



Integrated Approach to Diagnosis and Treatment in Clinical Medicine: Search for Optimal Solutions

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Abstract Aims: This review examines the Current State of the Integrated Healthcare approach and assesses the impact of integrated care models on patient health outcomes. **Methodology:** A systematic review using PubMed database and Google Scholar database. Using period 2019-2023 and keywords Clinical Medicine AND Diagnosis AND Treatment AND Integrated Approach and "integrated care" AND "diagnosis and treatment" AND "clinical medicine" AND "multidisciplinary care" were employed to identify relevant studies from PubMed and Google Scholar. Finally, 18 articles were sampled. **Results:** The systematic literature review on integrated diagnosis and therapy in clinical medicine shows many study designs and sample sizes. RCTs, the gold standard, are included in the review, along with Prospective Cohort Studies, Retrospective Studies, Cross-Sectional Studies, and Post-hoc Analyses. Some studies have large populations and rich datasets, whereas others have smaller samples. These studies provide varied approaches and timeframes for applying the integrated approach in clinical practice and discuss integrated healthcare approaches that use multidisciplinary teams, innovative technologies, and targeted interventions to treat chronic disorders and multi-morbidities. Integrated healthcare enhances patient outcomes, adherence to recommendations, and quality of life, emphasizing the need for tailored care in modern medicine. **Scientific Novelty:** Exploring a complex, integrated clinical medicine diagnosis and treatment approach to find patient care solutions. **Conclusion:** Clinical medicine's integrated diagnosis and treatment strategy is dynamic and promising. It can improve patient care, lower healthcare costs, and improve the quality of life for people with diverse health issues.

Key Words Integrated Healthcare, Diagnosis and Treatment, Clinical Medicine, Optimal Solutions, Multidisciplinary Care, Patient-Centered Approach

1. Introduction

The quest for optimal solutions in clinical medicine has been an ongoing struggle in modern healthcare's ever-changing environment. It is possible that legislation regarding data privacy and security, as well as improved infrastructure, healthcare education, and patient computer literacy, will significantly affect healthcare outcomes. To achieve worldwide standards for electronic health care, international assistance is required [1]. A comprehensive and integrated method of diagnosis and treatment is required since the body of medical knowledge is constantly increasing, new technologies are developing at a breakneck pace, and the complexities of each patient's situation are unmatched [2]. The traditional siloed approach to medical practice, where different spe-

cialties operate independently, is gradually replaced by a more comprehensive paradigm that considers the interplay of various factors affecting a patient's health.

This shift in perspective reflects the increasing recognition that healthcare cannot be effectively managed in isolation but requires a multidisciplinary, patient-centered approach. This evolving philosophy, often called the "integrated approach," has gained prominence and is reshaping the landscape of clinical medicine [3], [4]. The growing preventable mortality rates serve as evidence of the health system's shortcomings. Patients and medical professionals concur that there has to be significant reform in the nation's healthcare system. Despite this, the present administration's reform initiatives must be better received, and the public's mistrust of doctors is alarm-

ingly high. Thus, new approaches, models, and initiatives must be created to support healthcare reformation [5].

An integrated approach to diagnosis and treatment in clinical medicine has yet to have a single phrase widely recognized since its definition might shift based on the circumstances and the healthcare system in question. On the other hand, many other terminologies and models have been established in order to promote a healthcare approach that is more holistic and oriented toward the patient. One strategy of this kind is called "Integrated Care" or "Integrated Health Care". Integrated care is a method of providing medical treatment that emphasizes coordination and teamwork, intending to better the outcomes and experiences of individual patients. Comprehensive care is delivered, in part, by multidisciplinary teams comprised of medical specialists, each of whom specializes in a particular area of medicine. The effective administration of patient care across various healthcare venues and medical specializations is another component that must be present to guarantee continuity of treatment.

