 pandemic, which increased demand for telehealth services as a way to preserve continuity of treatment while lowering the danger of viral transmission, this trend has been especially noticeable (Franciosi et al., 2021). In addition to being a useful tool for emergency medical care, telehealth is becoming an indispensable part of routine healthcare delivery (Brotman & Kotloff, 2021).

Enhancing healthcare accessibility is one of the main advantages of telehealth, especially for those who live in underserved or rural locations (Russell et al., 2022). Telemedicine interventions can eliminate geographical barriers that have historically impeded access to care by drastically reducing travel time and associated expenses (Leath et al., 2018). Additionally, research has demonstrated that telemedicine improves patient engagement and happiness, with high patient acceptance and willingness to use telehealth services (Cummings et al., 2019). Therefore, it offers a chance to close the gap in healthcare access between urban and rural areas, guaranteeing a fair distribution of healthcare resources (Phenicie et al., 2021).

Apart from augmenting accessibility, telehealth has promise for elevating the caliber of healthcare provision by expediting prompt access to care, enhancing care coordination, and permitting preemptive management of persistent ailments (Khairat et al., 2019). Implementation of telehealth interventions can result in better clinical outcomes, a decrease in hospital readmissions, and more patient compliance with treatment plans

(Nicol Turner Lee & Roberts, 2020). Additionally, telehealth promotes a patient-centered approach to healthcare delivery by enabling healthcare providers to give individualized care that is catered to each patient's unique needs. As a result, it could improve patient outcomes and standards of treatment globally (Dean et al., 2019).

Also, aid initiatives for proactive disease management and preventative treatment via telehealth (Appuswamy & Desimone, 2020). Wearable technology and mobile health applications are examples of remote monitoring technologies that offer continuous monitoring of vital signs, medication adherence, and lifestyle behaviors (Valdivieso et al., 2018). This enables early diagnosis of health conditions and prompt action. Proactive healthcare management can slow the advancement of chronic illnesses, lower medical expenses, and enhance general population health (Monaghesh & Hajizadeh, 2020). As a result, telehealth stops being a reactive tool in illness management and starts to operate proactively, which could ultimately result in cost savings and better patient outcomes.

Notwithstanding its possible advantages, there are drawbacks to telehealth's extensive use (McElroy et al., 2020). The growth of telehealth services is severely hampered by issues with reimbursement, patient privacy, and data security, among other regulatory and policy constraints (Kruse et al., 2020). Furthermore, differences in broadband infrastructure, digital literacy, and access to technology may make already-existing healthcare disparities worse and restrict the populations that vulnerable populations can benefit from telehealth interventions (Dosaj et al., 2021). In order to guarantee fair access to telehealth services and fully utilize their potential to raise the standard and accessibility of healthcare, it will be imperative to address these issues (Park et al., 2018). Therefore, even if telehealth has many advantages, there are structural issues that need to be resolved if it is full potential is to be reached.

Telehealth is a revolutionary way to healthcare delivery that has the potential to raise standards of treatment globally in terms of accessibility and quality (Nicosia et al., 2021). Telehealth breaks down geographical boundaries to healthcare delivery by utilizing digital communication technology to increase patient involvement and provide care from a remote location (Blandford

et al., 2020). The increasing corpus of research on telehealth's influence on healthcare quality and accessibility, despite ongoing obstacles, highlights the technology is potential to fundamentally alter the way that healthcare is provided in the future (Appuswamy & Desimone, 2020). To fully utilize telehealth and guarantee that everyone has access to high-quality healthcare services, regardless of location or socioeconomic status, more research, innovation, and legislative initiatives are needed. Telehealth thus turns into a fundamental component of global healthcare delivery going forward, rather than just a tool for the here and now.

Research Gap
The systematic review of the effects of telehealth services on healthcare accessibility and quality is lacking in a number of important areas, including the long-term assessment of outcomes, health equity and disparities, provider perspectives, cost-effectiveness analysis, quality metrics and standards, and implications for regulations and policy. Studies that have already been conducted tend to concentrate on patient perspectives and short-term outcomes; however, there is a dearth of research that looks at the long-term consequences of telehealth interventions, healthcare providers' experiences, and the financial implications of telehealth adoption. Furthermore, the impact of telehealth initiatives on marginalized populations and their efficacy in addressing healthcare disparities remain poorly documented. Assessing and guaranteeing the safety and quality of telehealth services is further complicated by the lack of established quality indicators and the changing regulatory environment. In order to optimize telehealth interventions, ensure equitable access to high-quality healthcare for all, and influence evidence-based policy decisions, it is imperative that these research gaps be filled.

Problem statement
The requirement to thoroughly evaluate and comprehend the effects of telehealth interventions on these critical facets of healthcare delivery is at the center of the issue statement for the systematic evaluation on the influence of telehealth services on healthcare accessibility and quality. The influence of telehealth services on healthcare accessibility and quality is not well analyzed, despite the field's rapid growth and increased interest in the

potential advantages of these services. Policymakers, healthcare practitioners, and stakeholders are unable to make well-informed decisions due to this knowledge gap, which restricts the potential of telehealth to successfully address healthcare disparities and enhance healthcare outcomes. In order to inform evidence-based policy decisions, optimize telehealth interventions, and ultimately improve healthcare delivery for different people, a systematic study that clarifies the influence of telehealth services on healthcare accessibility and quality must be conducted.

Significance of study

It is impossible to overestimate the need of conducting a systematic evaluation to examine how telehealth services affect the accessibility and caliber of healthcare. Healthcare delivery is about to undergo a paradigm change because to telehealth, which has the potential to greatly improve patient outcomes, access to care, and efficiency in the use of resources. This research seeks to offer thorough insights into the efficacy, obstacles, and opportunities related to telehealth adoption by methodically synthesizing the available data on the effects of telehealth interventions. Policymakers, healthcare managers, and practitioners looking to use technology to address healthcare inequities, enhance patient pleasure, and improve health outcomes must comprehend the implications of telehealth for healthcare accessibility and quality (Shahbal et al., 2022; Alharbi et al., 2022; Alruwaili et al., 2022; Almutairi et al., 2022; Alotaibi et al., 2022). Furthermore, in order to facilitate the integration of telehealth into the delivery of traditional healthcare, the results of this systematic review can be used to inform the creation of evidence-based recommendations, regulatory frameworks, and reimbursement systems. In the end, this study advances the field of telehealth by pointing out areas in need of research, suggesting avenues for further investigation, and helping to ensure that telehealth services are implemented fairly and successfully to suit the various needs of communities and patients.

Aim of study

The aim of this systematic review is to comprehensively evaluate the impact of telehealth services on healthcare accessibility and

quality, synthesizing existing evidence to inform evidence-based decision-making and optimize telehealth interventions.

Research objectives

- To analyze and synthesize existing literature to assess the extent to which telehealth services contribute to improving healthcare accessibility and quality.
- To identifying key factors influencing their effectiveness and potential areas for further research or intervention.

