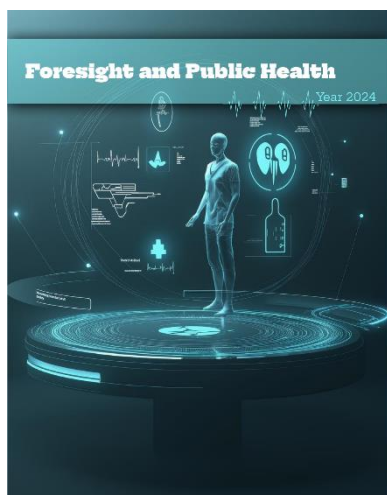Article type:
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The Future of Public Health Leadership: Skills and Strategies for the Next Generation

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ABSTRACT

This study aims to explore the essential skills, strategic approaches, challenges, role of digital transformation, and ethical considerations that will define the next generation of public health leadership. A qualitative research design was employed, utilizing semi-structured interviews with 24 participants from online public health communities alongside a review of scientific literature. Participants included public health practitioners, policymakers, researchers, and interdisciplinary professionals. Theoretical saturation was reached, ensuring comprehensive insights into the evolving landscape of public health leadership. Data were analyzed thematically using NVivo software, with key themes emerging around leadership competencies, digital transformation, and governance challenges. The results highlight five primary themes shaping the future of public health leadership: essential skills, strategic leadership approaches, leadership challenges, digital transformation, and ethical and policy considerations. Key skills identified include adaptive decision-making, emotional intelligence, interdisciplinary collaboration, community engagement, and crisis management. Strategic leadership approaches emphasize evidence-based policymaking, advocacy, and cross-sector partnerships. Challenges include resource limitations, political and institutional barriers, workforce burnout, public distrust, and equity concerns. Digital transformation is reshaping leadership practices, requiring expertise in data-driven decision-making, telehealth, AI integration, and cybersecurity. Ethical and policy considerations such as regulatory frameworks, legal accountability, and data privacy remain critical concerns for public health leaders. The future of public health leadership will depend on leaders who can integrate digital technology, advocate for equity, navigate governance complexities, and adopt adaptive, evidence-based strategies. Strengthening leadership training programs, mentorship, and ethical frameworks will be crucial in preparing the next generation of public health leaders to address emerging health challenges effectively. Investing in innovative, data-driven, and community-centered leadership models will ensure sustainable and equitable health outcomes.

Keywords: Public health leadership, digital transformation, equity in health, governance, public health policy, leadership training, workforce development.

Introduction

Public health leadership is undergoing a profound transformation as the global landscape faces increasingly complex challenges. From pandemics and climate change to digital health innovations and social determinants of health, the demand for forward-thinking, adaptable, and equity-focused leaders has never been greater (Kimball et al., 2019). The

next generation of public health leaders must be equipped with the skills to navigate interdisciplinary collaboration, integrate digital technology into health strategies, and address systemic inequities in health access and outcomes (Juzwishin, 2024). As leadership in public health evolves, the field must also ensure that emerging leaders are adequately trained to tackle the ethical, governance, and technological challenges that will define the future of population health (Czabanowska, 2023).

Public health has long been shaped by strong leadership, but contemporary challenges require a new set of skills and strategic approaches. The COVID-19 pandemic underscored the need for rapid decision-making, evidence-based policymaking, and crisis communication skills among public health professionals (Singh, 2024). Leaders who demonstrated agility, digital fluency, and a commitment to ethical decision-making were more effective in mitigating the impact of the pandemic (Lanterman, 2024). As the world prepares for future health crises, it is essential to examine the competencies that will define the next generation of public health leadership. Research suggests that traditional hierarchical models of leadership may no longer be sufficient, and a shift toward collaborative, equity-driven, and technology-integrated approaches is necessary (Rupert et al., 2022).