The third aspect emphasizes including patients in the decisions that affect their healthcare and adapting treatment programs to individual patients' specific requirements and inclinations. The fourth component is the utilization of health information technology to improve the flow of communication and information between various medical care providers. The fifth step is to base clinical choices and treatment plans on the most compelling data currently available, and the last step is to emphasize preventative measures that will help people stay healthy and ward off sickness. Putting integrated care into reality typically entails a process of trial and error, constant improvement, and adaptation based on the specifics of the local environment as well as the input of patients. Research, assessment, and feedback systems all play an important part in the evolution of the strategy into one that is more refined and effective over time [6], [7]. The integrated approach seeks to bridge the gap between diagnosis and treatment by fostering collaboration among healthcare professionals from diverse backgrounds, including physicians, nurses, specialists, therapists, and other allied health professionals. This approach recognizes that optimal solutions to complex medical problems cannot be found by individuals or within the confines of a specific medical specialty. Instead, it urges the seamless fusion of information, skills, and assets from many sources to better comprehend a patient's situation and create treatment strategies specific to their individual requirements [8].

Evidence for greater interprofessional practice has made it abundantly evident that Inter-Professional Practice is essential to achieving optimal patient outcomes, lowering expenses, enhancing public health, and enhancing the quality of life for healthcare professionals at work by integrated healthcare approach [9]. Preventable mortality shows health system flaws. Patients and doctors agree that the healthcare system needs major reform, yet the current government's reforms are unpopular, and the public mistrusts doctors. Thus, healthcare reform requires new methodologies, models, and integrated

healthcare approaches for clinical medicine [10].

In order to improve clinical treatment and increase access to cutting-edge pharmaceuticals and health technology, assessments are being implemented throughout developing and developed countries. Removing economic and regulatory barriers is necessary for developing and distributing novel medications [11], [12]. Apart from mitigating modifiable burnout factors, addressing structural issues, such as enhancing the response to patient's social needs, can play a vital role in reducing stress among primary care physicians. This integration goes beyond the clinical dimension of medicine and encompasses a more comprehensive scope of healthcare delivery.

It underscores the significance of the entire patient journey within the healthcare system, from the initial diagnosis to continuous management and post-treatment care. The integrated approach aims to offer patients a more holistic and seamless experience by dismantling the barriers that separate different healthcare domains, thus decreasing the chances of fragmented care and communication breakdowns [13]. The integrated approach also uses cutting-edge technologies, including electronic health records, telemedicine, and artificial intelligence, to improve the effectiveness and precision of diagnosis and treatment. A more thorough understanding of a patient's medical history and present state is made possible by synthesizing data from diverse sources, allowing medical professionals to make wise decisions and provide individualized care [14]–[16].

In clinical medicine, this systematic review explores the fundamentals of the integrated approach to diagnosis and treatment. It seeks to examine the fundamental ideas guiding this revolutionary paradigm change while closely examining the many ways that integration is being implemented in healthcare systems worldwide. Moreover, the review aims to examine the implications of this strategy on the most important indicator of healthcare success: patient outcomes. The search for the best answers in the dynamic field of clinical medicine is a never-ending journey that calls for flexibility, teamwork, and a steadfast commitment to patients' welfare. This voyage of ongoing change necessitates a flexible and adaptable strategy. In this setting, the integrated approach is a promising avenue for achieving optimal health outcomes for everybody. This paradigm shift has several different underlying concepts, all supporting a comprehensive approach to patient care. Integrative medicine recognizes that the human body is an interdependent network of physiological and psychological systems.

It promotes the integration of complementary, alternative, and allopathic medicine to meet each patient's particular requirements fully. As we set out on this research journey, we aim to examine the many international integrated healthcare models and identify the themes that unite them. Through close examination of the results of this methodology, we want to provide insight into its effectiveness in improving patient welfare. In the end, the integrated approach presents a viable way to reshape healthcare in the future, advancing efforts

to enhance health outcomes and promote a positive synergy between patients and healthcare professionals.

A. Objectives

- 1) Examine the Current State of Integrated Healthcare: Investigate the existing practices and systems in clinical medicine to understand the extent to which an integrated approach is currently being implemented in healthcare organizations.
- 2) Investigate how healthcare professionals from different specialties collaborate in integrated care models and how this collaboration impacts the quality of patient care and treatment outcomes.
- 3) Assess the impact of integrated care models on patient health outcomes, including reductions in hospital readmissions, improved disease management, and overall patient well-being.