Methodology

Research Question

For this systematic review, "What is the impact of telehealth services on healthcare accessibility and quality?" is the study question. The study specifically attempts to look at how telehealth interventions influences patient access to healthcare, taking into account variables like patient satisfaction, socioeconomic disparities, and geographic barriers. The review also looks at how telehealth affects many elements of healthcare quality, including clinical outcomes, care coordination, patient-provider communication, and the use of healthcare resources. The study aims to provide insights into the efficacy, opportunities, and challenges associated with telehealth adoption by methodically synthesizing the available evidence. These insights will inform evidence-based decision-making and guide future research and policy efforts aimed at optimizing telehealth interventions to improve healthcare accessibility and quality.

PICOT Question	In patients accessing healthcare services through telehealth (P), what is the impact on healthcare accessibility and quality (O), including patient satisfaction, clinical outcomes, care coordination, and healthcare resource utilization, compared to traditional in-person healthcare delivery or the absence of telehealth services (C), over the period from 2018 to 2022 (T)?

Population	P	Patients accessing healthcare services through telehealth.
Intervention	I	Implementation of telehealth services for healthcare delivery.
Comperes	C	Traditional in-person healthcare delivery or absence of telehealth services.
Outcome	O	Impact on healthcare accessibility and quality, including patient satisfaction, clinical outcomes, care coordination, and healthcare resource utilization.
Timeframe	T	Over a period of 2018 - 2022

In patients who accessed healthcare services through telehealth (P), the study aimed to investigate the impact of telehealth services on healthcare accessibility and quality (O), encompassing patient satisfaction, clinical outcomes, care coordination, and healthcare resource utilization, compared to traditional in-person healthcare delivery or the absence of telehealth services (C), over the period from 2018 to 2022 (T). The population (P) included patients who utilized telehealth services, while the intervention (I) focused on the implementation of telehealth for healthcare delivery. The study's primary outcome (O) was to assess the various facets of healthcare accessibility and quality. The comparison (C) was made with traditional in-person healthcare delivery or the absence of telehealth services. The study was conducted over the period from 2018 to 2022 (T), allowing for an exploration of both short-term and long-term effects of telehealth implementation on healthcare delivery.

Literature Search
For the systematic review investigating the impact of telehealth services on healthcare accessibility and quality, a meticulous literature search was meticulously conducted utilizing various electronic databases, including PubMed, Scopus, and Web of Science. The search strategy was carefully crafted using a combination of relevant keywords and medical subject headings (MeSH terms), encompassing concepts related to telehealth, healthcare accessibility, quality, patient satisfaction, clinical outcomes, care coordination, and healthcare resource utilization.

Boolean operators (e.g., AND, OR) were judiciously employed to refine search results, and search filters were applied to restrict the search to articles published in the English language between 2018 and 2022. Additionally, hand-searching of reference lists from retrieved articles and scanning of grey literature sources, such as conference proceedings and government reports, were conducted to ensure the inclusiveness of the search. The search strategy aimed to identify a comprehensive range of literature, including peer-reviewed articles, systematic reviews, meta-analyses, and relevant reports, providing a robust evidence base for the systematic review and enabling a thorough examination of the impact of telehealth interventions on healthcare accessibility and quality.

Database Selection

For the systematic review investigating the impact of telehealth services on healthcare accessibility and quality, a comprehensive selection of databases was utilized to ensure a thorough retrieval of relevant literature. Key databases such as PubMed, Scopus, and Web of Science were chosen for their extensive coverage of biomedical and health-related literature. PubMed, maintained by the National Library of Medicine, provided access to a vast repository of peer-reviewed biomedical literature, including journals in the fields of medicine, nursing, and allied health sciences. Scopus, a multidisciplinary database, offered a wide-ranging collection of scholarly literature, including peer-reviewed articles, conference proceedings, and patents. Web of Science, known for its robust citation indexing and citation analysis features, facilitated the identification of seminal articles and related research. These databases were selected based on their reputation, comprehensiveness, and relevance to the study's research question, ensuring a comprehensive literature search and retrieval process.

Table 1: Selection of research databases

Database	Description

PubMed	A comprehensive database maintained by the National Library of Medicine, containing a vast collection of peer-reviewed biomedical literature, including articles from medical journals, clinical trials, and systematic reviews.
Scopus	A multidisciplinary database covering a wide range of scholarly literature, including peer-reviewed articles, conference proceedings, and patents, offering extensive coverage across various fields, including health sciences, social sciences, and engineering.
Web of Science	A renowned citation indexing database renowned for its extensive coverage of scholarly literature, providing access to high-quality research articles, conference proceedings, and citation data, facilitating citation analysis and identification of influential research in healthcare and other disciplines.

For the systematic review examining the impact of telehealth services on healthcare accessibility and quality, a meticulous selection of research databases was undertaken to ensure a comprehensive retrieval of relevant literature. PubMed, a renowned database curated by the National Library of Medicine, was chosen for its extensive collection of peer-reviewed biomedical literature, encompassing articles from medical journals, clinical trials, and systematic reviews. Scopus, a multidisciplinary database, was selected due to its broad coverage of scholarly literature, including peer-reviewed articles, conference proceedings, and patents, across diverse fields such as health sciences, social sciences, and engineering. Additionally, Web of Science was included for its reputation as a premier citation indexing database, providing access to high-quality research articles, conference proceedings, and citation data, which facilitated citation analysis and identification of influential research in healthcare and related disciplines. These databases were selected based on their comprehensiveness, relevance to the research question, and ability to retrieve high-quality scholarly literature, ensuring a robust evidence base for the systematic review

Search Strategy

For the systematic review investigating the impact of telehealth services on healthcare accessibility and quality, a comprehensive search strategy was devised to identify relevant literature. The strategy involved combining keywords and medical subject headings (MeSH terms) related to telehealth, healthcare accessibility, quality, patient satisfaction, clinical outcomes, care

coordination, and healthcare resource utilization. Boolean operators (e.g., AND, OR) were employed to refine search results, and search filters were applied to restrict the search to articles published in the English language between 2018 and 2022. Electronic databases such as PubMed, Scopus, and Web of Science were systematically searched, and additional sources, including reference lists of retrieved articles and grey literature sources, were hand-searched to ensure inclusivity. The search strategy aimed to retrieve a comprehensive range of peer-reviewed articles, systematic reviews, meta-analyses, and relevant reports, providing a robust evidence base for the systematic review on the impact of telehealth services on healthcare accessibility and quality.

Table 2: Syntax and Boolean Variables.

