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Defining Public Health Transformation: A Scoping Review

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ABSTRACT

Public health transformation aims to instigate enduring changes in healthcare services, staff roles and patient involvement, fostering heightened satisfaction among patients and staff while bolstering financial sustainability. Public health transformation is the process of reorganizing and creating a shared vision to ensure the right mindsets, capacity, resources and workforce to deliver equitable Foundational Public Health Services and ultimately promote health, well-being and equity. Such transformation requires a fundamental change in public health systems' structure, functioning and interactions, supported by continuous quality improvement, innovation, partnerships, community-driven efforts and systems change.

This scoping review maps evidence of public health transformation. Searches encompassed databases including EBSCOHost, Academic Search Complete, Africa-Wide Information, Dentistry & Oral Sciences Source, Health Source–Consumer and Academic Edition, PUBMED and Scopus. Abstracts and full-text articles were screened by two independent reviewers against predefined criteria. Inclusion criteria spanned peer-reviewed published between 2013 and 2023. The quality of the included studies was assessed using the 2018 version of the mixed method appraisal tool. Screening results were reported following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) guidelines. Of 9509 articles retrieved, 808 duplicates were excluded, leaving 8692 for title and abstract screening. Following title and abstract screening, 105 articles were relevant and underwent full article screening, which resulted in 20 that became eligible for data extraction.

Emergent themes included (1) Transformation in Public Healthcare; (2) Evaluation of Health Transformation Programs; (3) Financial Implications; (4) Public Health Access; and (5) Job Satisfaction. Theme 4 featured a subtheme addressing healthcare access for minority groups. Overall, the review highlights a dearth of evidence guiding policymakers in decision-making on public health transformation, oversight of vulnerable populations, financial implications, and healthcare accessibility. Solutions should prioritize a people-centred approach in both practice and research to effectively address these gaps.

1 | Background

One of the primary objectives of public health is to enhance the overall well-being of the population by developing health, improving well-being and preventing diseases [1, 2]. Achieving this objective involves pursuing strategic transformation within the public healthcare industry. Public health transformation is a purposeful and systematic process designed to bring about

effective and enduring alterations in the delivery of healthcare services, staff responsibilities and the involvement of patients [3]. This transformation yields significant improvements in outcomes, as well as heightened satisfaction among patients and staff, contributing to the financial sustainability of the healthcare system [3]. Moreover, transformation in public healthcare serves as an instrument to ensure inclusivity for users and stakeholders, rectifying outdated and non-accommodative policies and practices. It is also instrumental in addressing prevailing public health challenges and emergencies [2]. The significance of transformation lies in the creation of an inclusive environment that upholds human rights, nurtures a setting where public healthcare professionals thrive and ensures that users receive good quality services. The inclusive environment encourages a departure from outdated and isolated solutions, advocating instead for transformative practices and policies [4].

The COVID-19 pandemic highlighted significant challenges in public health infrastructure, underscoring the urgent need for increased investments, a stronger focus on equity and improved approaches to crisis readiness and response [5]. Research suggests that addressing these challenges requires a systematic and rational approach, focusing on identifying existing inequalities to guide long-term organizational transformation and the redistribution of resources [6]. This approach is essential for improving community health and addressing public health disparities. The pandemic also exposed the need for tackling long-standing structural challenges and inequalities in global public health systems, creating an opportunity for fostering transformative resilience [6]. However, research on transformative public health actions remains unclear. To address this gap, we propose systematically mapping the evidence on public health transformation. The results of this scoping review are expected to provide insights into the transformative actions already undertaken and offer guidance for future research in the field.

Further allocation of healthcare resources is fundamental to achieving equality and access to health services [7], and this is highlighted by the example of Manitoba, facing barriers to effective and efficient delivery of services due to being among the jurisdictions with the highest level of complexity [8]. Inequalities, as articulated by Dong and Xu [7], manifest as imbalances in the distribution of the health workforce, including institutions, beds, technicians, doctors, nurses and other factors. To realize the strategic objective of becoming a data-driven and impact-focused organization, as advocated by the World Health Organization (WHO), there is an obligation to implement and integrate new capacity tools and mechanisms. Commitment and the enactment of these obligations ensure the optimization of resources and the attainment of target goals [9].

2 | Methodology

The scoping review was conducted following the methodological framework proposed by Arksey and O'Malley [10] and advanced Levac, Colquhoun [11], whereas guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) [12]. The scoping review method is relevant to the study, as the aim is to investigate the extent of information available/evidence on the research topic and ultimately identify knowledge gaps [13]. The protocol of this scoping review is registered on the Open Science Framework and accessible via this link: https://doi.org/10.17605/OSF.IO/G7C8E.

TABLE 1 | Population–concept–context (PCC) nomenclature.

Population	Public Health Institutions—healthcare institutions and healthcare providers accessible to the public, including institutions that offer health practitioner training
Concept	Transformation—transformation refers to a movement towards enhancing patient and healthcare professionals' experience, and this includes looking into diversity, equity, equality
Context	Global

2.1 | Identifying the Research Question

The primary question: 'What is the existing evidence on transformation in public health?' To refine the research question for the scoping review, the Population, Concept, Context (PCC) nomenclature [14], summarized in Table 1 was used.

2.2 | Identifying Relevant Studies

Comprehensive literature searches of studies published from 2013 to 2023 were conducted using the following electronic database sources: EBSCOHost; Academic Search Complete, Africa-Wide Information, Dentistry & Oral Sciences Source, Health Source–Consumer Edition, Health Source: Nursing/Academic Edition, PUBMED and Scopus. A draft search strategy was established and piloted to ensure the search strategy was effective.

The principal investigator (PI)/researcher and information specialist developed a comprehensive search strategy to ensure the accurate use of indexing terminology and Medical Subject Headings. No language restrictions were applied to avoid the risk of excluding relevant studies and possible bias. The following keywords were used in the search: 'community health services' OR 'public healthcare' OR 'healthcare services' OR 'public hospitals' OR 'community hospitals' OR 'public clinics' OR 'community clinics' and 'Diversity, Equity, Inclusion'[Mesh] OR equality OR transformation'. The keywords may, however, be refined to suit each database.

An electronic database search results document was created containing each database search in detail, showing the electronic database, keywords, number of retrieved studies and date of search.

2.3 | Eligibility Criteria

Inclusion criteria: This criterion guides articles to be included as follows.

- Articles presenting evidence on healthcare institutions that are accessible to the public (without needing medical aid)
- Articles presenting evidence on academic healthcare institutions
- Articles presenting evidence of sustainable development in Public Health
- Articles presenting evidence of equity or equality in Public Health
- Articles presenting evidence on inclusion in Public Health
- Articles published between 2013 and 2023 relating to transformation in public health

Exclusion criteria: This criterion guides articles to be excluded as follows.

