

# Public Participation in Health Policy Making: A Bibliometric Review of Scientific Publications

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## ABSTRACT

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Public participation in health policy-making is a vital component for fostering equity, transparency, and inclusivity in health systems worldwide. This study presents a bibliometric analysis of scientific publications to explore the research landscape on public participation in health policy-making. Using data from Scopus and Web of Science, the analysis identified key themes, influential contributors, and emerging trends. The findings reveal a growing emphasis on patient-centered care, governance frameworks, community health interventions, and the role of data and digital technologies. Prominent themes include the inclusion of vulnerable populations, such as women, children, and individuals with disabilities, as well as the integration of public input during health crises like the COVID-19 pandemic. Despite progress, challenges such as power imbalances, tokenistic participation, and the digital divide persist. This study highlights the importance of institutional frameworks, investments in data infrastructure, and digital tools to enhance participatory practices. Recommendations for future research include examining the long-term impact of participation, addressing gaps in low- and middle-income countries, and exploring the intersection of public engagement and technology. By synthesizing existing knowledge, this study contributes to advancing theory and practice in participatory health policy-making.

**Keywords:** *Public Participation, Health Policy-Making, Governance Framework, Community Health Interventions, Bibliometric Analysis*

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## 1. INTRODUCTION

Public participation in health policy-making is a cornerstone of effective governance, ensuring that the voices of citizens are integrated into the processes that shape healthcare systems and services. This participatory approach has garnered significant attention in recent years due to its potential to enhance policy legitimacy, equity, and effectiveness. Health policies that reflect the needs and aspirations of the population are more likely to achieve desired outcomes and foster trust in health systems. This study conducts a bibliometric review of scientific publications to understand the evolving trends, key contributors, and thematic focus of research on public participation in health policy-making.

The inclusion of public voices in health policy decision-making is rooted in democratic principles and human rights frameworks [1]. Participation ensures that health policies are not only informed by evidence but are also aligned with societal values and expectations. The World Health Organization (WHO) has emphasized the importance of community engagement as a means to achieve Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs) [2]. Participatory health policy-making enhances accountability, facilitates resource allocation that reflects community priorities, and empowers marginalized groups to contribute to policy discourse. In practice, public participation takes various forms, ranging from consultation and surveys to active collaboration in policy design and evaluation [3]. These approaches enable governments to address

systemic inequities and improve the responsiveness of health systems to emerging challenges, such as pandemics, aging populations, and non-communicable diseases.

Despite its importance, public participation in health policy-making faces numerous challenges. These include disparities in access to participatory mechanisms, limited public awareness of health policy issues, and tokenistic approaches that undermine genuine engagement [4]. Additionally, cultural, political, and socioeconomic factors often shape the extent and nature of public involvement [5]. Effective participation requires addressing these barriers through capacity building, transparent communication, and fostering trust between policymakers and citizens. On the other hand, advancements in digital technologies and social media have created new opportunities for participatory health policy-making. Online platforms facilitate real-time feedback, broaden access to diverse demographics, and enable the rapid dissemination of policy-related information [6]. These tools have been particularly valuable during health crises, such as the COVID-19 pandemic, where swift and inclusive decision-making was critical.

Bibliometric analysis has emerged as a powerful tool for synthesizing and mapping the knowledge landscape of various fields. By analyzing patterns in scientific publications, bibliometric reviews provide insights into research trends, influential authors, collaborative networks, and thematic developments [7]. In the context of public participation in health policy-making, bibliometric analysis can identify gaps in the literature, highlight under-researched areas, and inform future research agendas. Previous bibliometric studies in health policy and governance have focused on topics such as Universal Health Coverage (UHC), health equity, and the social determinants of health [8], [9]. However, a comprehensive bibliometric review specifically addressing public participation in health policy-making remains lacking. This study seeks to fill this gap by examining the body of literature on this topic and exploring how scholarly interest has evolved over time.