The evolution of public health leadership is also driven by the increasing role of digital technology in health systems. The rapid expansion of telehealth, artificial intelligence (AI), and big data analytics has redefined how health services are delivered, requiring leaders who can leverage these tools while addressing privacy and ethical concerns (Allegrante & Auld, 2019). The use of social media in public health has also changed the way leaders engage with communities, advocate for policies, and combat misinformation (Crooks, 2025; Czabanowska, 2023). The ability to navigate digital landscapes and harness the power of technology is now a core competency for public health leadership (Webber & Forster, 2017).

Workforce development and leadership training programs have been recognized as crucial for preparing future public health professionals. Several initiatives have focused on capacity building, mentorship, and leadership development to strengthen public health systems worldwide (Bhimani et al., 2020). Programs such as the Triple M Coaching and Mentorship Program have demonstrated the effectiveness of structured leadership training in equipping public health professionals with essential skills (Clarke & VanDriel, 2020). Similarly, investments in leadership training for young professionals have been emphasized as a key strategy for ensuring the sustainability of the public health workforce (Nittas et al., 2020).

A critical aspect of public health leadership in the future will be its ability to address health inequities and social determinants of health. The COVID-19 pandemic exposed deep-seated disparities in healthcare access, particularly among marginalized populations (Crooks, 2025). Leadership in public health must prioritize equity, advocate for inclusive policies, and work toward eliminating systemic barriers to health (Ofrane et al., 2023). Strengthening leadership frameworks that center equity and community engagement is essential to achieving sustainable and just public health outcomes (Coles & Ottolini, 2019).

Another challenge facing public health leadership is the growing complexity of global health governance. As public health threats become increasingly transnational, leaders must navigate international collaborations, negotiate with multiple stakeholders, and implement policies that align with global health frameworks (Vallet, 2019). The demand for public health professionals with expertise in global governance, diplomacy, and ethical decision-making is expected to grow in the coming years (Magaña-Valladares & Biberman, 2022).

Ethical considerations in public health leadership remain a central concern. The COVID-19 pandemic raised significant ethical dilemmas regarding resource allocation, vaccine distribution, and health data privacy (Lanterman, 2024). Leaders must be equipped to handle these challenges with integrity and transparency. Ethical leadership models, such as those outlined in the NurseTRUST framework, emphasize the importance of moral decision-making, community-centered leadership, and accountability (Clarke & VanDriel, 2020). As public health continues to intersect with legal and technological domains, ethical leadership will play a crucial role in maintaining public trust (Lloyd, 2020).

The role of mentorship and coaching in public health leadership has also been highlighted as a key factor in developing future leaders. Structured leadership programs that provide hands-on experience, peer learning, and guidance from senior professionals have been shown to enhance leadership capabilities among emerging public health

professionals (Bhimani et al., 2020). Investment in such programs will be critical in ensuring that the next generation of leaders is prepared to take on evolving public health challenges (Juzwishin, 2024).

Despite the increasing focus on leadership development, significant gaps remain in training and preparedness for public health leaders. Many professionals enter leadership roles without formal leadership training, relying instead on experience-based learning (Singh, 2024). There is a need for comprehensive leadership curricula that integrate digital competencies, policy advocacy, and ethical decision-making into public health education (Jacko et al., 2023). Strengthening leadership training at all levels of the public health workforce will be essential for building resilient health systems (Lanterman, 2024).

Public health leadership must also adapt to the changing expectations of younger generations entering the workforce. The next generation of public health professionals is increasingly drawn to collaborative, non-hierarchical leadership models that emphasize flexibility, work-life balance, and digital fluency (Rupert et al., 2022). Organizations that fail to adapt to these changing leadership dynamics may struggle to retain talent and foster innovation in public health initiatives (Kimball et al., 2019). Investing in leadership models that align with these evolving expectations will be essential for attracting and retaining future public health leaders (Nittas et al., 2020).