- Articles presenting evidence of transformation in areas not related to public health
- Articles presenting public health-related matters not related to transformation
- Articles from before 2013

2.4 | Selection of Eligible Studies

All eligible articles were exported to an Endnote 20 library, where duplicates were removed. All screeners were required to undergo training to gain relevant skills in screening. The articles were screened in three stages: (1) title, (2) abstract and (3) full article screening [10]. The Rayyan software was used throughout the screening process, guided by the eligibility criteria. The title screening was conducted by the PI/researcher, who selected articles eligible for abstract screening. The researcher and a co-screener conducted the abstract screening and resolved discrepancies between the two screeners through discussions. Articles included after the abstract screening further went through full-article screening. Discrepancies at this stage were resolved by a third screener.

2.5 | Charting the Data

Data were extracted from the included studies using a designed and piloted Google Form. The following details were included: title, aim, key findings, study design, country, income level, geographical setting, type of public health setting, transformation indicators/activities, conclusion and comments.

2.6 | Dealing With Missing Data

We reached out to the first authors of the two articles that were inaccesible, requesting full-text access.

2.7 | Appraisal of Quality Evidence

The 2018 version of the Mixed Method Appraisal Tool (MMAT) was used to evaluate the quality of the included studies [15]. The MMAT is designed for the appraisal stage of a systematic mixed studies review wherein reviews include qualitative, quantitative and mixed methods studies. The MMAT methodological quality follows five categories of research that will be appraised, including qualitative research, randomized controlled trials, non-randomized studies, quantitative descriptive studies and mixed methods studies. The percentage scores will be used to grade the quality of evidence as follows: (i) ≤50% represents low-quality evidence, (ii) 51%–75% represents average-quality evidence and (iii) 76%–100% represents high-quality evidence [15].

3 | Results

3.1 | Database Search

A comprehensive literature search of studies published from 2013 to 2023 was conducted using the following electronic database sources: EBSCOHost; Academic Search Complete, Africa-Wide Information, Dentistry & Oral Sciences Source, Health Source-Consumer Edition, Health Source: Nursing/Academic Edition, PUBMED and Scopus. The database search yielded 9509 articles, wherein 808 duplicates were removed.

3.2 | Screening

The database search resulted in 9509 articles with 808 duplicates and 9 articles that were not retrieved. This resulted in 8692 articles being included for title screening. After title screening, 6823 articles were excluded due to lack of relevance. A total of 1869 studies underwent abstract screening, resulting in 1766 articles being excluded. Abstract screening yielded 103 relevant articles, resulting in 83 articles being excluded. Fifteen articles were excluded during the full article screening as follows: Articles include transformation-specific illness/disease or care/recovery [16], articles mention public health but not directly related to transformation therein [17–28] and articles on digital transformation [29, 30]–followed by 68 articles excluded by the third screener during the full-article screening conflict resolution process.

The full article screening yielded 20 articles deemed eligible for data extraction as presented in Figure 1, in the summary of the search results.

3.3 | Degree of Agreement

The level of agreement between screeners' results was determined by calculating Cohen's kappa statistic. The kappa statistic is interpreted as follows: values <0.1 indicate no agreement, 0.10–0.20 indicate none to slight, 0.21–0.40 as fair, 0.41–0.60 as moderate, 0.61–0.80 as substantial and 0.81–1.00 as almost perfect agreement [31]. The results showed the inter-rater agreement was high (55.24% K = 0.51, $p < 0.05$). In addition, McNemar's Chi-square statistic suggests that there was no significant difference in the proportions of yes/no answers by the reviewers ($p > 0.01$).

3.4 | Characteristics of the Included Studies

The characteristics of the included articles are detailed in Table 2.