2. Materials and Methods

A systematic review using PubMed database and Google Scholar database was conducted to Integrated approach to diagnosis and treatment in clinical medicine: search for optimal solutions. The literature was searched for the period 2019-2023. Keywords such as Clinical Medicine AND Diagnosis AND Treatment AND Integrated Approach was used for searching relevant literature from PubMed and Keyword "integrated care" AND "diagnosis and treatment" AND "clinical medicine" AND "multidisciplinary care" were employed to identify relevant studies from Google Scholar.

A. Inclusion / Exclusion Criteria

The inclusion and exclusion criteria developed for the literature search that will take place between 2019 and 2023 are intended to guarantee that the research will be based on sources that are up to date, easily available, and pertinent. The focus of this systematic review was on human research, and it did not consider any other systematic literature reviews or meta-analyses. Only open-access material written in the English language was considered. This not only makes the research more accessible to a wider audience but also narrows the focus of the investigation to primary research that is pertinent to human experiences, behavior, and health.

On the other hand, we will not include any sources that were published before 2019 or after 2023, as well as any that require a payment or a subscription, contain systematic literature reviews or meta-analyses, are written in a language other than English, or involve subjects that are not humans. The use of these criteria as a set of filters helped to streamline the literature review process. This helped to ensure that the chosen sources were in close alignment with the research objectives, which in turn improved the quality and relevance of the study findings.

B. Database Search Results

The four-phase PRISMA flowchart outlines the systematic process followed in a research study to identify, screen,

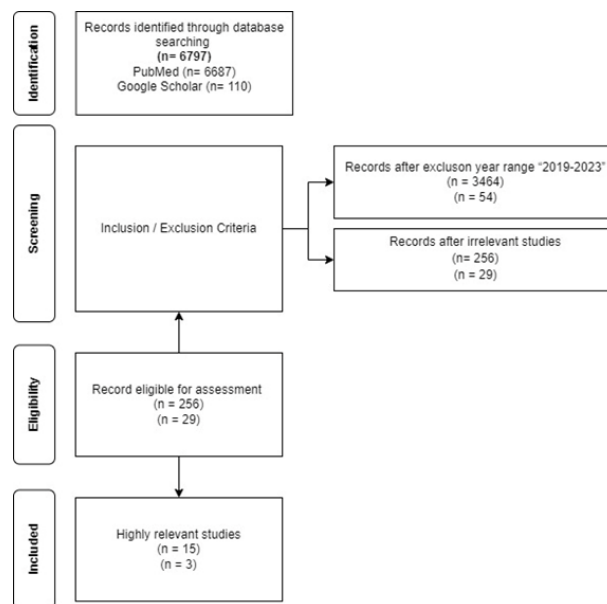


Figure 1: Four phased prisma flow chart

and include relevant studies in a systematic review or meta-analysis. It begins with the identification phase, where 6,797 records were initially found through database searching, primarily from two sources: PubMed (6,687 records) and Google Scholar (110 records). The subsequent screening phase applies inclusion and exclusion criteria to these records, resulting in the exclusion of records falling outside the specified year range (2019-2023). After this phase, the number of records is reduced to 3,464 for PubMed and 54 for Google Scholar. In the eligibility phase, the remaining records are assessed for relevance and further narrowed down, resulting in 256 eligible records for PubMed and 29 for Google Scholar. Finally, in the included phase, a careful evaluation of the eligible records leads to the selection of highly relevant studies, with 15 records chosen from PubMed and 3 from Google Scholar for inclusion in the review. Finally, 15 articles from the PubMed database and 3 articles from Google Scholar were comprehensively reviewed to collect information about the topic and compile these studies as in (Figure 1).

C. Risk Bias Assessment

The Newcastle-Ottawa Scale (NOS) was used to assess the quality of the observational studies in question, with scores allocated to the categories of selection of participants, comparability, and outcome. The overall quality assessment, which indicates the potential risk of bias, was generally low for most studies, with the majority receiving moderate to high-risk scores. Common areas for improvement were observed in the comparability and outcome categories, resulting in a less favorable overall quality assessment. However, a few studies, such as Cheng et al. [17], received high scores, indicating a lower risk of bias and higher quality as in (Table

1).