As public health systems prepare for future challenges, there is a growing recognition of the need for leadership that is inclusive, adaptable, and evidence-driven. The future of public health leadership will depend on leaders who can integrate technology into health strategies, advocate for equity, and navigate complex governance structures (Czabanowska, 2023). By investing in leadership training, fostering mentorship, and adapting to new leadership models, the field can ensure that the next generation of public health professionals is well-equipped to tackle the challenges of tomorrow (Allegrante & Auld, 2019). Thus, this study aims to examine the essential skills and strategies required for the next generation of public health leaders.

Methods and Materials

Study Design and Participants

This study follows a qualitative research design to explore the essential skills and strategies required for the next generation of public health leaders. The research is based on both semi-structured interviews and a review of scientific articles, ensuring a comprehensive understanding of the topic. The participant pool consists of 24 individuals who are actively engaged in online public health communities. These participants include professionals, researchers, and policymakers with diverse backgrounds and expertise in the field. The selection process followed a purposive sampling approach to ensure a broad representation of perspectives. The study reached theoretical saturation, meaning that additional data collection did not yield new themes or insights, confirming that the sample size was sufficient to achieve a deep and nuanced understanding of the subject matter.

Data Collection

The data collection process involved two key methods. First, semi-structured interviews were conducted with participants to gain insights into their perspectives on the evolving role of public health leadership, the competencies required for future leaders, and the challenges that emerging professionals may face in this field. These interviews were carried out virtually through video conferencing platforms, allowing for flexibility in scheduling and accessibility for participants from different regions. Each interview lasted between 45 to 60 minutes, ensuring that participants had enough time to elaborate on their experiences and views. The second method of data collection involved a systematic review of scientific articles related to public health leadership. This literature review focused on identifying prevailing trends, best practices, and theoretical frameworks that could help contextualize the findings from the interviews. Peer-reviewed journal articles and reports from reputable public health organizations were analyzed to provide a well-rounded perspective on the topic.

Data analysis

The data collected from both sources were analyzed using thematic analysis. NVivo software was employed to facilitate the organization, coding, and categorization of key themes emerging from the interviews and literature. The analysis process followed an inductive approach, allowing patterns and emerging concepts to shape the study's findings. Initially, open coding was used to identify recurring themes related to leadership skills, strategic approaches, and anticipated challenges in public health leadership. In the next stage, axial coding was performed to establish relationships between these themes and understand the broader structure of leadership development. Finally, selective coding refined these themes into core categories that encapsulated the essential competencies and strategies for future public health leaders.

Findings and Results

The study included a total of 24 participants who were actively engaged in online public health communities. Among them, 14 participants (58%) identified as female, while 10 participants (42%) identified as male. The age distribution ranged from 28 to 62 years, with a mean age of 41.7 years. In terms of professional background, 9 participants (38%) were public health practitioners, 6 participants (25%) were policymakers or health administrators, 5 participants (21%) were researchers specializing in public health, and 4 participants (16%) were professionals from interdisciplinary fields such as technology and healthcare innovation. Educational qualifications varied, with 16 participants (67%) holding master's degrees, 6 participants (25%) possessing doctoral degrees, and 2 participants (8%) with bachelor's degrees in health-related disciplines. Participants represented various geographical regions, with 12 individuals (50%) from North America, 6 individuals (25%) from Europe, 4 individuals (17%) from Asia, and 2 individuals (8%) from Africa. These demographic characteristics reflect a diverse sample, ensuring a wide range of perspectives on the future of public health leadership.