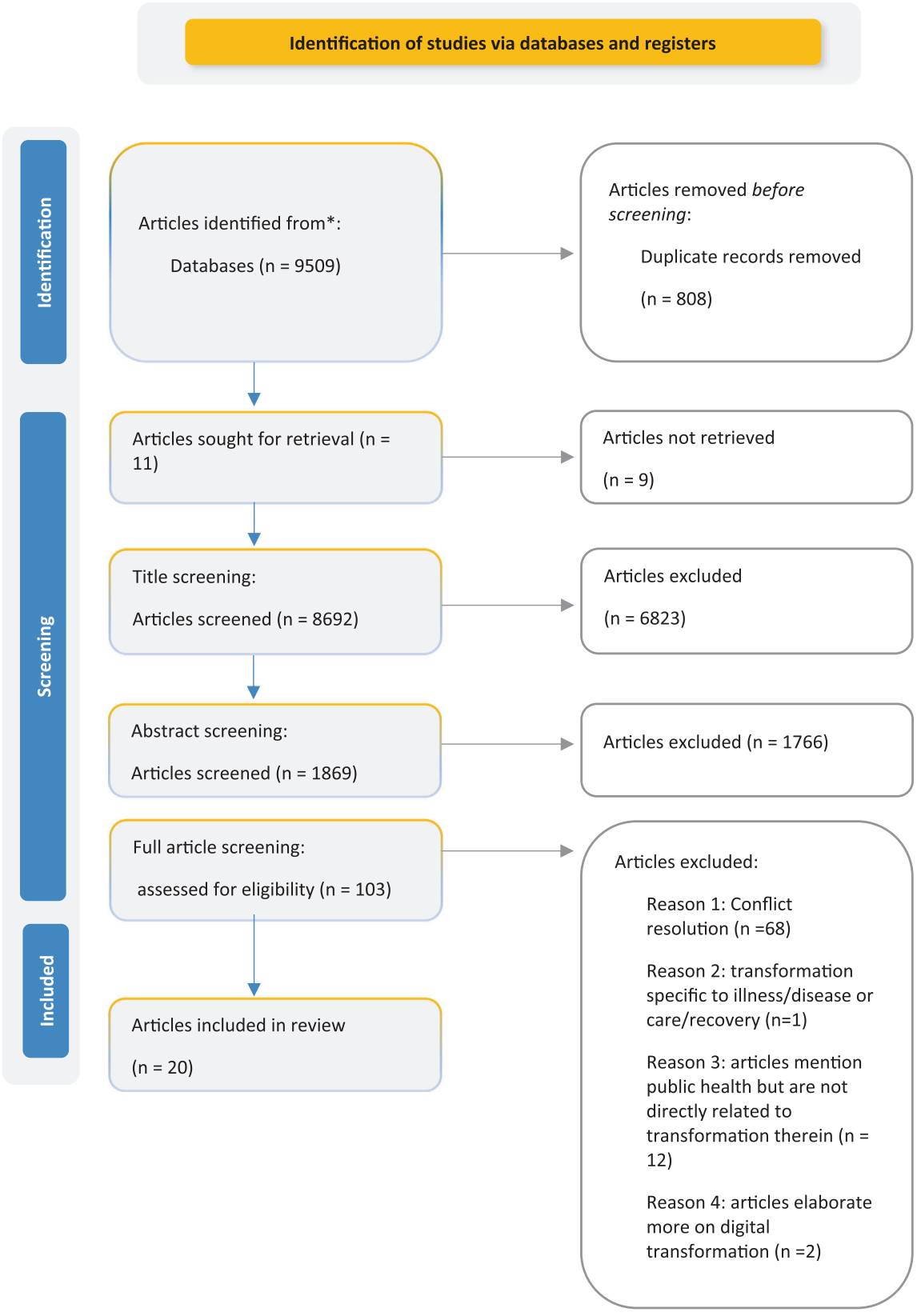

FIGURE 1 | PRISMA-ScR flowchart illustrating the literature screening and selection of eligible articles.

TABLE 2 | Characteristics of included studies.

Study	Title	Aim	Country	Income level	Study design	Transformative indicators	Types of public health settings
Kilci (2021) [36]	A study on financial sustainability of healthcare indicators for Turkey under the health transformation program	This study attempts to assess the financial sustainability of the healthcare system in Turkey by providing an empirical evaluation by concentrating on Turkey's healthcare system as a single country case after presenting the main developments with the transition to the Health Transformation Programme (HTP), which was mainly carried out from 2003 to 2013	Turkey	Upper–middle income	Cross-sectional analytic study	The programme has brought with it considerable improvements and a rapid reformation in the major health status indicators. However, when we check the general outlook by taking into account the whole series, we can conclude that health expenditures mostly do not have a stable trend in the period of 1999–2018	Hospitals
Argyriadis et al. (2023) [48]	Advancing access to quality LGBTQIA+ health care: Gender discrimination, socio-cultural, and mental health issues: A mixed-method study	The purpose of this research was to study the readiness of healthcare professionals to manage the social and mental health issues of the LGBTQIA+ community. In particular, the cultural competence of healthcare professionals targeted at gender identity, the recognition of the level of mastery of soft skills, and the relevant experiences of the participants were studied	Greece and Cyprus	High income	Mixed methodology—Sequential exploratory design	The lack of training can be bridged with special educational programmes and staff development in the future; however, what needs a special approach is the stereotypical thoughts that some healthcare professionals have about patients with heterogeneity. Understanding the historical context of LGBTQIA+ health inequalities, healthcare access and delivery, health promotion and education, and nursing care for the LGBTQIA+ community is essential in order to address these health challenges	Hospital
Abolhallaje et al. (2014) [46]	Assessing Health Inequalities in Iran: A focus on the distribution of health care facilities	The aim of this study was to examine the regional disparities in healthcare facilities across the Markazi province	Iran	Lower–middle income	Cross-sectional analytic study	Policymakers and administrators should decrease the distinction and gap in the enjoyment of healthcare facilities to attain a fair and balanced health situation in accordance with the state of development and planning of cities on the basis of gathered facts	Healthcare facilities across Markazi province

(Continues)

TABLE 2 | (Continued)

Study	Title	Aim	Country	Income level	Study design	Transformative indicators	Types of public health settings
Manyazewal et al. (2017) [52]	Beyond patient care: the impact of healthcare reform on job satisfaction in the Ethiopian public healthcare sector	This study aimed to determine the impact of healthcare reform on job satisfaction in the public healthcare sector in Ethiopia	Ethiopia	Low income	Cross-sectional analytic study	The country has witnessed healthcare reform. Recognition of the public health workforce to reward their work and behaviours is a fundamental need for them to extend their determinations towards meeting the intended goals of the hospitals. The recognition shall be made in such a way that it is relevant to the actual needs of the workforce. Regularly monitoring staff service performance data to reward and attract the best-performing providers who bring innovative ideas and procedures	Public hospitals in Addis Ababa, Ethiopia
Abdi et al. (2019) [38]	Developing a framework for the monitoring and evaluation of the Health Transformation Plan in the Islamic Republic of Iran: lessons learned	The study aimed to develop the most appropriate monitoring and evaluation framework for the HTP in accordance with national and global goals and priorities and to identify data gaps in its monitoring and evaluation	Iran	Lower–middle income	Qualitative studies—case study	The application of the M&E framework provides a strong updated information system and produces timely and high-quality evidence for policymakers. It can help in building capacity, empowering skilled human resources. In turn, this ensures a sustainable supply of logistics required to support the availability and quality of routine data and supports linkages between academic and research institutions	The Islamic Republic of Iran's National Institute of Health Research (NIHR)
Bayati et al. (2020) [43]	Effect of two major health reforms on health care cost and utilization in Fars Province of Iran: family physician program and health transformation plan	The study was aimed at evaluating the impact of these two reforms on the level of service utilization and cost of healthcare services	Iran	Lower–middle income	Quantitative descriptive study—case report	Family Physician Program (FPP) and Health Transformation Plan (HTP) are two major reforms that have been implemented in Iran's health system. FPP mainly reduced the utilization of health services in the short term. FPP has resulted in a reduction in the utilization of most services. After the launch of this plan, there was a significant increase in the cost of specialist visits, radiology services, and laboratory tests	Fars province (people insured by social security organization)

(Continues)

TABLE 2 | (Continued)

Study	Title	Aim	Country	Income level	Study design	Transformative indicators	Types of public health settings
Jamshidi et al. (2017) [44]	Equity in the quality of hospital services in Iran	This study was conducted between 2012 and 2013 to determine the level of equity in the quality of hospital services in Iran	Iran	Lower–middle income	Quantitative descriptive study—case report	The significant inequality observed in the quality of hospital care on the basis of the economic status of the patients highlights the necessity of supportive policies aiming at the reduction of this condition. Perceived quality was significantly higher in non-teaching hospitals compared with teaching hospitals. The perceived quality of services by the patients was significantly unequal, and the quality of services was more for affluent patients	Hospitals in the Fars province
Jacobs et al. (2018) [33]	Making free public healthcare attractive: optimizing health equity funds in Cambodia	We examine the benefits of additional interventions compared to existing stand-alone HEF scenarios in stimulating care seeking at public health facilities among eligible poor people	Cambodia	Lower–middle income	Quantitative descriptive study—case report	Following the introduction of user fees in Cambodia, Health Equity Funds (HEF) were developed to enable poor people access to public health services by paying public health providers on their behalf, including non-medical costs for hospitalized beneficiaries (HEFB)	Public health facilities
Carabez et al. (2014) [51]	Nursing Students' Perceptions of their Knowledge of Lesbian, Gay, Bisexual, and Transgender Issues: Effectiveness of a Multi-Purpose Assignment in a Public Health Nursing Class	The mission of this school of nursing is to embrace the diversity of its student population and to educate nurses who serve diverse populations, with a focus on social and environmental justice and health equality. Students explored issues in delivering care to LGBT patients and families and the experiences of LGBT nurses	The United States	High income	Qualitative studies—ethnography	The diverse teaching strategies involved in this assignment can enhance student knowledge, attitudes, and skills related to LGBT healthcare needs and increase appreciation of nursing research. The majority (74%) reported that the assignment made them more aware of LGBT issues	Urban Public University-Public Health Nursing Class