The Cochrane Risk of Bias Tool was used to assess the methodological quality and risk of bias in five randomized controlled trials (RCTs), both receiving medium risk assessments across all domains, indicating some concerns about methodological quality [18]. In contrast, it had a low risk of bias in most domains but a high risk of blinding participants and personnel. [19] had low risk in some domains but medium risk in others. [20] had an overall low risk of bias but a high risk of blinding participants. These assessments collectively suggest that the RCTs by [21] and [20] have relatively lower risks of bias, while [18] and [22] have medium risks of bias, and [19] has mixed results with low risk in some domains and medium risk in others as in (Table 2).

3. Results and Discussion

A. Study Characteristics

Table 3 lists various studies on the integrated approach to diagnosis and treatment in clinical medicine. These studies span different publication years and employ diverse study designs. [23] conducted a prospective cohort study, while [24] carried out a post-hoc analysis during the same year [18] conducted a randomized controlled trial in 2023, a gold standard in research. [25] study used a retrospective design, as did [26]. [27] conducted another post-hoc analysis in 2023. [17] study was cross-sectional and observational in design, while [1] study employed an RCT. [21] conducted an RCT. [19] also used an RCT design in 2021. [28] study was retrospective and observational, while [29] study was cross-sectional and observational. In [30] conducted a retrospective study, and [20], [31] carried out another RCT. [32] study was retrospective. These studies collectively provide a comprehensive dataset for a systematic literature review, offering insights into the integrated approach to diagnosis and treatment in clinical medicine across different study designs and periods. In this systematic literature review (SLR) on the integrated approach to diagnosis and treatment in clinical medicine, various study designs were employed in the selected studies. These study designs can be grouped to provide a clearer overview of their frequency. RCTs are considered the gold standard in research, and five studies have been included in this SLR. There are 4 Prospective Cohort Studies, four Retrospective Studies, three Cross-Sectional Studies, and two hoc analyses. These study designs and their respective frequencies provide a comprehensive dataset for this SLR, offering insights into the integrated approach's application in clinical medicine across different research methodologies and timeframes. Comparably, another systematic review included a variety of study designs, such as prospective or retrospective cohorts with or without comparators, before and after/longitudinal designs, randomized and non-randomized controlled trials, and cross-sectional studies [33]. These diverse study characteristics reflect the varied methodologies and approaches researchers use in different years and areas of study. In summary, this systematic literature review (SLR)

on integrated diagnosis and treatment in clinical medicine provides a comprehensive insight into the research landscape. Five Randomized Controlled Trials (RCTs) represent the gold standard in research, while four Prospective Cohort Studies offer longitudinal perspectives. An equal number of Retrospective Studies provide historical insights, while three Cross-Sectional Studies shed light on the current state of integrated approaches in clinical medicine. Additionally, two Post-hoc Analyses delve deeper into existing data. This diversity in study designs underscores the multifaceted nature of research in clinical medicine, offering a rich dataset that spans various methodologies and timeframes, contributing to our understanding of integrated approaches' significance in improving clinical outcomes.

B. Population Characteristics

(Table 4) presents a compilation of various studies related to an integrated approach to diagnosis and treatment in clinical medicine, with a focus on finding optimal solutions. Several studies from China, such as [23] and [24], involved substantial sample sizes of 3000 and 3324 patients, respectively, indicating a robust dataset. [18] conducted a study across six European countries, albeit with a smaller sample of 300 patients. [25], with 31 patients, and [34] with 82 patients, had relatively smaller sample sizes, potentially limiting the broad applicability of their findings. In contrast, [26] from the Republic of Korea conducted a study with a substantial sample of 47,940 patients, suggesting comprehensive insights. Furthermore, a second study by [24] from China, with 3324 patients, also contributes to the pool of robust findings. Other studies, such as [17] from Taiwan (457 participants) and [22] from Malaysia (151 patients), provide insights into specific regional populations. Meanwhile, [29] in Italy conducted research on breast cancer with a sizeable sample of 1500 patients.