The objective of this bibliometric review is to analyze the scientific publications on public participation in health policy-making to understand the scope and trajectory of research in this area. This bibliometric review contributes to the growing body of knowledge on public participation in health policy-making by synthesizing the existing literature and identifying areas for future research. Policymakers, practitioners, and researchers can benefit from the findings of this study to design more inclusive and effective participatory mechanisms. Furthermore, the study underscores the importance of aligning health policies with the principles of equity, transparency, and responsiveness.

## 2. LITERATURE REVIEW

### 2.1 *Theoretical Foundations of Public Participation*

Theories underpinning public participation often draw from democratic governance and participatory decision-making frameworks. [10] Ladder of Citizen Participation remains a seminal model, categorizing participation into levels ranging from nonparticipation (manipulation) to full citizen power (partnership and citizen control). This theoretical framework has been widely applied to analyze the extent of public involvement in health policy-making. Other significant contributions include Habermas's Theory of Communicative Action [11] which emphasizes the role of discourse in achieving mutual understanding between stakeholders. In the context of

health policy, this theory underscores the importance of transparent communication and inclusive dialogue to bridge power imbalances between policymakers and citizens [12]. Research has also explored the application of Systems Thinking in public participation, advocating for a holistic approach to integrate diverse stakeholder inputs into complex health systems [13]. These theoretical underpinnings provide a robust foundation for understanding the multifaceted nature of public participation in health policy-making.

### **2.2 *Methods and Mechanisms of Public Participation***

The mechanisms employed to engage the public in health policy-making range from traditional methods, such as town hall meetings and public consultations, to innovative approaches like digital platforms and deliberative polling. Deliberative Forums, a widely studied mechanism, involve structured discussions that allow participants to deliberate on policy issues and provide informed input [14]. Such forums have been successful in eliciting diverse perspectives on controversial topics, including healthcare prioritization and resource allocation. Citizen Juries and Community Advisory Boards are other notable mechanisms, particularly in the context of marginalized communities. Studies have highlighted their effectiveness in fostering trust and inclusivity, especially in settings with historically low public engagement [15]. However, these mechanisms often require substantial resources and time, limiting their scalability. The advent of digital tools has transformed public participation, enabling broader outreach and real-time feedback. Platforms like social media, online surveys, and e-governance portals have gained traction as cost-effective and scalable alternatives [16]. For example, studies during the COVID-19 pandemic demonstrated the value of online platforms in facilitating public engagement amid physical distancing measures [17].

### **2.3 *Outcomes of Public Participation in Health Policy***

Empirical studies have demonstrated that meaningful public participation can lead to improved policy outcomes. Enhanced policy legitimacy and trust in governance are frequently cited benefits, as participatory processes foster a sense of ownership among stakeholders [18]. Additionally, public input has been shown to improve the relevance and feasibility of health policies, aligning them more closely with community needs and priorities [19]. In the realm of resource allocation, participatory approaches have helped mitigate inequities by incorporating the voices of underrepresented groups. For instance, participatory budgeting in health systems has enabled communities to influence decisions on healthcare spending, resulting in more equitable service delivery [20]. Moreover, public participation contributes to capacity building by empowering citizens with knowledge and skills to engage in policy processes. This empowerment extends beyond health policy, fostering broader civic engagement and community resilience [21].

### **2.4 *Challenges to Effective Public Participation***

Despite its benefits, public participation in health policy-making is fraught with challenges. One persistent issue is the power imbalance between policymakers and citizens. Studies highlight that participatory processes are often dominated by elite groups, undermining the inclusivity and equity of such initiatives [22]. Addressing these imbalances requires deliberate efforts to engage marginalized populations through

targeted outreach and capacity-building programs. Tokenistic participation, where engagement is superficial and fails to influence decision-making, is another critical concern. [10] framework warns against such practices, emphasizing that genuine participation requires the delegation of decision-making power to citizens. Limited public awareness and knowledge of health policy issues further hinder effective participation. Many citizens lack the technical understanding needed to engage meaningfully in policy discussions, highlighting the need for educational initiatives [6]. Additionally, logistical barriers such as time constraints, financial costs, and geographic accessibility often prevent broader participation, particularly in low-resource settings.