(Continues)

TABLE 2 | (Continued)

Study	Title	Aim	Country	Income level	Study design	Transformative indicators	Types of public health settings
Doshmangir et al. (2019) [39]	Policy analysis of the Iranian Health Transformation Plan in primary healthcare	This study aimed to analyse the HTP at the PHC level in Iran	Iran	Lower–middle income	Qualitative study Phenomenology	Policy formulation—Experts with diverse backgrounds and experiences were recruited to design the reform. Evidence-informed programme (about 15 national programmes and 10 projects) were discussed and approved. To minimize administrative and implementation flaws, policymakers capitalized on previous experiences and outcomes of the expansion of PHC to the cities. Monitoring and evaluation structures were designed to ensure effective and efficient implementation of HTP	Hospitals and clinics
Jannati et al. (2022) [32]	Evaluation of patient satisfaction with nursing services before and after implementation of the Health System Transformation Plan in Iran: A cross-sectional study	How healthcare service delivery is achieved after implementing the Health System Transformation Plan (HSTP) is investigated in the present study by assessing the patients' satisfaction with nursing care services compared to before HSTP	Iran	Lower–middle income	Cross-sectional analytic study	Dissatisfaction with nursing care services was predominantly found before HSTP, but a moderate level of satisfaction was reported as the highest rate after HSTP. This is due to the HSTP making effective and suitable changes in the provision of healthcare services intending to improve the patients' satisfaction levels. To increase the quality of nursing services, the medical staff should try to combine their knowledge and skills to improve professional behaviours	Iranian hospitals
Lyles et al. (2014) [37]	Innovation and Transformation in California's Safety-net Healthcare Settings: An Inside Perspective	Health reform requires safety-net settings to transform care delivery, but how they will innovate in order to achieve this transformation is unknown	The United States	High income	Qualitative study-Ground Theory	Limited resources and complex patient populations within safety-net settings necessitated creative innovations, but many of these solutions need support for broader dissemination and implementation to become transformational. These leaders also defined innovation as an ongoing and often incremental process, rather than a disruptive process in which a new technology would drive transformation. Safety-net leaders expressed a need for reimbursement structures that support their current and future innovation work	California's public hospital systems and community health centres

(Continues)

TABLE 2 | (Continued)

Study	Title	Aim	Country	Income level	Study design	Transformative indicators	Types of public health settings
Olyaeemanesh et al. (2018) [35]	Iran's Health System Transformation Plan: A SWOT analysis	The aim of the current investigation was to critically evaluate the health transformation plan in Iran	Iran	Lower–middle income	Qualitative—phenomenology	The establishment of the 'Health System Transformation Plan' (HSTP). Aim: reducing the rate of co-payment for hospitalized patients in hospitals affiliated with the MoHME as well as providing all necessary medicines, consumables and services inside the hospitals; and redistributing doctors in hospitals situated in less developed areas, with incentives for encouraging them to stay and work in deprived territories, to increase equity in accessing healthcare services	Iranian hospitals
Malakoane et al. (2022) [40]	Improving public health sector service delivery in the Free State, South Africa: development of a provincial intervention model development of a provincial intervention mode	A multi-method situation appraisal of the different functional domains revealed serious health system deficiencies and operational defects, notably fragmentation of healthcare programmes and frontline services, as well as challenges related to governance, accountability and human resources for health	South Africa	Upper–middle income	Qualitative study—case study	The Health Systems Governance & Accountability' (HSGA) was formalized into policy to bind the employees and managers to comply with the implementation of the model in a sustainable manner and in line with the Strategic Transformation Plan 2015–2030. A process flow was conceptualized on how service delivery at the district level could be functionally integrated with the next levels of referral through a cascade termed Re-engineering of Admission (READ) to enable smooth referral of the patient from the community up to the tertiary level of care. Another process flow termed the Re-engineering of Discharge (RED) was adopted to direct the safe referral and movement of the patient downwards through the system	PHC clinics, community health centres and hospitals in Free State
Küçük (2018) [49]	Public hospital reform in Turkey: The 'public hospital union' case (2012–2017)	The purpose of this study is to review and evaluate the 'public hospital union' model of public hospital reform implemented between 2012 and 2017 as an integrated part of reforms in the Turkish healthcare system and to examine the factors and obstacles that led to the failure of this model	Turkey	Upper–middle income	Quantitative descriptive studies	New public management (NPM) forced the policymakers to apply similar reforms in the health sector. Many countries have implemented public hospital reforms as a part of public management reform. Public hospitals, which have an important role in delivering healthcare services, are the backbone of the Turkish healthcare system	Public hospitals

(Continues)

TABLE 2 | (Continued)

Study	Title	Aim	Country	Income level	Study design	Transformative indicators	Types of public health settings
Choi et al. (2016) [53]	Transformational leadership, empowerment, and job satisfaction: the mediating role of employee empowerment	This study also explored the mediating effect of empowerment between transformational leadership and job satisfaction	Malaysia	Upper–middle income	Quantitative descriptive study—survey	The results show that the positive effect of transformational leadership on job satisfaction remains significant. Transformational leadership exhibits a positive effect on empowerment, and empowerment, in turn, positively affects job satisfaction. These results indicate that the mediator (i.e., empowerment) may absorb some effect of the relationship between transformational leadership and job satisfaction	Hospitals
Goudarzi et al. (2021) [34]	The effect of Iran's health transformation plan on hospital performance: Kerman province	This study assesses and compares university and non-university hospitals' efficiency and productivity in Kerman provinces, Iran	Iran	Lower–middle income	Cohort study	Despite the increase in inputs and outputs, hospitals' increases after the HTP implementation period were not significant. Therefore, the physician variable may be the most important variable influencing hospitals' efficiency. The results indicated that non-university hospitals had obtained higher efficiency after HTP compared to other hospitals. which means that the increase in the average efficiency of hospitals is due to random effects and reasons other than HTP can lead to this increase	Public hospitals
Homaie Rad et al. (2017) [42]	Pros and cons of the health transformation program in Iran: evidence from financial outcomes at the household level	In this study, these goals were evaluated using a before-and-after analysis	Iran	Lower–middle income	Quantitative descriptive studies—case report	The healthcare reform was not successful in increasing healthcare utilization. OOP payments did not change before and after the reform. It's discovered that the reform was not successful in decreasing OOP payments or the inequity of the payments, whereas it seems to have been successful in reducing the number of households experiencing CHE	Public hospitals affiliated with the Ministry of Health and Medical Education (MOHME)