Table 1

The Results of Qualitative Analysis

Categories	Subcategories	Concepts
Essential Skills for Future Public Health Leaders	Adaptive Decision-Making	Situational awareness, resilience, rapid response strategies, proactive planning
	Emotional Intelligence	Empathy, self-awareness, emotional regulation, social awareness
	Interdisciplinary Collaboration	Collaborative problem-solving, interdisciplinary research, knowledge sharing
	Community Engagement	Public trust, grassroots mobilization, inclusive participation, civic engagement
	Crisis Management	Emergency preparedness, rapid adaptation, stakeholder coordination, mental resilience
Strategic Approaches to Leadership	Evidence-Based Policy Making	Data-driven policies, empirical analysis, policy evaluation metrics, cost-effectiveness
	Cross-Sector Partnerships	Public-private collaboration, inter-agency cooperation, knowledge exchange
	Advocacy and Influence	Persuasive communication, lobbying, public perception management, strategic messaging
	Innovation and Creativity	Creative problem-solving, fostering new ideas, design thinking, adaptive learning
	Sustainability Strategies	Long-term planning, environmental sustainability, public health resilience
	Global Health Initiatives	Global partnerships, international health frameworks, cross-border collaboration
Challenges in Public Health Leadership	Resource Limitations	Funding limitations, infrastructure deficits, resource misalloction, budget constraints
	Political and Institutional Barriers	Bureaucratic inefficiencies, policy resistance, leadership conflicts, administrative barriers
	Public Distrust	Fake news, misinformation, conspiracy theories, declining institutional credibility
	Workforce Burnout	Emotional exhaustion, high turnover rates, job dissatisfaction, professional stress
	Equity and Inclusivity	Marginalized communities, gender disparities, access to healthcare, policy bias

Role of Digital Transformation in Leadership	Digital Communication Skills	Social media management, digital advocacy, virtual leadership, online community building
	Data-Driven Decision Making	Big data analytics, epidemiological modeling, real-time monitoring, predictive analytics
	Telehealth Leadership	Remote patient care, virtual consultations, telemedicine policy, digital health expansion
	AI and Public Health	Machine learning, AI-driven diagnostics, automation in public health, decision-support systems
	Cybersecurity Challenges	Data breaches, health data privacy, cyber threats, risk management strategies
	Digital Ethics	Moral responsibility in AI use, data ethics, ethical AI governance, bias in health tech
Ethical and Policy Considerations in Public Health Leadership	Regulatory Frameworks	Legislative compliance, policy implementation, health law enforcement, policy evaluation
	Ethical Decision-Making	Moral dilemmas, ethical leadership, value-based decision-making, bioethics considerations
	Health Equity Policies	Universal healthcare, anti-discrimination policies, equitable resource distribution
	Privacy Concerns	Informed consent, data privacy laws, patient confidentiality, ethical data use
	Legal and Accountability Challenges	Legal accountability, malpractice implications, liability concerns, policy adherence

The analysis of the data identified five main themes related to the future of public health leadership: essential skills for future public health leaders, strategic approaches to leadership, challenges in public health leadership, the role of digital transformation in leadership, and ethical and policy considerations in public health leadership. Within these themes, multiple subthemes emerged, highlighting key skills, strategies, barriers, and ethical concerns shaping the next generation of public health leadership.

Essential Skills for Future Public Health Leaders

One of the most critical skills identified in the study was adaptive decision-making. Participants emphasized the need for situational awareness, resilience, rapid response strategies, and proactive planning. A senior public health professional from an online leadership forum stated, "We are constantly dealing with new challenges, from pandemics to climate-related health crises. Leaders who can adapt and make informed decisions in real-time are the ones who will drive change." This ability to respond flexibly to emerging public health crises while maintaining long-term strategic vision was consistently highlighted across interviews.

Emotional intelligence emerged as another key competency, particularly in managing teams and engaging with diverse stakeholders. Participants described how empathy, self-awareness, emotional regulation, and social awareness are fundamental to effective leadership. One respondent, a public health administrator, remarked, "Technical skills are important, but if you can't connect with your team and the community, your leadership won't be effective. People follow leaders who understand and care about them." Emotional intelligence was frequently cited as a means to build trust, improve workplace collaboration, and enhance community relationships.