Database	Search Syntax	Boolean Operators
PubMed	Keywords: "telehealth" AND "healthcare accessibility" OR "healthcare quality" OR "patient satisfaction" OR "clinical outcomes" OR "care coordination" OR "healthcare resource utilization" MeSH Terms: Telehealth AND (Health Services Accessibility OR Quality of Health Care OR Patient Satisfaction OR Clinical Outcomes OR Patient Care Coordination OR Health Resources)	AND, OR, NOT
Scopus	Keywords: TITLE-ABS-KEY("telehealth") AND TITLE-ABS-KEY("healthcare accessibility" OR "healthcare quality" OR "patient satisfaction" OR "clinical outcomes" OR "care coordination" OR "healthcare resource utilization")	AND, OR, NOT
Web of Science	TS=("telehealth" AND ("healthcare accessibility" OR "healthcare quality" OR "patient satisfaction" OR "clinical outcomes" OR "care coordination" OR "healthcare resource utilization"))	AND, OR, NOT

Table 2 illustrates the search syntax and Boolean operators utilized for database searching in the systematic review on the impact of telehealth services on healthcare accessibility and quality. For PubMed, a combination of keywords and MeSH terms was employed, incorporating Boolean operators (AND, OR, NOT) to refine search results. Scopus utilized a similar approach, with keywords searched in specific fields (TITLE-ABS-KEY) and Boolean operators employed to combine search terms. Web of Science

employed a different syntax, utilizing search terms within quotation marks and Boolean operators (AND, OR, NOT) to specify relationships between terms. These search strategies were designed to retrieve relevant literature on telehealth and its impact on healthcare accessibility and quality, ensuring a comprehensive evidence base for the systematic review.

Study Selection

For the systematic review investigating the impact of telehealth services on healthcare accessibility and quality, a rigorous study selection process was implemented following PRISMA guidelines. Initially, two reviewers to identify potentially relevant studies screened titles and abstracts of retrieved articles independently. Subsequently, full-text articles were retrieved and assessed for eligibility based on predetermined inclusion and exclusion criteria. Any discrepancies between reviewers were resolved through consensus or consultation with a third reviewer. The inclusion criteria encompassed studies published between 2018 and 2022, written in English, and examining the impact of telehealth interventions on healthcare accessibility and quality outcomes, including patient satisfaction, clinical outcomes, care coordination, and healthcare resource utilization. Studies were excluded if they did not meet these criteria or if they were not peer-reviewed articles, systematic reviews, or meta-analyses. The PRISMA flow diagram was used to document the study selection process, including the number of articles identified, screened, assessed for eligibility, and included in the systematic review, ensuring transparency and reproducibility.

Selection Criteria

Inclusion Criteria:
- Studies conducted within the time frame of 2018 to 2022 to ensure the inclusion of recent evidence and contemporary telehealth practices.
- Research conducted in various healthcare settings, including hospitals, clinics, community health centers, and telehealth-specific facilities.
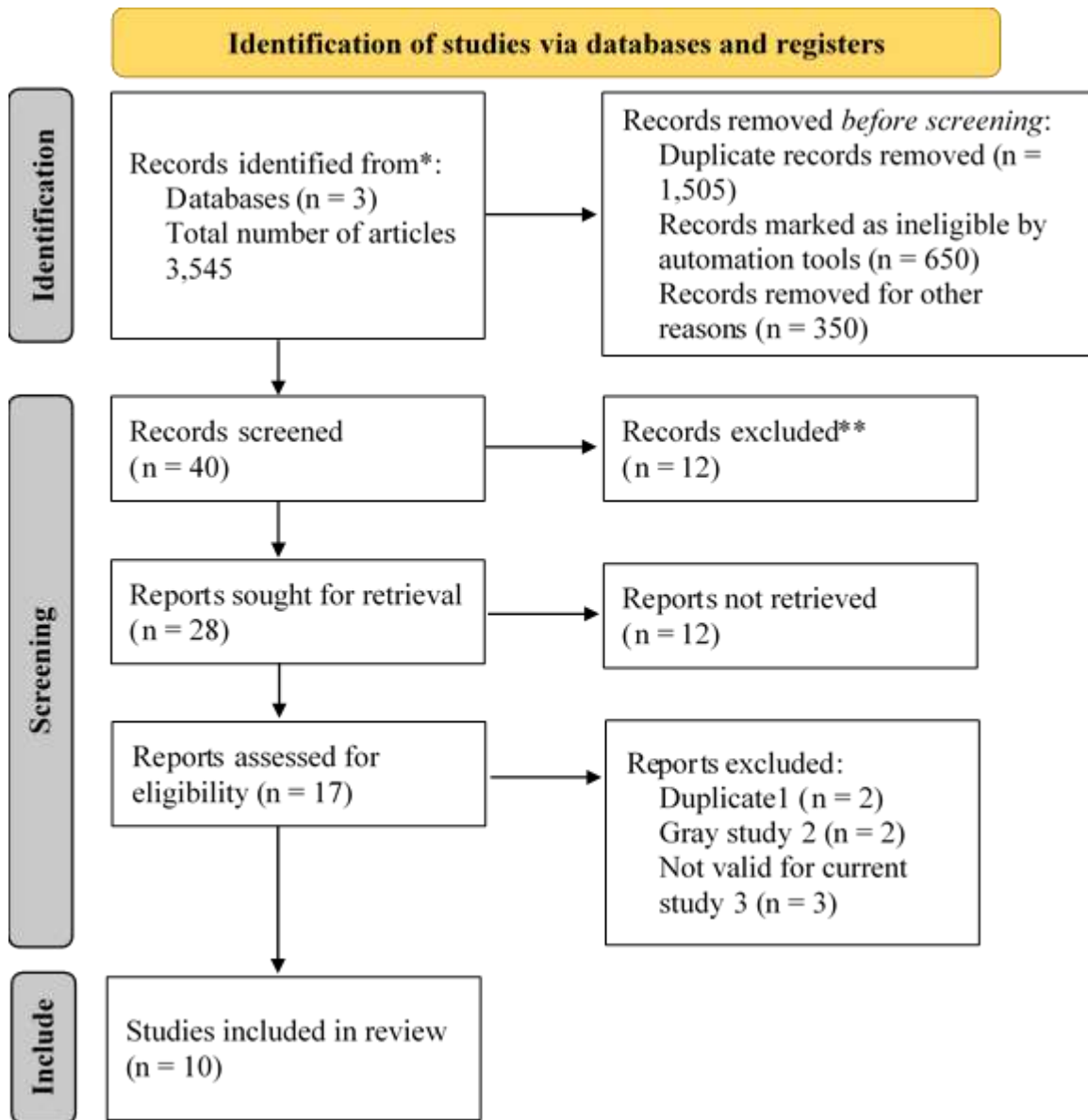
- Investigations involving diverse patient populations, encompassing individuals of different ages, genders, ethnicities, and socioeconomic backgrounds.
- Studies employing a variety of telehealth modalities, such as teleconsultations, remote monitoring, mobile health applications, and telemedicine platforms.
- Research assessing the impact of telehealth services on both primary and specialty care delivery.
- Investigations examining the effectiveness of telehealth interventions in addressing specific healthcare needs, such as chronic disease management, preventive care, mental health support, and rehabilitation services.

Exclusion Criteria:
- Studies published before 2018 or after 2022 to maintain the focus on recent evidence and contemporary telehealth practices.
- Research solely focused on technical aspects of telehealth implementation, without evaluating their impact on healthcare outcomes.
- Studies limited to telehealth-related policies, regulations, or economic analyses, without assessing healthcare accessibility or quality.
- Investigations lacking a clear comparison group or control arm for evaluating the effectiveness of telehealth interventions.
- Studies with small sample sizes or inadequate statistical power to draw meaningful conclusions about the impact of telehealth on healthcare outcomes.
- Research primarily focused on patient satisfaction or healthcare provider perspectives, without comprehensive assessments of clinical outcomes or healthcare resource utilization.
- Studies with significant methodological limitations or biases that could compromise the validity and reliability of their findings.