Some studies focused on records rather than individual patients, like [30] in Thailand, which utilized 200 records. Finally, studies from countries like Finland [32] had sample sizes of 235 participants, respectively, offering focused insights. Numerous systematic studies have been carried out to investigate the importance, efficacy, and economic advantages of using a healthcare-oriented approach in diagnosing and treating a wide range of medical problems. These reviews have focused on the advantages of a healthcare-oriented approach in diagnosing and treating various medical conditions. These in-depth studies were conducted in a diverse range of locations and incorporated several different sample sizes; as a result, they reflect the diversity and the global reach of research efforts across various subjects.

These studies provide insights that are applicable on a global scale and shed light on the usefulness of integrating healthcare principles into the management of diverse diseases [35]–[37]. These studies encompass a broad spectrum of sample sizes, ranging from relatively minor to significantly large. The larger studies are likely to yield findings that can be more widely applied and generalized across diverse

Author's	Selection of Participants	Comparability	Outcome	Final
[23]	L	M	L	L
[24]	L	L	L	L
[25]	M	L	L	L
[26]	M	L	L	L
[27]	M	L	L	L
[17]	H	M	H	H
[34]	L	H	L	L
[28]	H	M	L	M
[29]	H	M	L	M
[30]	H	M	L	M
[32]	L	M	L	L

Table 1: Newcastle-ottawa scale

Author's	Random Sequence Generation	Allocation Concealment	Blinding of Participants	Blinding of Personnel	Incomplete Outcome Data	Selective Reporting	Other Sources of Bias	Final
[18]	L	M	M	M	M	M	M	M
[22]	M	M	M	M	M	M	M	M
[21]	L	L	H	H	L	L	M	L
[19]	L	M	M	M	M	L	L	M
[20]	L	L	H	L	L	L	L	L

Note: Low = L, Medium = M and High = H

Table 2: Cochrane risk of bias tool

Authors / Year	Study Design
[23]	Prospective Cohort
[24]	Post-hoc
[18]	RCT
[25]	Retrospective
[26]	Observational Cohort Study
[27]	Post-hoc
[17]	Cross-Sectional Observational
[22]	RCT
[34]	Retrospective
[21]	RCT
[19]	RCT
[28]	Retrospective Observational
[29]	Cross-Sectional Observational
[30]	Retrospective
[20]	RCT
[32]	Retrospective

Table 3: Study characteristics

Authors / Year	Study Setting	Sample Size
[23]	China	3000
[24]	China	3,324
[18]	Europe	300
[25]	-	31
[26]	Korea	47,940
[27]	China	3,324
[17]	Taiwan	457
[22]	Malaysia	151
[34]	South Korea	82
[21]	Minnesota	201
[19]	Norway	174
[28]	Ireland	174
[29]	Italy	1500
[30]	Thailand	200
[31]	China	44
[32]	Finland	235

Table 4: Population characteristics

populations. Conversely, the smaller studies are tailored toward specific demographic subsets or medical conditions, limiting the extent to which their results can be extrapolated. Furthermore, the geographic diversity represented by these studies underscores the global scope of the research in integrated approaches for diagnosis and treatment in clinical medicine. This indicates that these investigations collectively contribute to a comprehensive understanding of this field worldwide.

C. Status of Integrated Approaches and Health Problems

Table 5 presents a compilation of various integrated healthcare approaches, along with the specific health problems they address, based on a selection of studies from 2019 to 2023. These integrated approaches encompass a wide range of strategies and technologies, including mobile health applications, multidisciplinary care models, and complementary medicine. The health issues under consideration are equally diverse, including atrial fibrillation, depression, dementia, stroke, cancer, hepatitis C, COVID-19 pneumonia, hypertension, acute myeloid leukemia, low back pain, and various co-morbidities in older adults. These studies aim to improve patient outcomes and the quality of care by combining different healthcare disciplines, technologies, and interventions tailored to the specific needs of each health condition.