### **2.5 Role of Technology in Advancing Public Participation**

Technological advancements have revolutionized public participation, offering innovative solutions to longstanding challenges. Social media platforms have emerged as powerful tools for mobilizing communities, raising awareness, and collecting public feedback. Platforms like Twitter and Facebook enable real-time interaction between citizens and policymakers, fostering transparency and accountability [23]. E-governance initiatives, such as online portals for public consultations, have been widely adopted to streamline participatory processes. These platforms allow citizens to submit feedback, participate in surveys, and track the progress of policy implementation [23]. Moreover, big data analytics and artificial intelligence are increasingly being used to analyze public input, identify trends, and inform decision-making. Virtual deliberation tools, such as video conferencing and online forums, have proven particularly valuable during the COVID-19 pandemic. These tools have enabled participatory processes to continue despite physical distancing measures, ensuring that public voices remain integral to policy-making [24]. However, the digital divide remains a significant barrier, with unequal access to technology disproportionately affecting marginalized communities.

## **3. METHODS**

This study employs a bibliometric analysis to systematically review the scientific literature on public participation in health policy-making. Data were collected Scopus, using a comprehensive search strategy with keywords such as "public participation," "health policy," and "citizen engagement." The dataset includes articles published from 2000 to 2024 to capture evolving trends over time. Bibliometric indicators, including citation analysis and thematic clustering, were analyzed using tools such as VOSviewer. Descriptive and network analyses were conducted to identify prolific authors and thematic trends. Additionally, a qualitative content analysis of highly cited papers was performed to understand dominant theoretical frameworks and methodologies.