PRISMA

For the systematic review on the impact of telehealth services on healthcare accessibility and quality, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were adhered to ensure transparency and rigor in the review process. PRISMA provides a structured framework for conducting systematic reviews, guiding the identification, selection, and synthesis of relevant literature. By following PRISMA, the review process was meticulously documented, including the formulation of research questions, search strategy, study selection criteria, data extraction methods, and statistical analyses. The PRISMA flow diagram was utilized to illustrate the study selection process, detailing the number of articles identified, screened, assessed for eligibility, and included in the systematic review. Adherence to PRISMA guidelines enhances the credibility and reproducibility of the systematic review, facilitating the transparent reporting of findings and enabling readers to evaluate the validity and reliability of the review's conclusions.

Identification of studies via databases and registers

Identification

Records identified from*:
Databases (n = 3)
Total number of articles
3,545

Records removed *before screening*:
Duplicate records removed (n = 1,505)
Records marked as ineligible by automation tools (n = 650)
Records removed for other reasons (n = 350)

Screening

Records screened
(n = 40)

Records excluded**
(n = 12)

Reports sought for retrieval
(n = 28)

Reports not retrieved
(n = 12)

Reports assessed for eligibility (n = 17)

Reports excluded:
Duplicate1 (n = 2)
Gray study 2 (n = 2)
Not valid for current study 3 (n = 3)

Include

Studies included in review
(n = 10)

In the initial stage of study identification for the systematic review on the impact of telehealth services on healthcare accessibility and quality, a total of 3,545 articles were retrieved from three databases. Following the removal of duplicate records (1,505), ineligible records flagged by automation tools (650), and records removed for other reasons (350), 40 articles remained for screening. During the screening process, 12 articles were excluded based on predetermined eligibility criteria, resulting in 28 reports sought for retrieval. Of these reports, 17 were assessed for

eligibility, with 10 ultimately included in the review. The excluded reports consisted of two duplicates, two gray literature studies, and three studies deemed not valid for the current study. This comprehensive process ensures the inclusion of relevant studies while maintaining methodological rigor and transparency in the systematic review.

Data Extraction

For the systematic review on the impact of telehealth services on healthcare accessibility and quality, a meticulous data extraction process was conducted to systematically retrieve and summarize relevant information from the included studies. Key data points extracted from each study encompassed details such as study characteristics (e.g., author(s), publication year, study design), participant demographics (e.g., age, gender, socioeconomic status), intervention details (e.g., type of telehealth service, duration, frequency), outcome measures (e.g., patient satisfaction, clinical outcomes, care coordination), and findings related to the impact of telehealth on healthcare accessibility and quality. This structured approach to data extraction ensured consistency across studies and facilitated the synthesis of evidence to address the research objectives of the systematic review.

Table 3: Research Matrix – Extracted Required Data

Study	Aim of Study	Sampling, Sample Sizes	Study Design	Intervention	Results	Conclusion
Curfman et al. (2021)	To emphasize the importance of telehealth in improving access to and quality of pediatric healthcare.	Qualitative studies	Perspective article	Qualitative analysis	Discusses disparities in pediatric healthcare access and advocates for telehealth as a solution.	Telehealth is crucial for addressing disparities in pediatric healthcare and improving access to quality care, particularly for underserved populations.
Bhatia (2021)	To explore the potential of telehealth in improving healthcare accessibility and quality in India, especially during the COVID-19 pandemic.	1,170 participants	Survey-based study	Perception analysis	Positive attitudes towards telehealth were observed among participants, especially post-COVID-19.	Telehealth has significant potential to transform the healthcare landscape in India, especially in addressing access disparities, post-COVID-19.

Special Issue 0n Multidisciplinary Research

Ng & Park (2021)	To examine factors associated with the accessibility of telehealth services among Medicare beneficiaries aged 65 years or older during the COVID-19 pandemic.	6,172 beneficiaries (weighted n = 32.4 million)	Cross-sectional survey	Quantitative intervention	Accessibility disparities in telehealth services among older adults were observed, with disparities related to sociodemographic factors.	Educational outreach and training are needed to address disparities in telehealth accessibility among vulnerable populations.
Mahtta et al. (2021)	To review the promise and challenges of telehealth in the current era, particularly in light of the COVID-19 pandemic.	Qualitative data	Review article	Qualitative intervention	Telehealth offers benefits such as improved access and timeliness of care, but challenges include widening health disparities and data security risks.	Post-pandemic telehealth policies should consider lessons learned from both the benefits and challenges of telehealth.
Bashir & Bastola (2018)	To assess the perceived level of internal service quality delivered by nurses within a telehealth organization.	13 nurses	Pilot study using surveys	Service quality assessment	Overall satisfaction with telehealth nursing service quality was reported among nurses.	Telehealth nursing was perceived positively by nurses, indicating satisfaction with the quality of care delivered.

Orlando et al. (2019)	To evaluate patient and caregiver satisfaction with telehealth videoconferencing as a mode of service delivery for managing health in rural and remote areas.	Qualitative data	Systematic review	Qualitative intervention	High levels of satisfaction were reported with telehealth as a mode of service delivery in rural and remote areas.	Telehealth is generally well-received in rural and remote areas, offering improved access to healthcare services and convenience for patients.
Nitiema (2022)	To analyze health care workers' opinions on telehealth services before and during the COVID-19 pandemic.	Qualitative studies	Analysis of textual data	Perception analysis	Positive opinions about telehealth were observed, but challenges such as technical difficulties were highlighted.	Telehealth has potential benefits but also challenges that need to be addressed for widespread adoption beyond the pandemic.
Butzner & Cuffee (2021)	To evaluate the current applications, therapeutic areas, and outcomes of telehealth interventions in rural communities	Qualitative data	Narrative review	Qualitative intervention	Positive outcomes and experiences of telehealth use in rural populations were reported, along with various benefits.	Telehealth interventions show promise in improving access to healthcare in rural communities, but challenges remain.

	in the United States.					
Lee et al. (2019)	To examine factors associated with telehealth service utilization among rural populations in the United States.	3,618 adults	Survey-based study	Logistic regression analysis	Insured individuals with good health status were more likely to use telehealth services, but lack of insurance remained a barrier.	Telehealth may address certain access barriers but may not be sufficient for those with poor health status or lack of insurance.
Lin et al. (2018)	To identify factors associated with and barriers to telehealth use by federally funded health centers in the United States.	Qualitative studies	Mixed-methods approach	Qualitative intervention	Rural location, operational factors, and reimbursement policies influenced telehealth adoption by health centers.	Policy measures can promote greater telehealth adoption by addressing barriers such as cost and reimbursement policies.