Notably, several studies focus on patient-centered care and tailored interventions for complex and high-risk patient populations, such as the elderly with multiple morbidities or post-stroke individuals. Integrating conventional and complementary medicine, lifestyle modification, and innovative technologies like artificial intelligence and mobile health applications plays a central role in many of these approaches. These findings are consistent with another SLR that revealed multidisciplinary teams, thorough assessments, and case management were the most often mentioned components

Integrated Approaches	Types of Health Problems
The mAFA app for guideline-based AF management, tailored rehab packages, and AI-driven AF risk prediction [23]	Atrial fibrillation (AF)
The "ABC pathway" for Atrial Fibrillation, including OAC treatment based on risk assessments (A), patient symptom assessment and management (B), and concurrent comorbidity optimization (C) [24]	Atrial fibrillation patients with a history of thromboembolic events
Integrated biopsychosocial care model [18]	Heart failure and mental distress/disorder
Integrative medicine blends Western and complementary and alternative medicine [25]	Depression, specifically Major Depressive Disorders
Integrated assessment of early rhythm control and lifestyle modification [26]	Patients with AF and DM.
Atrial fibrillation Better Care pathway approach [27]	Atrial fibrillation with and without heart failure
The integrated care for older people screening tool [17]	Hypertension, Diabetes, and Dyslipidemia decrease geriatric function.
The Integrated Care Pathway for Post Stroke patients [22]	Post-stroke
Integrating conventional medicine with Korean medicine [34]	Patients with cognitive dysfunction and dementia
Multidisciplinary integrative and monodisciplinary chiropractic treatment [21]	Adults with sub-acute and chronic low back pain
Multidisciplinary teams provided on-site HCV testing, liver fibrosis evaluation, counseling, therapy, and posttreatment follow-up [19]	Injection drug users' chronic hepatitis C
Virtual and in-person clinics supported by a multidisciplinary team [28]	COVID-19 pneumonia
Integrating lifestyle counseling, physical activity assessment, dietary advice, complementary treatments [29]	Breast cancer
Patient-Centered Medicine (PCM) [30]	Hypertension (high blood pressure)
Integrated nursing program, which includes medical assistance groups, ward rounds, and discharge planning for patients [20], [31]	Cardiogenic shock induced by acute myocardial infarction
Point-of-care diagnostics and integrated care paradigm help treat Hepatitis C [32]	HCV patients receiving opioid agonist therapy

Table 5: Integrated approaches and health problems

of integrated care models. The most often reported service providers were nurses, physiotherapists, doctors, and social workers [38]. However, it is crucial to remember that integrated models of care vary greatly both within and across systematic reviews. It may sometimes be difficult to dissect the component elements and underlying mechanisms of action of complex therapies [39], [40]. For individuals living with HIV, multimorbidity, or both, a further systematic study published in BMC Public Health emphasizes the value of multidisciplinary work, continuity of treatment, and meaningful user participation in integrated healthcare systems [41]. Finally, integrated care and multidisciplinary interventions are highlighted as effective strategies in addressing acute or chronic health conditions, underscoring the significance of

a holistic healthcare approach in modern medicine. Other studies are emphasizing integrating approaches to diagnosis and treatment in clinical areas. In a biopsychosocial practice, the psychosocial elements are frequently difficult for doctors and nurses to handle. In the medical setting, where patients present with complaints of physical symptoms and doctors often focus only on the physical disease diagnosis, doctors, nurses, health psychologists, general psychologists, and social workers can more readily and comprehensively attend to psychosocial factors starting with the patient's complaints of physical symptoms. Integrating alternative medicine practitioners and spiritual counselors will help determine the entire extent of integrated treatment effect [42].

In conclusion, integrated healthcare techniques are becom-

ing more important for treating a variety of health issues, from atrial fibrillation to COVID-19 pneumonia to depression to acute myeloid leukemia. These approaches emphasize patient-centered care and individualized solutions for complicated patient groups, notably the elderly and those with multiple morbidities, using a rich tapestry of tactics, technology, and interventions. Many models combine conventional and alternative medicine with emerging technology like artificial intelligence and mobile health apps. The literature shows that multidisciplinary teams, detailed examinations, and case management by nurses, physiotherapists, doctors, and social workers are essential. Integrated care models differ widely, making analyzing their components and mechanisms difficult. The findings constantly emphasize the need for a holistic healthcare strategy in modern medicine, emphasizing the necessity for continuity of care and meaningful user interaction in treating acute and chronic health issues. Psychosocial and spiritual elements must be integrated into clinical practice to understand patients' healthcare demands fully. These findings support developing and implementing integrated healthcare methods to improve patient outcomes and care quality.