## **4. RESULTS AND DISCUSSION**

### **4.1 Keyword Co-Occurrence Analysis**

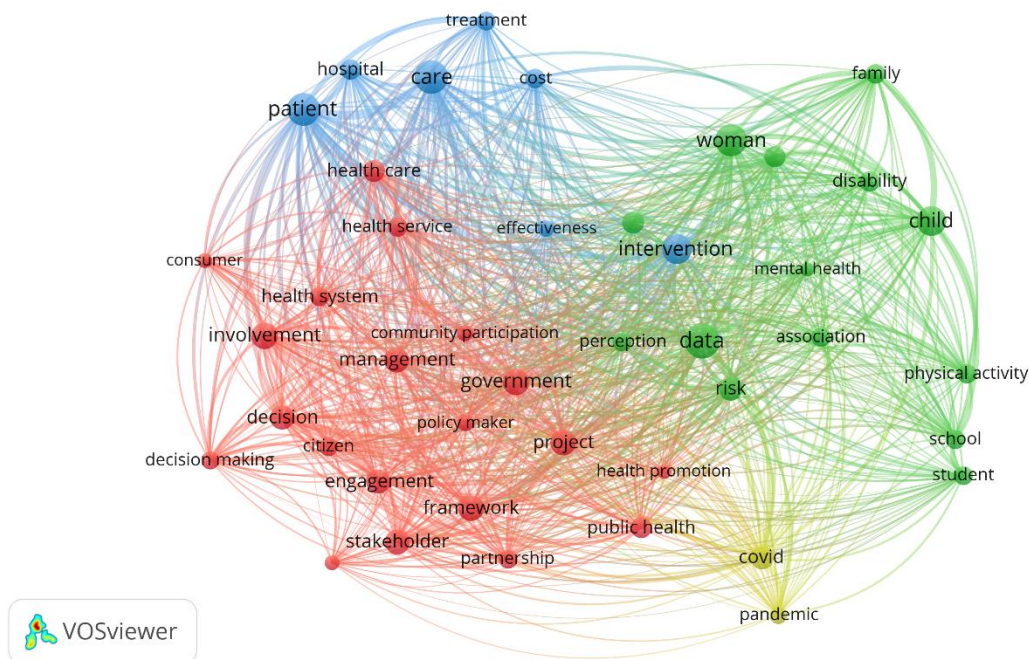


Figure 1. Network Visualization

Source: Data Analysis Result, 2024

The network visualization generated by VOSviewer illustrates the interconnectedness of key terms in the field of public participation in health policy-making. The nodes represent frequently occurring terms in the analyzed corpus of publications, and their size indicates the frequency of use. The colors denote clusters of closely related terms, revealing thematic areas within the research. The connections between nodes (edges) represent co-occurrence relationships, with thicker lines signifying stronger associations. Three main clusters are evident in the visualization:

1. **Red Cluster (Governance and Stakeholder Engagement)**  
This cluster revolves around terms like "government," "policy maker," "stakeholder," "decision-making," and "engagement." It highlights the focus on governance structures, stakeholder involvement, and frameworks for effective policy-making. The prominence of "involvement" and "partnership" indicates significant attention to collaborative approaches in health governance.
2. **Green Cluster (Community and Individual-Level Outcomes)**  
This cluster includes terms like "intervention," "risk," "data," "child," "woman," and "mental health." It emphasizes research on community-focused interventions, health risks, and demographic-specific health outcomes. The presence of terms such as "family," "disability," and "school" suggests a focus on vulnerable populations and settings like schools and families in health interventions.
3. **Blue Cluster (Healthcare Systems and Costs)**  
This cluster contains terms such as "patient," "care," "hospital," "treatment," "cost," and "effectiveness." It reflects research on healthcare delivery systems, patient-centered care, and the economic implications of health policies. The strong connections between "patient" and "care" underscore the centrality of patient outcomes in policy evaluations.

The strong interconnections between clusters highlight the multidisciplinary nature of public participation in health policy-making. For instance, terms like "data," "government," and "public health" serve as bridges, linking governance and stakeholder engagement (red cluster) with

health interventions and community outcomes (green cluster). Similarly, "care" and "effectiveness" connect the healthcare systems (blue cluster) with policy and governance aspects. This interconnectivity underscores the importance of integrating governance, community, and healthcare delivery considerations in policy-making.

Emerging themes such as "COVID," "pandemic," and "health promotion" indicate a growing interest in the role of public participation during health crises and preventive health strategies. The inclusion of terms like "physical activity" and "mental health" suggests an increasing focus on lifestyle interventions and psychological well-being as key components of health policy. Overall, the visualization reflects a dynamic and evolving field that balances macro-level governance with micro-level health outcomes, addressing both systemic and individual health determinants.