(Continues)

TABLE 2 | (Continued)

Study	Title	Aim	Country	Income level	Study design	Transformative indicators	Types of public health settings
Moeeni et al. (2023) [45]	To what extent has the Iranian Health Transformation Plan addressed inequality in healthcare financing in Iran?	The present study aimed to investigate the inequality in households' financial contribution (HFC) to health expenditure both before and after the implementation of the Iranian Health Transformation Plan (HTP) in 2014	Iran	Lower–middle income	Cross-sectional analytic study	Both HE (Health expenditure) and HFC (Households' financial contribution) to health expenditure were higher for households in upper-income quintiles. As the age of the household head rose, the HFC to health expenditure decreased very slowly. However, those households with a female head, with an unemployed head, and with a head having income without a job were contributing more to financing health expenditure	Rural/urban households
Best et al. (2016) [41]	Using systems thinking to support clinical system transformation	Using a complex system framework, the purpose of this study is to examine mechanisms that enable and constrain the implementation of clinical guidelines across various clinical settings	Canada	High income	Qualitative study—phenomenology	For a high-level understanding of enablers and constraints related to CCM (Clinical Care Management) implementation, a general model of CASs and two specific conceptual frameworks (realist evaluation and system dynamics mapping) were used. At the macro-level, these factors included relatively stable healthcare governance arrangements, significant influence by physician organizations on provincial policy, and peaceful labour relations across the health sector. At the micro-level, the CCM initiatives overlapped with other projects to implement clinical guidelines as well as the turnover of managers, leading to continuity gaps and shifting priorities	The British Columbia Ministry of Health's Clinical Care Management

Abbreviation: M&E, Monitoring and Evaluation.

FIGURE 2 | Methodologies used in the included studies.

All 20 articles included were published between 2013 and 2023 and present evidence specific to transformation in public healthcare, these articles comply with the inclusion and exclusion criteria.

The included articles comprised four Quantitative Descriptive articles, seven Qualitative articles, one Mixed Methodology article as well as eight Non-Randomized articles, as illustrated in Figure 2.

All included articles are mapped in Figure 3, illustrating the countries in which the articles were conducted and their income level. The articles were conducted in nine countries in total; ten articles were conducted in Iran, whereas Turkey and the United States produced two articles, and Ethiopia, Malaysia, Cambodia, Greece, Canada and South Africa each produced one article.

3.5 | Quality Appraisal of Included Studies

An MMAT V.2018 was adopted and piloted to determine the quality of the selected studies, as the tool allows to appraise the methodological quality of five categories of studies, namely: [1] qualitative research; [2] randomized controlled trials; [3] non-randomized studies; [4] quantitative descriptive studies; [5] mixed-methods studies [15]. Once the scores for each article were calculated as a percentage, the articles were given a specific rank. Articles that were equal to or below 50% were ranked as low quality, those between 51% and 75% were deemed average quality, and those ranging from 76% to 100% were given a high-quality score. From the included articles, 65% [13] scored 100%, 20% [4] scored 80% and 15% [3] scored 60%. All included articles ranked high-quality.

3.6 | Main Finding

The included articles present evidence of public health transformation. The following themes emerged: Transformation in Public Healthcare; Monitoring and Evaluation (M&E) of the Health Transformation Plan/Programme (HTP); Financial implications of the HTP; Public Health Access following the HTP; and Job satisfaction during/post the HTP.

3.6.1 | Transformation in Public Healthcare

Six articles report the success of reform/transformation programmes administered in public healthcare institutions [32–37]. Three articles present evidence from Iran, one article from Cambodia, characterised as Lower and Middle-Income Countries (LMICs), one article from Turkey, an Upper-Middle Income Country (UMIC), as well as one article from the United States, a High-Income country. The studies were conducted in Public Health care facilities. Goudarzi et al. indicated that non-university hospitals in Iran had higher efficiency after the application of the HTP when compared to other hospitals [34]. Leaders' understanding of innovation as an ongoing and incremental process is evident in the improvement in the United States's public hospital systems and community health centres [37]. After the implementation of the HTP, which aimed to enhance the effectiveness of healthcare services and to implement appropriate changes in hospitals, a significant increase in patient satisfaction with nursing services was observed [32]. Following the implementation of the HTP, patients also reported satisfaction with timely doctor visits, and the status of hospital rooms significantly improved. Initiatives such as the inclusion of health centres as primary-level healthcare facilities contributed to initiating care-seeking at public health facilities in Cambodia [33] as well as reducing the rate of co-payment for hospitalized patients in Iranian hospitals affiliated with the Ministry of Health and Medical Education (MOHME) administration [33]. The success of the HTP (2003–2013), in improving the supply of healthcare, has also benefited Turkey even during the COVID-19 global pandemic [36].

Despite the HTP increasing access to healthcare services, effective and cost-effective drugs and increased average life expectancy,