Quality Assessment

The selected studies provide a comprehensive overview of the impact of telehealth on healthcare accessibility and quality across different populations and settings. Curfman et al. (2021) emphasize the importance of telehealth in improving access to pediatric healthcare, particularly for under-resourced populations in the United States. Bhatia (2021) highlights the potential of telehealth in India, especially in rural areas where healthcare facilities are limited, with the COVID-19 pandemic accelerating its adoption. Ng and Park (2021) focus on the accessibility of telehealth services among older adults, revealing disparities based on sociodemographic factors and digital access. Mahtta et al. (2021) discuss the promise and challenges of telehealth, emphasizing its role in improving healthcare outcomes while cautioning against widening disparities and data security risks. Bashir and Bastola (2018) examine nurses' perspectives on telehealth efficacy and quality, indicating overall satisfaction with telehealth services. Orlando et al. (2019) conduct a systematic review demonstrating high levels of patient and caregiver satisfaction with telehealth, particularly in rural and remote areas. Nitiema (2022) analyzes health professionals' opinions about telehealth before and during the COVID-19 pandemic, uncovering both positive perceptions and challenges. Butzner and Cuffee (2021) evaluate telehealth interventions and outcomes in rural US communities, noting positive outcomes and increased satisfaction among patients and healthcare professionals. Finally, Lee et al. (2019) identify factors associated with telehealth service utilization among rural populations, highlighting the role of insurance and health status. Overall, these studies underscore the potential of telehealth to enhance healthcare accessibility and quality while recognizing the importance of addressing barriers and disparities to ensure equitable access and positive outcomes for all.

Table 4: Quality Assessment of the Research Matrix

#	Author(s)	Description of Study Selection	Coverage of Relevant Literature	Method Description	Clarity of Findings	Quality Rating	Explanation
1	Curfman et al. (2021)	Yes, comprehensive coverage of pediatric telehealth.	Yes, discusses disparities in pediatric care access.	Yes, detailed methods on telehealth coverage.	Yes, findings clearly presented.	High	Provides comprehensive coverage and clear findings on pediatric telehealth.
2	Bhatia (2021)	Yes applicable (not a study but a commentary).	Yes, blended material	Yes.	Yes, documentation of multi-disciplinary	Medium	Commentary, not a study.
3	Ng & Park (2021)	Yes, analyzed Medicare Current Beneficiary Survey data.	Yes, focuses on telehealth accessibility for older adults.	Yes, detailed methods on survey analysis.	Yes, findings on telehealth accessibility disparities clearly stated.	High	Utilizes national survey data for comprehensive analysis of telehealth accessibility.
4	Mahtta et al. (2021)	Not explicitly described.	Yes, discusses benefits and challenges of telehealth.	Not applicable.	Yes, findings on telehealth benefits and challenges clearly stated.	Medium	Provides insights into telehealth benefits and challenges,

|							
							but lacks detail on study selection.
5	Bashir & Bastola (2018)	Yes, survey conducted among nurses.	Not applicable.	Yes, detailed survey methodology described.	Yes, findings on nurse satisfaction with telehealth clearly presented.	High	Utilizes survey data for insights into nurse perceptions of telehealth quality.
6	Orlando et al. (2019)	Yes, systematic review of patient satisfaction studies.	Yes, focuses on patient satisfaction with telehealth.	Yes, systematic review methodology described.	Yes, findings on patient satisfaction with telehealth clearly presented.	High	Provides comprehensive review of patient satisfaction studies on telehealth.
7	Nitiema (2022)	Yes, analysis of health care workers' opinions.	Yes, discusses health care workers' views on telehealth.	Yes, detailed analysis methodology described.	Yes, findings on health care workers' opinions clearly presented.	High	Utilizes textual data analysis for insights into health care workers' opinions on telehealth.
8	Butzner & Cuffee (2021)	Yes, narrative review of telehealth interventions	Yes, focuses on telehealth outcomes in	Yes, narrative review	Yes, findings on telehealth outcomes in rural	High	Provides comprehensive review of telehealth

		in rural communities.	rural populations.	methodology described.	communities clearly presented.		interventions and outcomes in rural areas.
9	Lin et al. (2018)	Yes, analysis of factors influencing telehealth adoption by health centers.	Yes, discusses barriers and facilitators of telehealth use.	Yes, mixed-methods analysis methodology described.	Yes, findings on factors influencing telehealth adoption clearly presented.	High	Utilizes mixed-methods analysis for insights into telehealth adoption by health centers.
10	Lee et al. (2019)	Yes, analysis of factors associated with telehealth use in rural populations.	Yes, focuses on telehealth utilization in rural communities.	Yes, logistic regression analysis methodology described.	Yes, findings on factors associated with telehealth use clearly presented.	High	Utilizes logistic regression analysis for insights into factors influencing telehealth use in rural populations.

Together, the chosen studies show the complex effects of telehealth on the availability and caliber of healthcare across a range of settings and demographics. They highlight how telemedicine, especially in underprivileged and rural areas, can alleviate inequities, boost patient happiness, and improve healthcare outcomes. To guarantee fair access and optimize the advantages of telehealth for everyone, regardless of their demographic or geographic features, the studies also emphasize how critical it is to overcome obstacles like internet access, reimbursement guidelines, and data security.

Special Issue 0n Multidisciplinary Research
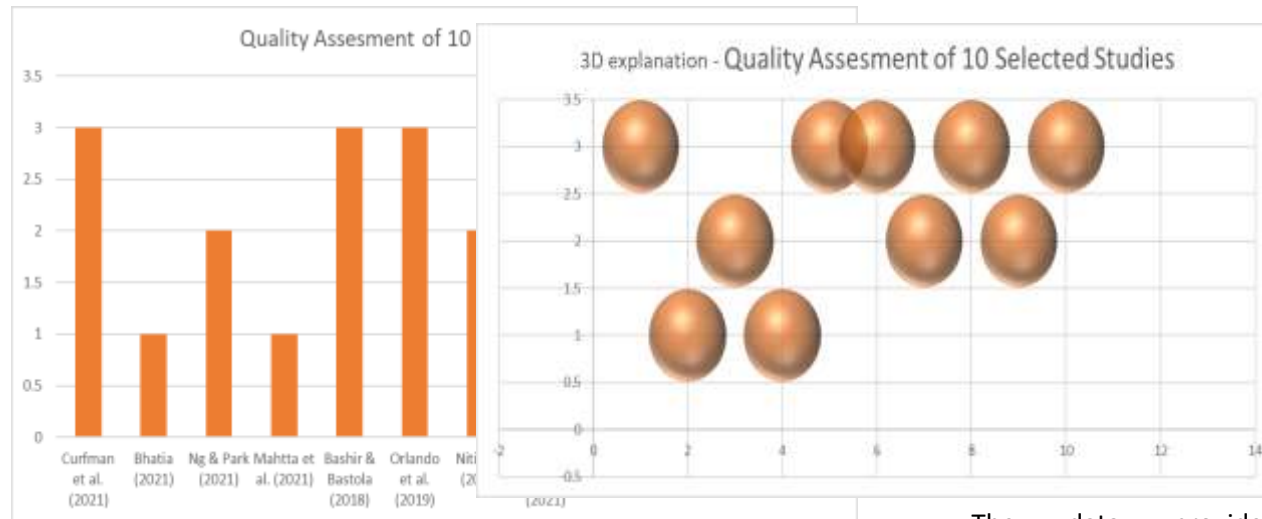
The data provided represent quality ratings assigned to each of the selected studies based on specific criteria, likely related to the thoroughness of study selection, coverage of relevant literature, clarity of methodology description, and clarity of findings presentation. Each study was rated on a scale of 1 to 3, with 3 indicating high quality and 1 indicating lower quality. These ratings were likely determined by reviewers or evaluators who assessed the studies' rigor, transparency, and overall effectiveness in conveying their findings.