D. Integrated Approaches and Clinical Outcomes

(Table 6) presents a diverse array of studies conducted by various researchers in the context of integrated healthcare, each with distinct clinical outcomes. These studies encompass a wide range of medical conditions and interventions, highlighting their impact on patient care. Notable findings include enhanced adherence to guideline-recommended care for atrial fibrillation patients, improved quality of life for depression patients, reduced macrovascular complications in certain populations, and advancements in geriatric healthcare. Additionally, several studies emphasize improved patient outcomes, reduced adverse events, and enhanced quality of life across various medical contexts, from oncology to hypertension treatment. These studies collectively contribute valuable insights into the efficacy of integrated healthcare approaches in promoting better patient outcomes and quality of life. While integrated care has shown promise in reducing hospital admission rates and shortening hospital stays, the lack of conclusive evidence leaves much uncertainty regarding its impact on patient-related outcomes in the later stages of life [43].

Other research indicates that integrated healthcare has the potential to lower expenses and enhance patient outcomes. Nevertheless, the current body of evidence exhibits significant variability and is generally of moderate quality [44]. Although the results of other research are conflicting about the higher efficacy of integrated treatment approaches, this conclusion must be understood in light of the numerous study constraints [45]. Two challenges facing pediatrics are an inadequate healthcare system and a high infants and child mortality rate. Opportunities for improvement include more investment in R&D and the use of an integrated strategy, better maternity and pediatric healthcare, and the development

Authors	Clinical Outcomes
[23]	Enhanced adherence to guideline-recommended care for atrial fibrillation patients, potentially reduced the adverse cardiovascular events and improved patient outcomes in quality and survival.
[24]	The composite outcome of recurrent AF, heart failure, and acute coronary syndromes was significantly influenced by bleeding episodes, indicating that secondary prevention patients may benefit differentially from the intervention.
[18]	Improvement in the health-related quality of life and secondary outcomes encompassing various measures, costs, and subgroup analyses.
[25]	Patients recovered from depression, with a specific focus on those who achieved a complete cure through homeopathy using this three-step approach.
[26]	reductions in all-cause mortality, glycemic emergencies, and macrovascular complications.
[27]	A mHealth-enabled ABC approach reduces primary outcome, rehospitalization, and bleeding in patients with and without HF with AF, according to mAFA-II.
[17]	Promotes comprehensive geriatric healthcare, emphasizing dyslipidemia control and age-specific therapies to reduce functional impairments. It also emphasizes gender-specific and nutritional factors in older healthcare planning, promoting holistic elder care policy.
[22]	Improves quality of life and is cost-effective for post-stroke patients compared to standard treatment.
[34]	Positive effect of integrative therapy on cognitive function, specifically in patients with mild cognitive impairment.
[21]	The main clinical result was the degree of pain; other secondary outcomes were improvement, quality of life, satisfaction, fear avoidance beliefs, medication use, disability, and kinesiophobia.
[19]	The study evaluated HCV treatment initiation and SVR outcomes, including factors like cirrhosis screening, hepatic encephalopathy assessment, and subgroup analyses. Adverse events and treatment side effects were also documented.
[28]	Increasing patient acceptability and care quality for better follow-up.
[29]	Improved breast cancer patients' symptoms, oncology compliance, and quality of life.
[30]	Follow hypertension treatment standards, including initial evaluation, ongoing monitoring and target organ damage assessment, lifestyle change, medication, and dosage adjustment.
[20]	Reduce hospital stay, enhance quality of life, average blood pressure, and nurse satisfaction
[32]	Patients who finished HCV therapy had an EOT sustained virologic response.

Table 6: Integrated approaches clinical outcomes

of telemedicine and e-health services.

The nation can greatly enhance the health and wellbeing of its children by addressing these issues and making investments in these opportunities [46]. Literature shows that integrated healthcare serves as a valuable instrument for effectively managing diseases. Individual models, as well as group- and disease-specific models, are the most commonly used models in integrated healthcare. It is clear that group- and disease-specific models are more beneficial than individual models when it comes to managing hypertension patients

[20], [31], [47]. These studies collectively underscore the importance of tailored interventions in healthcare that can lead to improved clinical outcomes, patient satisfaction, and overall well-being in diverse patient populations.