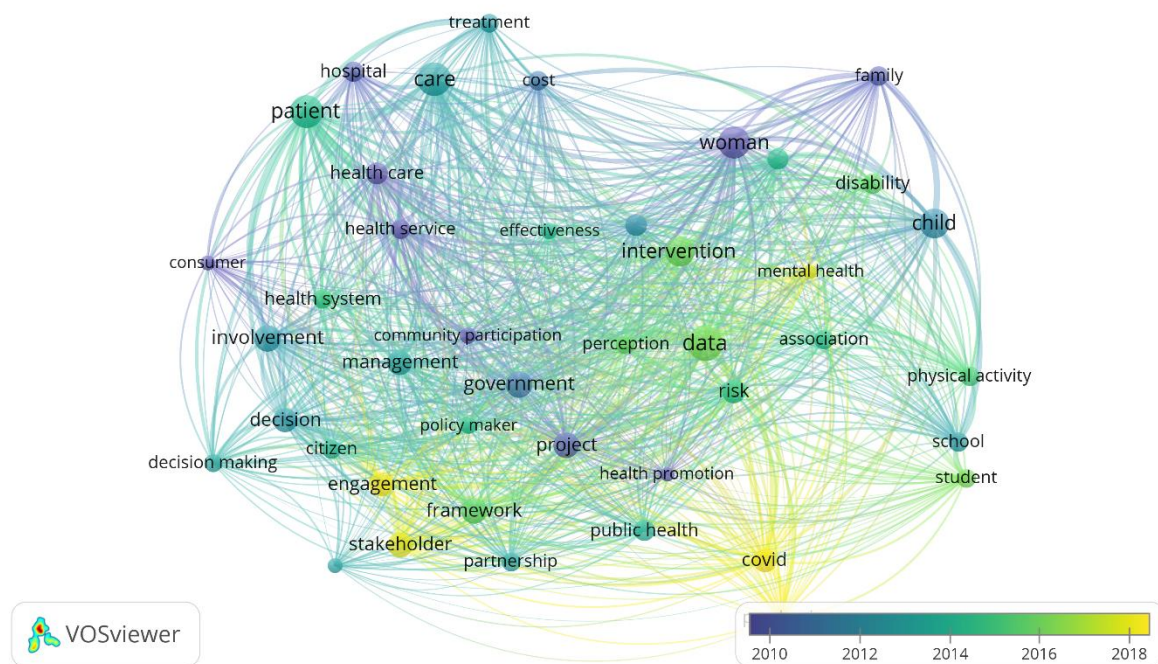


Figure 2. Overlay Visualization

Source: Data Analysis Result, 2024

The VOSviewer visualization incorporates a timeline dimension, as indicated by the color gradient ranging from blue (earlier years, around 2010) to yellow (more recent years, around 2018). The temporal shifts in the network show the progression of research focus in public participation and health policy-making. Early studies (blue) centered on foundational topics such as "patient," "care," "hospital," and "treatment," reflecting an initial focus on healthcare delivery systems and patient-centered outcomes. Over time, the focus transitioned to include terms such as "intervention," "data," and "risk," which represent the increasing emphasis on community-based health interventions and the role of data-driven decision-making in public health.

The yellow nodes, such as "COVID," "health promotion," and "public health," highlight themes that have gained prominence in recent years. The inclusion of "COVID" underscores the significant impact of the pandemic on public participation research, with a growing body of literature exploring how participatory approaches can address health crises. Similarly, the emphasis on "health promotion" signals a shift toward preventive health measures and the integration of public voices in promoting healthier behaviors. This evolution reflects the field's responsiveness to global health challenges and its alignment with contemporary public health priorities.

Despite the temporal shifts, strong interconnections between older and newer themes are evident, indicating the continuity of foundational research areas such as "government," "engagement," and "stakeholder." These terms serve as bridges, linking early discussions on governance and policy-making frameworks with more recent studies on community participation and crisis management. This interconnectedness demonstrates the field's cohesive development, where newer themes build upon and expand established knowledge. The visualization also suggests that areas like "data," "public health," and "risk" have remained consistently central to the discourse, further emphasizing their importance in shaping health policies over time.