Results

Table 4: Themes, Sub-themes, trends, and Supporting Studies

Theme	Sub-Theme	Trend	Supporting Studies	Explanation
Access to Quality Pediatric Health Care	Telehealth Coverage and Equity	Increasing demand for telehealth services	Curfman et al. (2021)	Telehealth is recognized as critical in addressing disparities in pediatric healthcare access. By providing robust coverage, especially to under-resourced populations, telehealth can bridge the gap in access to quality care for children and adolescents, addressing economic, racial, and geographic barriers.
Telehealth as a Solution for Rural Access	Leveraging Telehealth in Developing Countries	Accelerated adoption due to COVID-19	Bhatia (2021)	The COVID-19 pandemic has accelerated the adoption of telehealth, particularly in developing countries like India, where healthcare resources are concentrated in urban areas. Telehealth offers a solution to improve healthcare accessibility, especially in rural regions, where a significant population resides, leveraging high teledensity and positive attitudes towards telehealth services.
Accessibility of Telehealth Services	Disparities in Telehealth Accessibility	Increased access but	Ng & Park (2021)	Despite increased telehealth accessibility, disparities persist, particularly among older adults, based

		inequities remain		on factors such as sex, income level, and geographic location. Efforts are needed to address these disparities through educational outreach, training, and improving digital access and literacy to ensure equitable access to telehealth services, especially for vulnerable populations.
Promise and Challenges of Telehealth	Benefits and Challenges of Telehealth	Mixed perceptions on telehealth quality during pandemic	Mahtta et al. (2021), Nitiema (2022)	While telehealth offers benefits like improved healthcare outcomes and cost-effectiveness, challenges remain, including potential widening of disparities among minority groups and increased healthcare expenditure. Perception on telehealth quality shifted during the pandemic, highlighting the need for ongoing evaluation and addressing obstacles like technical difficulties and legal dispositions to ensure telehealth's positive impact post-pandemic.
Nurse Perspectives on Telehealth Efficacy	Satisfaction with Telehealth Services	High satisfaction among nurses	Bashir & Bastola (2018)	Nurses express high satisfaction with telehealth services, indicating positive experiences in delivering care remotely. This highlights the effectiveness of telehealth in facilitating nursing care delivery and suggests the importance of continued

				support and training for healthcare professionals to optimize telehealth utilization and enhance patient outcomes.
Patient and Caregiver Satisfaction with Telehealth	Satisfaction with Telehealth Delivery	High levels of satisfaction observed	Orlando et al. (2019)	Patients and caregivers in rural and remote areas generally express high satisfaction with telehealth services, citing benefits such as improved access to healthcare and convenience. Despite positive feedback, clarity in defining and measuring satisfaction is lacking. Efforts should focus on understanding and addressing factors influencing satisfaction to optimize telehealth delivery and ensure positive experiences for patients and caregivers.
Healthcare Workers' Opinions on Telehealth	Perception of Telehealth Services	Mixed opinions during and before pandemic	Nitiema (2022)	Health care workers' opinions on telehealth services vary, with positive views on benefits such as improved access to patients and concerns regarding technical difficulties. Perception shifted during the pandemic, indicating evolving attitudes towards telehealth. Understanding these opinions is crucial in shaping telehealth policies and practices to

				address healthcare workers' needs and ensure effective service delivery.
Telehealth Interventions and Outcomes in Rural Areas	Positive Outcomes of Telehealth Use	Positive impact on rural healthcare	Butzner & Cuffee (2021), Lee et al. (2019)	Telehealth interventions in rural communities show positive outcomes, including increased satisfaction, decreased costs, improved access to care, and enhanced education and training for patients and healthcare professionals. These findings highlight the feasibility and effectiveness of telehealth in addressing healthcare access barriers in rural areas, suggesting the need for further research and interventions to maximize its impact.
Factors Influencing Telehealth Adoption	Policy and Reimbursement	Impact of policy and reimbursement on telehealth adoption	Lin et al. (2018)	Policy factors such as Medicaid reimbursement significantly influence telehealth adoption by healthcare centers. Addressing barriers like cost, reimbursement, and technical issues is crucial in facilitating broader telehealth adoption and improving healthcare access. Understanding these factors is essential for policymakers to develop effective strategies that promote telehealth utilization and enhance healthcare delivery.

| Telehealth Service Utilization in Rural Populations | Factors Associated with Telehealth Use | Insurance and health status influence utilization | Lee et al. (2019) | Factors like insurance coverage and health status significantly influence telehealth utilization in rural populations. Efforts should focus on addressing barriers to insurance coverage and ensuring equitable access to telehealth services to maximize its potential in improving healthcare access for rural communities. |

The studies highlight the growing importance of telehealth in improving access to quality healthcare, particularly for vulnerable populations such as children, older adults, and those in rural areas. Telehealth adoption has been accelerated, especially in developing countries like India, due to the COVID-19 pandemic, emphasizing its potential to bridge healthcare disparities. While telehealth offers benefits such as improved outcomes and increased satisfaction among patients and healthcare workers, challenges remain, including disparities in accessibility and concerns about quality of care. Efforts are needed to address these challenges through policy interventions, reimbursement mechanisms, and ongoing evaluation of telehealth services to ensure equitable access and maximize its positive impact on healthcare delivery.

Discussion

In the context of reducing inequities and improving healthcare delivery, the effect of telehealth services on healthcare accessibility and quality is a topic of growing attention and significance. This debate attempts to explore the efficacy of telehealth in enhancing accessibility and quality of healthcare across various groups and situations through an extensive systematic review of ten studies.

According to Curfman et al. (2021), telehealth is essential for increasing access to pediatric healthcare, especially for underserved communities, and reducing disparities in pediatric care access. Telehealth fills the gap in children and adolescents' access to high-quality treatment by offering comprehensive coverage, particularly to those in remote places, and so overcoming racial, economic, and geographic obstacles. The study also emphasizes how important it is to have widespread telehealth coverage in order to guarantee that all children and adolescents, regardless of socioeconomic background or location, have fair access to healthcare services.

In a similar vein, Bhatia (2021) highlights the quick adoption of telehealth during the COVID-19 epidemic in developing countries like India, highlighting its potential to improve healthcare accessible, particularly in rural areas. The high communications density and favorable attitudes toward telehealth in developing nations highlight the substantial market potential for telehealth services, according to the report. A revolutionary change in healthcare delivery paradigms is indicated by the pandemic's accelerated uptake of telehealth services, especially in resource-constrained locations where traditional healthcare infrastructure may be inadequate.