To sum up, integrated healthcare can enhance patient outcomes and life satisfaction. These studies reveal that atrial fibrillation patients follow guidelines better and depression patients have a better quality of life. Integrated care may reduce hospital admissions and stay length, but its long-term effects are unknown. While the evidence is mixed, the opportunity to cut costs and enhance patient outcomes makes integrated healthcare systems worth exploring. The success of group- and disease-specific strategies in controlling hypertension highlights the necessity for patient-centered care. The evidence also suggests that investing in telemedicine, maternity and pediatric care, and an integrated approach to healthcare infrastructure issues could improve child health outcomes and improve the well-being of the younger population. As a disease management tool, integrated healthcare improves clinical outcomes, patient satisfaction, and overall well-being across varied patient populations.

4. Conclusion

In conclusion, this systematic review provides valuable insights into the integrated approach to diagnosis and treatment in clinical medicine. These studies encompass a wide range of healthcare disciplines, study designs, and geographic locations, making them a rich source of information for a systematic literature review.

The chosen studies use a variety of research types, such as prospective cohort studies, cross-sectional studies, retrospective investigations, RCTs, and post-hoc analyses. This diversity reflects the various research methodologies used in exploring the integrated approach to diagnosis and treatment. Researchers and clinicians should consider the strength of study designs when evaluating the evidence for integrated healthcare. RCTs, while the gold standard, may not always be feasible or ethical, so findings from other study types can still be informative.

The studies vary widely in sample sizes, from smaller studies with fewer than 100 participants to substantial cohort studies with tens of thousands. The sample size can impact the generalizability and robustness of the findings. Larger sample sizes generally provide more robust evidence, but smaller studies can offer valuable insights, particularly in specialized or regional contexts. Researchers should consider the study population's size and diversity when interpreting the results.

The integrated healthcare approaches address various health problems, from chronic conditions like hypertension to acute issues like COVID-19 pneumonia. They utilize various strategies, including multidisciplinary care models, technology applications, and complementary medicine. Tailoring integrated approaches to specific health conditions and populations is critical for their success. Clinicians and healthcare

administrators should consider adopting and adapting these strategies based on the needs of their patient populations.

This study further highlights the impact of integrated healthcare on various clinical outcomes, including improved adherence to guidelines, enhanced quality of life, reduced complications, and better patient outcomes. The evidence suggests that integrated healthcare can lead to positive clinical outcomes. Healthcare systems and providers should explore integrated approaches tailored to specific medical conditions to improve patient care.

The studies included in this systematic review come from various countries, reflecting the global reach of research efforts in integrated healthcare. This diversity of geographic locations and healthcare systems underscores the worldwide applicability of integrated care principles. Lessons learned from integrated healthcare studies can be applied in diverse healthcare settings. Policymakers and healthcare leaders should consider the global applicability of integrated care models when designing healthcare strategies.

However, some studies highlight the challenges and limitations of integrated healthcare, including the need for multidisciplinary teams and potential variability in outcomes. Subsequent research must concentrate on elucidating the constituents and modes of operation of intricate interventions, tackling limitations in the studies, and enhancing the caliber of available data.

This systematic literature review also emphasizes the importance of integrated healthcare in addressing issues like infant and child mortality and the potential for improvement through telemedicine, enhanced maternity and pediatric care, and increased investment in research and development. Investments in integrated healthcare can significantly impact pediatric and maternal health outcomes. Policymakers and healthcare providers should prioritize these areas for improvement.

In summary, the systematic literature review reveals that the integrated approach to diagnosis and treatment in clinical medicine is a dynamic and promising field. It provides chances to raise patient satisfaction, cut down on medical expenses, and improve the lives of people with a range of medical issues. However, challenges and variations in evidence quality exist, emphasizing the need for ongoing research, adaptation to local contexts, and a multidisciplinary approach to healthcare. Ultimately, integrating healthcare principles into clinical practice can transform healthcare delivery and improve patient outcomes on a global scale.

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Conflict of interest

The authors declare no conflict of interests. All authors read and approved final version of the paper.

Authors Contribution

All authors contributed equally in this paper.

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