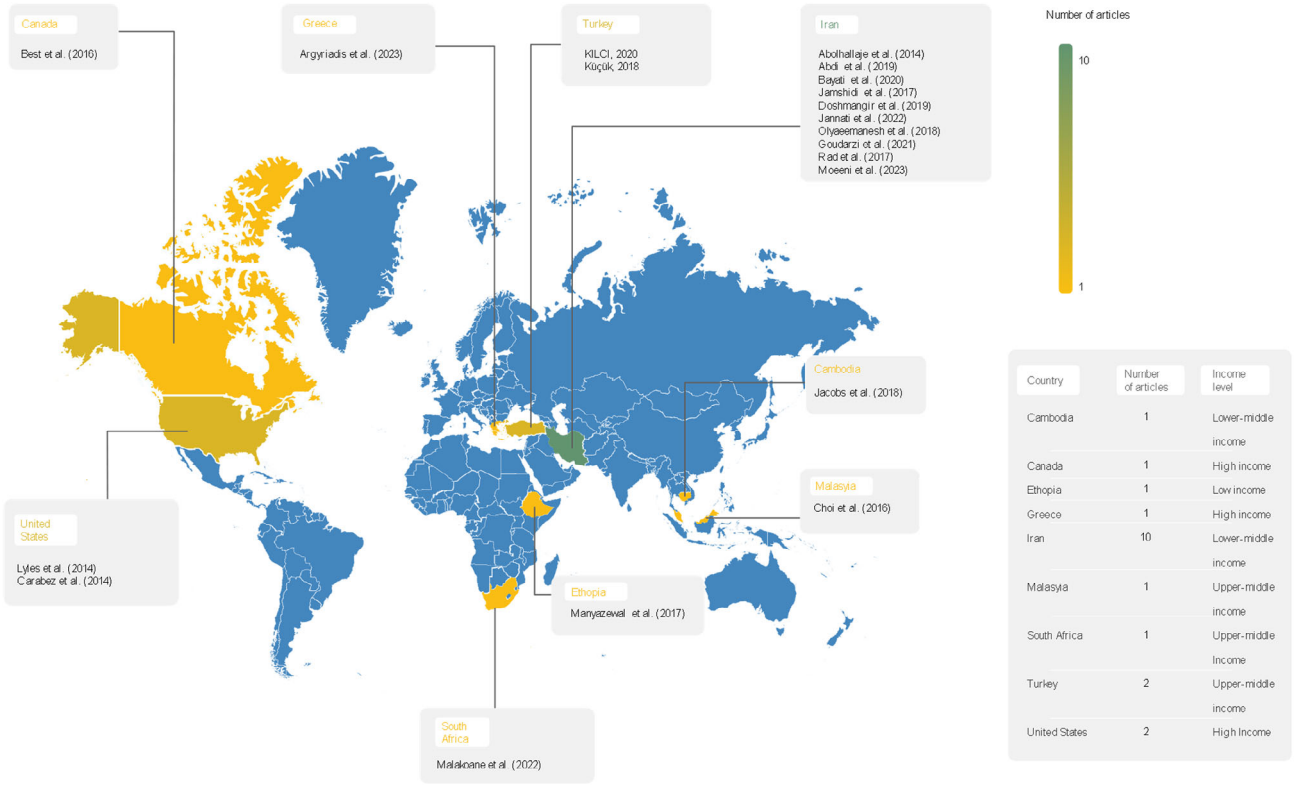

FIGURE 3 | Included articles mapped globally and the number of articles from each country.

Turkey, more recently, faced a higher population of older and higher-risk age groups [36]. The ageing populations indicate a potential increase in healthcare demand [36]. Another identified challenge includes the shortage of specialists, as observed in Iranian hospitals, leading to the productivity of hospitals being compromised. In the Iranian context, there remains the uncertainty of the increase in hospital efficiency being due to random effects and reasons other than the HTP, more so with the identified specialist shortages [34]. The HTP plan presents clear benefits, including increased patient satisfaction rates and improved healthcare-seeking behaviours. However, the unintended results of an ageing population with its unique demands and challenges, as well as the uncertainty behind the reason of hospital efficiency increase, are major gaps that require further attention. As suggested above, the shortage of specialists in public hospitals is another gap that decreases the effectiveness of hospitals. The HTP thus seems to reveal a different set of challenges in meeting its intended goals, an ageing population with its unique demands, which in turn have created a new gap in attending to these new intersectional complexities.

3.6.2 | M&E of HTP

Five articles examine the significance of evaluating the HTP within public healthcare systems. These studies provide insights from diverse geographical backgrounds, including Iran, which is categorized as an LMIC [35, 38, 39], South Africa [40], representing UMIC and Canada, a high-income country [41]. Iran adopted an M&E framework that facilitated the formation of up-to-date information, supplying policymakers with timely, high-quality evidence and aiding in capacity building by empowering skilled human resources [38]. To achieve a comprehensive understanding of the enablers and barriers of the Clinical Care Management (CCM) programme implemented in Canada, two conceptual frameworks, namely, realist evaluation and system dynamics mapping, were employed [41]. At the macro-level, remarkable factors included stable healthcare governance arrangements, significant influence by physician organizations on provincial policy and peaceful labour relations across the health sector. At the micro-level, the CCM initiatives overlapped with other projects to implement clinical guidelines and alteration of managers, leading to continuity gaps and shifting priorities [41]. Public hospital and clinic policymakers in Iran, in an effort to minimize administrative and implementation flaws, capitalized on previous experiences and outcomes of the expansion of Public healthcare programmes to cities [39].

Conducting a SWOT analysis facilitated the identification of the principal strengths, weaknesses, opportunities and threats of the HTP in Iran [35]. Following the HTP implementation, notable improvements were observed in the satisfaction levels regarding timely doctor visits, adherence to religious standards and ethics, provision of pre-discharge training and the overall condition of hospital rooms [35]. Countries with effective M&E frameworks have reported successful outcomes towards achieving HTP goals, as these frameworks ensure the sustainable provision of logistics required to support the availability and quality of routine data and facilitate linkages between academic and research institutions [38–40]. The relevance of M&E is further observed in a study by Malakoane et al. in South Africa, where a shift towards an assets-based approach in public health intervention design and implementation has commenced [40]. This approach emphasizes activating and leveraging the strengths and skills of individuals and

communities, along with co-producing intervention programmes and research. The Health System Governance and Accountability (HSGA) intervention model emphasizes the system's accountability to the community and patients it serves [40]. Challenges in the implementation of HTP programmes are highlighted in the included articles as well. In Iran, the HTP was driven by strong political will and a short 4-year term of office, which poses a challenge as politicians may prioritize initiatives yielding immediate results. It was reported that the lack of sufficient evidence made it difficult for policymakers to set priorities [39].

3.6.3 | Financial Implications of HTP

Four articles addressed financial implications relating to HTP originating from Iran [42–45]. Reducing the number of affected families was one of the main goals of their HTP. The MOHME identified certain chronic diseases as being catastrophic for families due to their high financial burden and subsidized the costs of these diseases for the poor [42]. The percentage of households experiencing catastrophic health expenditures (CHE) was compared before and after the reform. After further adjusting for mean age, household size, effective income, residency, education and number of males in the family, the CHE adjusted rate decreased significantly, by close to 2.39% after the HTP [42].

Their Family Physician Program (FPP) and their HTP are two major reforms implemented in Iran's health system, resulting in a significant increase in the utilization of radiology services and laboratory tests [43]. It was discovered that the reform was not successful in decreasing Out-Of-Pocket (OOP) payments or the inequity of the payments, however [42]. It was revealed that the gender of the household head and the age structure of its members are important for policymaking, as households with a female head are at higher risk of economic vulnerability and older citizens require more healthcare services [45].