Interdisciplinary collaboration was recognized as an essential aspect of future leadership, given the growing complexity of public health challenges. Participants emphasized collaborative problem-solving, interdisciplinary research, and knowledge sharing as crucial elements for addressing global health concerns. A policy advisor noted, "Public health is no longer just about medicine. We need to work with economists, urban planners, and data scientists to design effective solutions." This underscores the necessity of cross-sectoral partnerships and an integrated approach to leadership.

Community engagement was identified as a critical factor in promoting public trust and participation in health initiatives. Respondents highlighted the importance of public trust, grassroots mobilization, inclusive participation, and civic engagement. One participant involved in community-based health programs explained, "When communities are actively engaged in health interventions, the outcomes are significantly better. Leadership is about listening to people and making them part of the solution." The study findings suggest that future leaders must prioritize participatory decision-making processes to ensure sustainable public health initiatives.

Crisis management was another recurring theme, with participants underscoring the importance of emergency preparedness, rapid adaptation, stakeholder coordination, and mental resilience. A health emergency response

coordinator shared, "We saw during the COVID-19 pandemic that leaders who could manage crises effectively—those who could think ahead, act quickly, and communicate transparently—were the ones who made the most impact." The ability to remain calm under pressure and lead with confidence in uncertain situations was seen as a defining characteristic of effective public health leadership.

Strategic Approaches to Leadership

Evidence-based policy-making was identified as a fundamental approach to leadership in public health. Respondents emphasized the need for data-driven policies, empirical analysis, policy evaluation metrics, and cost-effectiveness assessments. A researcher specializing in health policy noted, "Decisions in public health should always be based on solid evidence. Leaders who use data to drive policy are more likely to make meaningful and sustainable changes." The integration of scientific research into policymaking was considered essential for addressing both immediate and long-term public health challenges.

Cross-sector partnerships were recognized as essential for advancing public health goals. Participants discussed the importance of public-private collaboration, inter-agency cooperation, and knowledge exchange. A senior health strategist explained, "Public health problems cannot be solved in silos. We need partnerships between governments, businesses, and civil society to create lasting impact." These findings suggest that leaders must actively seek interdisciplinary and cross-sector partnerships to enhance the reach and effectiveness of public health initiatives.

Advocacy and influence were highlighted as critical strategies for shaping public health policies and interventions. Participants spoke about the need for persuasive communication, lobbying, public perception management, and strategic messaging. One participant involved in health advocacy shared, "A leader's role is not just about designing policies—it's also about getting them implemented. Advocacy is crucial to influencing policymakers and mobilizing public support." The ability to effectively communicate public health needs and mobilize action was viewed as a necessary leadership skill.

Innovation and creativity were identified as indispensable for addressing evolving public health challenges. Participants pointed to the importance of creative problem-solving, fostering new ideas, design thinking, and adaptive learning. A public health entrepreneur remarked, "We can't rely on old methods to solve new problems. The future of public health depends on leaders who can think outside the box and embrace innovative solutions." This highlights the need for a culture of experimentation and innovation in public health leadership.

Sustainability strategies were discussed as an essential component of long-term public health leadership. Respondents emphasized the significance of long-term planning, environmental sustainability, and public health resilience. One health sustainability expert explained, "The health of populations is directly linked to environmental health. Leaders must integrate sustainability into their decision-making to ensure the well-being of future generations." These findings suggest that public health leaders must consider environmental and social sustainability in their strategic planning.

Challenges in Public Health Leadership

Participants identified resource limitations as a major challenge, particularly in low- and middle-income countries. Issues such as funding limitations, infrastructure deficits, resource misalloction, and budget constraints were frequently mentioned. A hospital administrator stated, "We often have ambitious plans but lack the financial resources to implement them. Leaders must be strategic in resource allocation and find innovative funding solutions." This finding highlights the need for financial acumen and resource management skills in public health leadership.