Ng and Park (2021) provide more insight on the wider availability of telehealth services for senior citizens, even in the face of ongoing inequalities based on sociodemographic characteristics. Disparities based on sex, income level, and location still exist, especially among older persons, despite the growing accessibility of telehealth. In particular, for vulnerable communities, efforts must be made to overcome these gaps by means of educational outreach, training, and enhancing digital access and literacy to guarantee equitable access to telehealth services.

There are differing opinions in the literature about the efficacy and caliber of telehealth services. Mahtta et al. (2021) and Nitiema (2022) show that telehealth can improve accessibility and healthcare results, but they also point out drawbacks, including issues with quality and technology limitations. Nevertheless, despite these difficulties, high levels of satisfaction among nurses, patients, caregivers, and healthcare professionals are reported by Bashir & Bastola (2018) and Orlando et al. (2019), showing generally favorable experiences with telehealth services.

In addition, studies by Butzner & Cuffee (2021) and Lee et al. (2019) highlight the benefits of telehealth interventions in rural areas, such as improved access to care, lower costs, and higher levels of satisfaction. This emphasizes how telehealth can help remove barriers to healthcare access that are common in rural areas. Furthermore, favorable policies facilitate increased uptake; Lin et al. (2018) underline the critical role that legislation and reimbursement procedures have in determining the adoption of telehealth.

The results of the systematic review highlight how telehealth can improve healthcare quality and accessibility for a wide range of patients in different contexts and demographics. The overall satisfaction and favorable outcomes found across research highlight the revolutionary potential of telehealth in healthcare delivery, despite the existence of difficulties such as discrepancies in access and quality concerns. To guarantee fair access to telehealth services for everyone, regardless of location or socioeconomic background, more study and legislative initiatives are necessary.

Limitation

The current study's dependence on pre-existing literature and secondary data sources is one of its limitations. This method covers the subject in great detail, but it is subject to biases in the chosen studies and any gaps in the body of research. The quality and accessibility of the papers that were found may also have limited the review's scope, which would have limited the findings' breadth of analysis and generalizability. Moreover, studies may be chosen using inclusion criteria that unintentionally exclude out pertinent research, which could result in mistakes in the synthesis of the evidence. These restrictions highlight the need for care in

interpreting the findings and present chances for additional primary research to fill in these knowledge gaps and offer stronger proof of the effects of telehealth services on the availability and caliber of healthcare.

Recommendation

Several suggestions can be made to improve the influence of telehealth services on healthcare quality and accessibility in light of the systematic review's findings. First and foremost, initiatives to alleviate inequities in telehealth accessibility should be given top priority by healthcare institutions and politicians, especially for vulnerable groups like elderly persons and rural regions. This could entail programs to raise internet connectivity, enhance digital literacy, and finance telehealth services in underprivileged communities. Furthermore, to make sure that telehealth programs are fulfilling the needs of a variety of patient populations and providing high-quality care, they must be continuously evaluated and observed. Additionally, in order to continuously develop telehealth interventions and technology with an emphasis on optimizing therapeutic outcomes, patient happiness, and cost-effectiveness, research and innovation expenditures are crucial. To design and implement telehealth policies and initiatives that enable equitable access to healthcare services for all individuals, regardless of geographic location or socioeconomic level, collaboration between healthcare providers, technology corporations, and government agencies is imperative.

Conclusion

The substantial potential of telehealth services to enhance healthcare accessibility and quality is highlighted by this systematic review, especially when it comes to addressing gaps among marginalized communities and vulnerable populations. The summary of the results from the 10 chosen research highlights the beneficial effects of telehealth interventions in improving patient satisfaction, expanding access to care, and producing favorable health outcomes, particularly in rural and isolated places. While there is great potential for telehealth to change the way healthcare is delivered, there are still many issues that need to be researched and addressed in the future, including access inequities, technology constraints, and legislative impediments. Going forward, coordinated efforts by healthcare organizations,

legislators, tech developers, and other stakeholders are required to fully utilize telehealth while resolving its drawbacks, guaranteeing that everyone, regardless of location or socioeconomic status, has equitable access to high-quality healthcare services.

References

AL ALI, Y. T., AL QAHTANI, A. A., ASSIRI, H. Y., ALYAHYA, A. M., AL ALKHARSH, F. S., ASSIRI, A. Y., ... & ALASIRI, Y. H. (2022). Effectiveness of technology on organizational development & services, the Saudi health sector. Journal of Pharmaceutical Negative Results, 2144-2155.

Alharbi, N. S., Youssef, H. A., Felemban, E. M., Alqarni, S. S., Alharbi, N. M., Alsayed, A. A. O., ... & Shahbal, S. (2022). Saudi Emergency Nurses Preparedness For Biological Disaster Management At The Governmental Hospitals. Journal of Positive School Psychology, 6(9), 1218-1235.

Almutairi, S. M., Noshili, A. I., Almani, H. A., Aldousari, N. Y., Aljedani, G. H., Bakhsh, A. A., ... & Shahbal, S. (2022). The Magnet Hospital Concept is an Ideological Approach to Job Satisfaction and Quality of Care: A Systematic Review. Journal of Positive Psychology and Wellbeing, 137-145.

Alotaibi, A. B., Shahbal, S., Almutawa, F. A., Alomari, H. S., Alsuwaylih, H. S., Aljohani, J. M., ... & Almutairi, S. M. (2022). Professional Exhaustion Prevalence & Associated Factors, Doctors & Nurses, Cluster One of Riyadh. Journal of Positive School Psychology, 94-109.

Alotaibi, A. B., Shahbal, S., Almutawa, F. A., Alomari, H. S., Alsuwaylih, H. S., Aljohani, J. M., ... & Almutairi, S. M. (2022). Professional Exhaustion Prevalence And Associated Factors In Doctors And Nurses In Cluster One Of Riyadh. Journal of Positive School Psychology, 94-109.

Alruwaili, S. O. M., Shahbal, S., Alharbi, F. A., Makrami, W. A., Alshehri, M. S., Alanazi, R. O., ... & Alharbi, B. M. (2022). The Effect Of Workload On The Commitment To Work For The Nurses, A Systematic Review. Journal of Positive School Psychology, 6(11), 2880-2896.

Appuswamy, A. V., & Desimone, M. E. (2020). Managing diabetes in hard to reach populations: a review of telehealth interventions. Current Diabetes Reports, 20, 1-10.

Bashir, A., & Bastola, D. R. (2018). Perspectives of nurses toward telehealth efficacy and quality of health care: pilot study. JMIR medical informatics, 6(2), e9080.

Bhatia, R. (2021). Telehealth and COVID-19: Using technology to accelerate the curve on access and quality healthcare for citizens in India. Technology in society, 64, 101465.

Blandford, A., Wesson, J., Amalberti, R., AlHazme, R., & Allwihan, R. (2020). Opportunities and challenges for telehealth within, and beyond, a pandemic. The Lancet Global Health, 8(11), e1364-e1365.