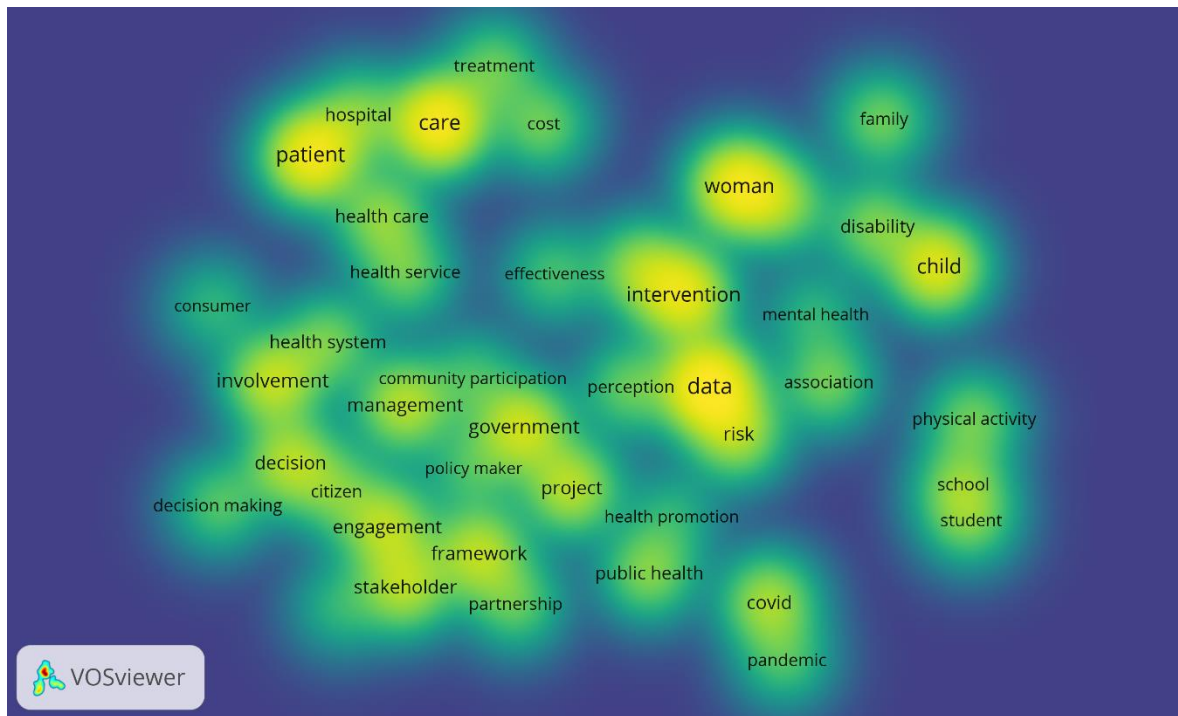


Figure 3. Density Visualization  
 Source: Data Analysis Result, 2024

This heatmap visualization illustrates the intensity of focus on specific terms within the literature on public participation in health policy-making. The yellow regions represent areas of high research density or frequent co-occurrence of terms, while green and blue areas indicate lower densities. Prominent terms such as "patient," "care," "data," "intervention," and "government" appear in bright yellow, highlighting their centrality and frequent discussion in the analyzed body of research. These terms emphasize the key areas of interest in the literature, including patient-centered care, data-driven health interventions, and the role of governance in health policy-making. The distribution of high-density areas across diverse themes reflects the multidisciplinary nature of the field. Clusters related to healthcare delivery ("patient," "care," "hospital"), governance and decision-making ("government," "framework," "stakeholder"), and community-focused outcomes ("child," "woman," "risk") indicate a broad spectrum of research interests. Additionally, the inclusion of terms like "COVID" and "public health" demonstrates the field's responsiveness to recent global health challenges, further supporting the importance of integrating public participation into crisis management and preventive health strategies. This heatmap highlights the balanced focus across systemic, individual, and community-level health determinants in the literature.