Nevertheless, these country-specific programmes have been successful in reducing the number of households experiencing CHE, with the percentage of health expenditures decreasing from 24% before the reform to 3% after the HTP implementation [42]. FPP aims to improve the quality of healthcare services and reduce costs, such as referrals to family physicians, improving prescription practices and reducing the financial burden to the patient and the community [43]. It was also noted that access to family physicians helped identify many unmet medical needs of the people, resulting in referrals to higher levels of care [43]. As mentioned above, there is a gap in the attempt to decrease OOP expenses, as well as a gender inequality issue where female-headed households are at a higher risk of economic vulnerability. Additionally, older citizens require more healthcare services, which can increase healthcare expenditure among households with elderly members.

3.6.4 | Public Health Access Following HTP Implementation

Five articles explore the impact of HTP on public healthcare access. These articles offer insights from various contexts: Iran [45, 46], Turkey [47], the United States [37] and Greece [48]. The union model implemented in Turkey's public hospitals has created substantial opportunities in terms of specialization, economies of scale and effective planning of medical services and human resources on a regional scale. The HTP in Turkey has increased access to healthcare services and has reduced costs, with per capita hospital visits to public hospitals rising from 1.7 to 4.3 [47]. On the contrary, compared to Turkey, there are significant healthcare facility disparities in the Markazi province example in Iran. Access to healthcare facilities and quality of healthcare services differ on the basis of the economic standing of each city [46]. When it comes to minority groups, for examples, in a programme implemented in Greece, the Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual plus [49], the LGBTQIA+ community in Greece feels ostracized due to the lack of training and soft skills of healthcare providers to provide adequate healthcare services [48]. These disparities in healthcare access are concerning and highlight the need for further exploration and research by policymakers and administrators. Another example is in the case of California's public hospital systems and community health centres have limited resources and complex patient populations and have had to apply broader dissemination and implementation of creative innovations for healthcare systems to transform for the good [37]. In particular, the study identified disparities on the basis of economic differences related to marginalized communities that significantly hinder the success of the HTP. However, the study also found that the HTP has resulted in increased access to healthcare services and reduced costs. The presented evidence highlights gaps in research on reasons behind disparities in the quality of healthcare services and healthcare facilities on the basis of the economic standing of cities.

Special skills addressing healthcare access to marginalized communities. Three articles explore health access and special skills required to meet the needs of marginalized communities in Iran [33], Greece and the United States [50]. The marginalized groups include the LGBTQIA+; Lesbian, Gay, Bisexual, Transgender, Queer, Intersex and Asexual plus communities [49]. The communities have expressed the need for healthcare providers who are equipped with basic knowledge of LGBTQIA+ issues and improved communication skills. It has also been observed that there is a need for healthcare providers to have an understanding of the historical context of LGBTQIA+ health disparities, healthcare access and delivery, health promotion and education, as well as nursing care that caters to the communities [47]. A shortage of nurses who possess essential skills and knowledge to cater to the needs of LGBTQIA+ patients in metropolitan areas in some United States hospitals and healthcare organizations has been reported [50]. Jannati et al., however, propose that the gap can be bridged through tailored educational programmes and staff development initiatives, specifically directed at dispelling stereotypes and discrimination among healthcare professionals regarding LGBTQIA+ patients [32]. Argyriadis et al. endorse the implementation of such programmes, in conjunction with diversity teaching methodologies, to enrich nursing students' comprehension, attitudes and skills, thereby amplifying the need for the prominence of LGBTQIA+ issues in nursing research [48]. Carabez et al. revealed that a significant majority (74%) of students acknowledged that engaging in assignments focused on raising awareness about LGBTQIA+ concerns heightened their

awareness of the LGBTQIA+ community. Evidence presents limited awareness, among healthcare professionals, of marginalised communities' struggles concerning healthcare access, delivery and promotion.

3.6.5 | Job Satisfaction During/Post-HTP Implementation

Five articles investigate the job satisfaction of healthcare professionals in public healthcare systems during/post-HTP implementation. These articles include insights from diverse geographical settings, incorporating Ethiopia [51], Iran [32], Cambodia [33], Malaysia [52] and the United States [37]. These articles focus primarily on public health facilities, public hospital systems and community health centres. Safety-net leaders' perception of innovation and creativity as an ongoing and incremental process is a vision that is particularly significant in public hospital systems and community health centres such as those in the United States [37] and Malaysia [52] with limited resources. According to Lyles et al. [37] and Choi et al. [52], there is a positive correlation between transformational leadership and job satisfaction. Choi, Goh [2] developed a conceptual framework that is based on the assumptions related to transformational leadership, empowerment and job satisfaction, suggesting that empowerment acts as a mediator, influencing the connection between transformational leadership and job satisfaction. This correlation is attributed to various factors, such as the quality of management, in-service training, working environment, and timeliness, which all contribute to the quality of nursing care and patient satisfaction [32]. The Choi et al. study in Malaysia demonstrates how transformational leadership empowered medical assistants and nurses to foster a stronger sense of self-determination and competency, meaningfully impacting their work and job satisfaction [52]. Empowering nursing staff mitigates powerlessness and job burnout, leading to higher job satisfaction rates [52].

Empowering, recognizing and rewarding public health professionals for their contributions are fundamental for motivating them towards achieving HTP goals in hospitals [51]. The HTP in Cambodia's public health facilities addressed this need by implementing quarterly bonuses for primary-level healthcare facility staff on the basis of community feedback through satisfaction surveys and service delivery frequency [33]. Evidence highlights the need to consult healthcare professionals in HTP attempts in order to ensure their job satisfaction and the sustainability of the HTP. According to evidence, the transformational leadership approach has significance in the effectiveness of ensuring job satisfaction as one of the HTP goals. There is, however, limited research on the effects of limited resources and complex patient populations on HTP and job satisfaction. There is also limited evidence on the correlation between providing healthcare professionals with bonuses and the increased quality of services, even though Jacobs et al. address the matter.

4 | Discussion

This scoping review presents existing global evidence on transformation in public health institutions to help identify enablers and barriers to health inequity. The study addresses an important global health priority presented in Sustainable Development Goals (SDG) 3, which aims to achieve universal health coverage and provide access to safe and effective medicines and vaccines for all. Achieving SDG goal 3 is of high importance in countries with a history of healthcare inequity, such as South Africa [53]. South Africa's National Strategic Plan 2023–2028 (NSP) emphasizes the importance of adopting evidence-based policies and practices to tackle the underlying causes of health and social disparities. The NSP also points out the need to prioritize vulnerable populations, such as female-headed households, elderly populations and the LGBTIQ+ community, as these groups often face stigma, discrimination and other violations of their rights [54]. The following themes were revealed in this study: (1) Transformation in Public Healthcare; (2) M&E of HTP; (3) Financial Implications of HTP; (4) Public Health Access following HTP implementation; and (5) Job satisfaction during/post-HTP implementation.