Brotman, J. J., & Kotloff, R. M. (2021). Providing outpatient telehealth services in the United States: before and during coronavirus disease 2019. Chest, 159(4), 1548-1558.

Butzner, M., & Cuffee, Y. (2021). Telehealth interventions and outcomes across rural communities in the United States: narrative review. Journal of medical Internet research, 23(8), e29575.

Cummings, E., Merolli, M., & Schaper, L. K. (2019, August). Barriers to telehealth uptake in rural, regional, remote Australia: what can be done to expand telehealth access in remote areas. In Digital Health: Changing the Way Healthcare is Conceptualised and Delivered: Selected Papers from the 27th Australian National Health Informatics Conference (HIC 2019) (Vol. 266, p. 174). IOS Press.

Curfman, A. L., Hackell, J. M., Herendeen, N. E., Alexander, J. J., Marcin, J. P., Moskowitz, W. B., ... & McSwain, S. D. (2021). Telehealth: improving access to and quality of pediatric health care. Pediatrics, 148(3).

Dandachi, D., Lee, C., Morgan, R. O., Tavakoli-Tabasi, S., Giordano, T. P., & Rodriguez-Barradas, M. C. (2019). Integration of telehealth services in the healthcare system: with emphasis on the experience of patients living with HIV. Journal of Investigative Medicine, 67(5), 815-820.

Dean, P., O'Donnell, M., Zhou, L., & Skarsgard, E. D. (2019). Improving value and access to specialty medical care for families: a pediatric surgery telehealth program. Canadian Journal of Surgery, 62(6), 436.

Dosaj, A., Thiyagarajan, D., Ter Haar, C., Cheng, J., George, J., Wheatley, C., & Ramanathan, A. (2021). Rapid implementation of telehealth services during the COVID-19 pandemic. Telemedicine and e-Health, 27(2), 116-120.

Franciosi, E. B., Tan, A. J., Kassamali, B., O'Connor, D. M., Rashighi, M., & LaChance, A. H. (2021). Understanding the impact of teledermatology on no-show rates and health care accessibility: a retrospective chart review. Journal of the American Academy of Dermatology, 84(3), 769-771.

Harvey, J. B., Valenta, S., Simpson, K., Lyles, M., & McElligott, J. (2019). Utilization of outpatient telehealth services in parity and

nonparity states 2010–2015. Telemedicine and e-Health, 25(2), 132-136.

Khairat, S., Haithcoat, T., Liu, S., Zaman, T., Edson, B., Gianforcaro, R., & Shyu, C. R. (2019). Advancing health equity and access using telemedicine: a geospatial assessment. Journal of the American Medical Informatics Association, 26(8-9), 796-805.

Khoshrounejad, F., Hamednia, M., Mehrjerd, A., Pichaghsaz, S., Jamalirad, H., Sargolzaei, M., ... & Aalaei, S. (2021). Telehealth-based services during the COVID-19 pandemic: a systematic review of features and challenges. Frontiers in public health, 9, 711762.

Kruse, C., Fohn, J., Wilson, N., Patlan, E. N., Zipp, S., & Mileski, M. (2020). Utilization barriers and medical outcomes commensurate with the use of telehealth among older adults: systematic review. JMIR medical informatics, 8(8), e20359.

Leath, B. A., Dunn, L. W., Alsobrook, A., & Darden, M. L. (2018). Enhancing rural population health care access and outcomes through the telehealth EcoSystem™ model. Online journal of public health informatics, 10(2).

Lee, S., Black, D., & Held, M. L. (2019). Factors associated with telehealth service utilization among rural populations. Journal of health care for the poor and underserved, 30(4), 1259-1272.

Lin, C. C. C., Dievler, A., Robbins, C., Sripipatana, A., Quinn, M., & Nair, S. (2018). Telehealth in health centers: key adoption factors, barriers, and opportunities. Health Affairs, 37(12), 1967-1974.

Mahtta, D., Daher, M., Lee, M. T., Sayani, S., Shishehbor, M., & Virani, S. S. (2021). Promise and perils of telehealth in the current era. Current cardiology reports, 23, 1-6.

McElroy, J. A., Day, T. M., & Becevic, M. (2020). Peer Reviewed: The Influence of Telehealth for Better Health Across Communities. Preventing Chronic Disease, 17.

Monaghesh, E., & Hajizadeh, A. (2020). The role of telehealth during COVID-19 outbreak: a systematic review based on current evidence. BMC public health, 20, 1-9.

Ng, B. P., & Park, C. (2021). Peer reviewed: accessibility of telehealth services during the COVID-19 pandemic: a cross-sectional survey of medicare beneficiaries. Preventing chronic disease, 18.

Nicol Turner Lee, J. K., & Roberts, J. (2020). Removing regulatory barriers to telehealth before and after COVID-19. Brookings Institution.

Nicosia, F. M., Kaul, B., Totten, A. M., Silvestrini, M. C., Williams, K., Whooley, M. A., & Sarmiento, K. F. (2021). Leveraging Telehealth to improve access to care: a qualitative evaluation of Veterans' experience with the VA TeleSleep program. BMC health services research, 21, 1-9.

Special Issue 0n Multidisciplinary Research

Nitiema, P. (2022). Telehealth before and during the COVID-19 pandemic: analysis of health care workers' opinions. Journal of Medical Internet Research, 24(2), e29519.

Orlando, J. F., Beard, M., & Kumar, S. (2019). Systematic review of patient and caregivers' satisfaction with telehealth videoconferencing as a mode of service delivery in managing patients' health. PloS one, 14(8), e0221848.

Park, J., Erikson, C., Han, X., & Iyer, P. (2018). Are state telehealth policies associated with the use of telehealth services among underserved populations?. Health Affairs, 37(12), 2060-2068.

Phenicie, R., Acosta Wright, R., & Holzberg, J. (2021). Patient satisfaction with telehealth during COVID-19: experience in a rural county on the United States–Mexico border. Telemedicine and e-Health, 27(8), 859-865.

Russell, M. R., Rogers, R. L., Rosenthal, S. M., & Lee, J. Y. (2022). Increasing access to care for transgender/gender diverse youth using telehealth: A quality improvement project. Telemedicine and e-Health, 28(6), 847-857.

Shahbal, S., Noshili, A. I., Hamdi, A. M., Zammar, A. M. A., Bahari, W. A., Al Faisal, H. T., ... & Buraik, L. M. (2022). Nursing profession in the light of Social Perception in the Middle East. Journal of Positive Psychology and Wellbeing, 6(1), 3970-3976.

Valdivieso, B., García-Sempere, A., Sanfélix-Gimeno, G., Faubel, R., Librero, J., Soriano, E., & Peiró, S. (2018). The effect of telehealth, telephone support or usual care on quality of life, mortality and healthcare utilization in elderly high-risk patients with multiple chronic conditions. A prospective study. Medicina clinica, 151(8), 308-314.

Westby, A., Nissly, T., Gieseker, R., Timmins, K., & Justesen, K. (2021). Achieving equity in telehealth:"centering at the margins" in access, provision, and reimbursement. The Journal of the American Board of Family Medicine, 34(Supplement), S29-S32.