### 4.2 Citation Analysis

Table 2. The Most Impactful Literatures

Citations	Authors and year	Title	Contributions
1719	[25]	Contamination of drinking-water by arsenic in Bangladesh: A public health emergency	Highlighted the severe public health crisis caused by arsenic contamination in drinking water in Bangladesh, emphasizing the need for urgent interventions and policies to mitigate exposure and health impacts.
1511	[26]	Exploring pathways linking greenspace to health: Theoretical and methodological guidance	Provided a theoretical and methodological framework to understand the health benefits of greenspaces, exploring pathways such as physical activity, social cohesion, and mental restoration.
1407	[27]	Prevention and treatment of low back pain: evidence, challenges, and promising directions	Summarized evidence-based strategies for preventing and treating low back pain, identified global challenges in implementation, and proposed innovative solutions for improving outcomes.
1350	[28]	Environmental factors associated with adults' participation in physical activity. A review	Reviewed the role of environmental factors in influencing adults' physical activity levels, providing insights for designing interventions to promote active lifestyles.
1328	[29]	The Brazilian health system: History, advances, and challenges	Chronicled the evolution of Brazil's health system, highlighting achievements in universal health coverage and ongoing challenges such as inequities and resource allocation.
1240	[30]	The COMET Handbook: Version 1.0	Developed a comprehensive guide for creating Core Outcome Sets (COS) to standardize outcome reporting in clinical trials, aiming to improve comparability and utility of research findings.
1113	[31]	Antimicrobial resistance: Risk associated with antibiotic overuse and initiatives to reduce the problem	Discussed the global health risks of antibiotic overuse, analyzed factors contributing to antimicrobial resistance, and reviewed strategies for promoting responsible antibiotic use.
1014	[32]	Central Challenges Facing the National Clinical Research Enterprise	Identified systemic barriers to clinical research, including funding, infrastructure, and regulatory challenges, and proposed reforms to strengthen the clinical research enterprise in the United States.
972	[33]	Digital inequality: From unequal access to differentiated use	Explored the concept of digital inequality, moving beyond access issues to analyze disparities in how different populations use and benefit from digital technologies.
934	[34]	All for all: Equality, corruption, and social trust	Examined the relationships between social trust, equality, and corruption, arguing that societies with high trust and low corruption tend to have more equitable and cohesive populations.

Source: *Publish or Perish Output, 2024*



## Discussion

### 1. Key Themes in Public Participation Research

The bibliometric analysis reveals a rich tapestry of interconnected themes in public participation in health policy-making. Prominent among these are patient-centered care, governance frameworks, and community-level health interventions. The frequent appearance of terms such as “patient,” “care,” and “hospital” underscores the central role of healthcare delivery systems in shaping participatory practices. This focus aligns with the broader movement toward patient-centered care, which prioritizes the needs, preferences, and experiences of patients in health policy decisions [35].

Governance frameworks also feature prominently, as evidenced by the clustering of terms such as “government,” “policy maker,” and “stakeholder.” This reflects the recognition that effective public participation requires supportive institutional structures and policies. The findings suggest that participatory mechanisms are increasingly viewed as integral to good governance, aligning with frameworks like the World Health Organization’s recommendations for community engagement (WHO, 2019). However, the persistent challenges of power imbalances and tokenistic participation highlight the need for further research and policy reforms to ensure meaningful engagement.

Community-focused themes, such as “child,” “woman,” and “disability,” point to a growing interest in addressing the needs of vulnerable populations. This aligns with global health priorities, including the Sustainable Development Goals (SDGs), which emphasize equity and inclusivity. The emphasis on terms like “school,” “family,” and “mental health” further suggests that participatory practices are increasingly being applied in diverse settings and for varied health outcomes, ranging from education to psychological well-being.

### 2. The Role of Data and Technology

One of the most notable findings from the analysis is the centrality of “data” in the literature. This reflects the growing reliance on evidence-based decision-making in health policy. Data-driven approaches enable policymakers to identify community needs, monitor outcomes, and evaluate the effectiveness of participatory mechanisms [36]. However, the ethical implications of data collection and use, particularly in marginalized communities, warrant careful consideration. Issues such as data privacy, representation, and accessibility must be addressed to ensure that data-driven participatory practices are equitable and inclusive.

The emergence of terms like “COVID” and “pandemic” highlights the transformative impact of global health crises on participatory practices. During the COVID-19 pandemic, digital technologies played a pivotal role in facilitating public engagement, as traditional mechanisms were disrupted by physical distancing measures. Online platforms, social media, and virtual forums emerged as critical tools for maintaining public participation. While these technologies offer numerous advantages, including scalability and real-time feedback, they also pose challenges related to the digital divide. Future research should explore strategies to bridge this divide and ensure that digital participatory tools are accessible to all.