Evidence presented in this scoping review is derived from articles using different study designs, including four Quantitative Descriptive articles, seven Qualitative articles, one Mixed Methodology article and eight Non-Randomized articles. The scoping review reveals that the most common research methodology used ($n = 8$) in this study was Non-Randomized, which is defined as quantitative studies estimating the effectiveness of intervention [15]. In contrast, the least common study design used ($n = 1$) was Mixed Methodology, combining qualitative and quantitative methods [15]. Evidence also reveals that the majority of research ($n = 10$) on public health transformation was conducted in Iran and the lowest ($n = 1$) in Ethiopia, Malaysia, Cambodia, Greece, Canada and South Africa each produced one article.

In the process of mapping evidence on transformation in Public Health, our scoping review revealed that HTPs face multifaceted challenges hindering their intended outcomes. The challenges include an ageing population as a result of the average life expectancy increase over the last thirty years that presents unique demands, worsening the gap in meeting healthcare needs [36].

Implementation hurdles, outlined in existing literature, underline the complexity of HTP efforts. Despite strong political support, short tenures in office for policymakers may result in the prioritization of short-term gains over long-term health system improvements. Further, insufficient evidence complicates priority setting for policymakers [39]. The scoping review also reveals research gaps in addressing OOP expenses and gender disparities, with female-headed households at heightened economic risk [45]. The healthcare burden on older citizens strains household finances, necessitating further investigation [36]. Inclusivity and diversity management training and support for marginalized communities, such as the LGBTQIA+ community, by healthcare workers, are uncharted areas, resulting in the widening of the healthcare equity and access gap [48].

This study revealed a notable increase in patient satisfaction, with patients reporting satisfaction with timely doctor visits and the status of hospital rooms after the HTP implementation [35]. Similar studies maintain that adopting a population approach to imaging services enables some challenges to be met [55]. HTP

presented results that created a platform for engagement and focus on quality and safety concerns, allowing for a people-centred approach in policymaking and problem-solving [56]. It was also noted that access to family physicians helped identify unmet medical needs of people, resulting in referrals to higher levels of care with likely better outcomes [43].

Transformational leadership, empowerment and job satisfaction: the mediating role of employee empowerment evidence suggests that transformational leadership can empower healthcare professionals and improve their self-determination and competency, leading to increased job satisfaction [52]. Studies from various parts of the world have reported similar findings, indicating job satisfaction after the HTP implementation [57]. However, there remains a gap in research on how limited resources and complex populations affect healthcare professionals' job satisfaction [37]. In countries such as China, job satisfaction levels are reported to be neutral [58]. According to a similar article, although women globally contribute directly to the functioning of health systems and the provision of good quality care, they are subject to an increasing gender wage gap. Women also occupy fewer positions of leadership and hold more unskilled or unpaid positions, which results in inequality. This issue was highlighted during the Ebola outbreak in 2012, as well as during the more recent Covid-19 global pandemic [59]. The highlighted shortages of specialists in the study further impede hospital effectiveness [34].

Recognizing and rewarding public health professionals for their contributions are essential to motivate them to achieve health transformation goals in public health institutions [51]. However, limited evidence exists on incentivizing healthcare professionals to improve service quality and increase accountability [33]. Lastly, studies such as Olyaeemanesh et al. found that countries with effective M&E frameworks reported successful outcomes towards achieving HTP goals, as these frameworks ensure the sustainable provision of logistics required to support the availability and quality of routine data and facilitate linkages between academic and research institutions [38].

4.1 | Strengths and Limitations

The scoping review methodology enabled systematic mapping and integration of diverse study designs with a transparent, reproducible approach for identifying, charting, analysing and appraising studies [10]. The comprehensive literature search across electronic databases and the use of PRISMA-ScR ensured robust and transparent reporting. Studies were rigorously evaluated with no language limitations, using Rayyan for screening, with discrepancies in the full article screening stage resolved by a third screener, resulting in high agreement ($K = 0.51$, $p < 0.05$). Quality appraisal was conducted using MMAT 2018 [15]. However, the exclusion of review articles to avoid bias may have overlooked some relevant literature, though the comprehensive search strategy thoroughly examined existing studies.

4.2 | Recommendation for Future Practice

Future practice should prioritize a people-centred approach to reduce healthcare disparities, meet complex patient needs, ensure healthcare access for all and enhance job satisfaction for professionals. Policymakers must focus on marginalized groups like the LGBTQIA+ community, female-headed households and the elderly through extensive needs assessments. Addressing limited resources, complex populations and providing soft skills training for healthcare professionals to manage inclusivity and diversity is essential. Tailored educational programmes and workshops can equip healthcare workers with necessary skills, raising awareness and preventing inequalities and exclusion practices.

4.3 | Recommendation for Future Research

Our scoping review identified significant research gaps, including a lack of guidance for policymakers, oversight of vulnerable populations, financial implications and healthcare accessibility issues [48]. Future research should provide evidence to assist policymakers, understand how other countries manage similar situations and focus on holistic insights into HTP [51]. Key gaps include healthcare disparities due to economic differences, OOP expenses, job satisfaction and specialist shortages [36]. Vulnerable groups, such as female-headed households, the elderly, and the LGBTQIA+ community, face barriers to healthcare [48]. Research is needed on inclusivity training, hospital effectiveness, the impact of staff bonuses on care quality and the effects of limited resources and complex populations on HTP and healthcare quality.

5 | Conclusion

Our scoping review presents evidence of global public health transformation and reveals challenges, including overlooked needs of vulnerable populations such as older individuals, high-risk ageing groups, female-headed households and LGBTQIA+ communities. Economic disparities, specialist shortages and evidence gaps in policymaking, alongside short-term political priorities and high OOP expenses, were highlighted. We advocate extensive research and a people-centred approach for effective health system transformation, emphasizing supportive policies, meeting complex patient needs and prioritizing marginalized populations. Achieving equitable policymaking and healthcare access demands the prioritization of marginalized communities and the offering of tailored educational programmes and staff training.

Author Contributions

Violet Phooko: conceptualization, data curation, formal analysis, investigation, methodology, writing–original draft. **Tivani Mashamba-Thompson**: conceptualization, methodology, supervision, validation, writing–review and editing. **Kuhlula Maluleke**: methodology, writing–review and editing. **Kabelo Kgarosi**: methodology. **Thato Serite**: methodology. **Sebueng Ramatsokotla**: methodology. **Funeka Sokudela**: writing–review and editing.

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Ethics Statement

An application for an exemption was submitted to the University of KwaZulu-Natal (UKZN) ethics committee. (Ethics committee approval exemption reference number: 00022844.). This scoping review was developed and compiled using existing literature and will therefore not include human or animal participants or samples

Consent

The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

All data supporting the conclusions of this scoping review are available through a detailed reference list. The original datasets were not presented, because this scoping review used existing literature.

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