### Challenges and Barriers to Participation

Despite the progress in understanding and implementing public participation, significant barriers remain. The analysis underscores persistent challenges such as power imbalances, tokenistic participation, and limited public awareness. These issues are particularly pronounced in low- and middle-income countries (LMICs), where structural inequities and resource constraints often limit the effectiveness of participatory mechanisms [37]. The findings suggest a need for targeted interventions to empower marginalized populations, including capacity-building programs and culturally sensitive engagement strategies.

Another critical barrier is the lack of standardization in participatory practices. The diversity of mechanisms, ranging from citizen juries to online consultations, makes it challenging to compare

outcomes and identify best practices. The development of standardized frameworks, such as the COMET Initiative for core outcome sets, could help address this issue by providing a common language and methodology for evaluating participatory processes [30].

### **Implications for Policy and Practice**

The findings of this study have several implications for policy and practice. First, they highlight the importance of institutionalizing public participation within governance structures. Policymakers should prioritize the development of legal and regulatory frameworks that mandate and facilitate public engagement. These frameworks should include provisions for funding, capacity building, and accountability to ensure that participatory mechanisms are sustainable and effective. Second, the centrality of data in the literature underscores the need for investments in data infrastructure and literacy. Governments and organizations should prioritize the collection of high-quality, disaggregated data to inform participatory practices. They should also invest in initiatives to improve data literacy among policymakers and the public, enabling more informed and inclusive decision-making. Third, the findings suggest that digital technologies will play an increasingly important role in public participation. Policymakers should leverage these technologies to enhance outreach and engagement while addressing the challenges of the digital divide. This could include investments in internet infrastructure, digital literacy programs, and the development of user-friendly platforms that are accessible to diverse populations.

### **Directions for Future Research**

While this study provides a comprehensive overview of the literature, it also highlights several gaps that warrant further investigation. One key area is the long-term impact of public participation on health outcomes and system performance. While numerous studies document the immediate benefits of participatory practices, fewer examine their sustainability and long-term effects. Longitudinal studies are needed to address this gap and provide insights into the conditions under which participatory practices are most effective. Another important area for future research is the intersection of public participation and technology. As digital tools become more prevalent, researchers should explore their impact on the inclusivity, equity, and effectiveness of participatory mechanisms. This includes examining the ethical implications of digital participation and identifying strategies to mitigate the risks associated with technology use, such as data privacy concerns and misinformation. Finally, there is a need for more research on participatory practices in LMICs. The literature remains heavily skewed toward high-income countries, limiting its applicability to diverse contexts. Future studies should prioritize under-researched regions and populations, incorporating culturally sensitive methodologies to ensure relevance and impact.

### **Limitations of the Study**

While this bibliometric analysis provides valuable insights, it is not without limitations. The reliance on bibliographic databases such as Scopus and Web of Science may result in the exclusion of relevant literature not indexed in these sources. Additionally, the analysis focuses on co-occurrence and citation patterns, which may not fully capture the nuances of individual studies. Qualitative approaches, such as meta-synthesis or case studies, could complement the findings of this study and provide a deeper understanding of participatory practices. Another limitation is the temporal scope of the analysis, which may overlook recent developments in the field. Given the rapidly evolving nature of public health and technology, ongoing updates to the bibliometric analysis are necessary to capture emerging trends and themes.

## **CONCLUSION**

The findings of this bibliometric analysis underscore the importance of public participation in health policy-making as a means to promote equity, transparency, and effectiveness. They

highlight the field's multidisciplinary nature, integrating insights from governance, healthcare delivery, and community engagement. While significant progress has been made, challenges such as power imbalances, tokenistic participation, and the digital divide persist. Addressing these issues requires a concerted effort from researchers, policymakers, and practitioners, guided by robust evidence and a commitment to equity and inclusivity. By advancing research and practice in this area, public participation can serve as a powerful tool for improving health outcomes and strengthening health systems worldwide.

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