Political and institutional barriers were also discussed as significant obstacles to effective leadership. Respondents pointed to bureaucratic inefficiencies, policy resistance, leadership conflicts, and administrative barriers. A public health policymaker explained, "Public health decisions are often influenced by political considerations rather than scientific evidence. This makes it difficult to implement necessary reforms." These findings suggest that leaders must navigate political complexities while maintaining a commitment to evidence-based decision-making.

Public distrust emerged as another critical challenge, exacerbated by misinformation, fake news, conspiracy theories, and declining institutional credibility. One epidemiologist noted, "During the pandemic, misinformation spread faster

than the virus itself. Leaders must proactively address misinformation and rebuild public trust." These findings underscore the importance of transparent communication and trust-building in public health leadership.

Workforce burnout was a recurring concern, with participants citing emotional exhaustion, high turnover rates, job dissatisfaction, and professional stress as significant issues. A public health worker shared, "Many professionals are leaving the field due to burnout. We need leaders who prioritize mental health and create supportive work environments." The study suggests that future leaders must implement strategies to reduce burnout and enhance workforce well-being.

Equity and inclusivity were also identified as ongoing challenges. Participants spoke about marginalized communities, gender disparities, access to healthcare, and policy bias. A community health organizer stated, "Public health must serve everyone, but systemic inequalities still persist. Leaders must advocate for equity and inclusion in all health policies." This finding highlights the need for a strong commitment to social justice in public health leadership.

Discussion and Conclusion

The findings of this study highlight the evolving nature of public health leadership, emphasizing the essential skills, strategic approaches, challenges, digital transformation, and ethical considerations that will shape the next generation of leaders. Participants consistently underscored the importance of adaptive decision-making, emotional intelligence, interdisciplinary collaboration, community engagement, and crisis management as critical leadership competencies. These findings align with existing literature that has identified similar skill sets as essential for effective public health leadership in dynamic and uncertain environments (Singh, 2024). The increasing complexity of public health challenges, from pandemics to climate-related health risks, necessitates leaders who can think strategically, respond rapidly to crises, and foster collaborative efforts across disciplines (Kimball et al., 2019).

A key insight from this study is the growing emphasis on evidence-based policymaking and cross-sector partnerships as strategic approaches to leadership. Participants described how data-driven decision-making, policy evaluation metrics, and collaboration with diverse stakeholders are becoming fundamental to public health leadership. These findings are consistent with previous research, which has highlighted the role of interdisciplinary collaboration and data-informed policies in strengthening public health systems (Czabanowska, 2023). Leaders who integrate empirical research into their decision-making are better equipped to design policies that are both effective and equitable (Jacko et al., 2023). Moreover, studies on global health governance emphasize the need for public-private partnerships to address resource constraints and expand the reach of public health interventions (Magaña-Valladares & Biberman, 2022).

The findings also reveal significant challenges facing public health leadership, particularly in the areas of resource limitations, political and institutional barriers, public distrust, workforce burnout, and equity concerns. Participants frequently mentioned funding limitations, bureaucratic inefficiencies, and resistance to policy change as major obstacles to implementing effective public health strategies. This is consistent with previous studies that have documented the financial and administrative constraints that hinder public health initiatives, particularly in low- and middle-income countries (Bhimani et al., 2020). Additionally, the issue of public distrust, fueled by misinformation and declining institutional credibility, emerged as a critical challenge for public health leaders. Recent research has emphasized the growing impact of misinformation on public health communication, particularly in the context of vaccine hesitancy and pandemic response efforts (Penney & Neilson, 2010; Puleston et al., 2011). Public health leaders must therefore adopt transparent communication strategies and engage with communities to rebuild trust and counteract misinformation (Srivastava & Kunwar, 2018; Vallet, 2019).

Another major challenge identified in this study was workforce burnout, with participants describing high turnover rates, job dissatisfaction, and emotional exhaustion as significant concerns. These findings align with studies that have examined the impact of the COVID-19 pandemic on public health professionals, revealing increased stress and burnout among those working on the front lines (Singh, 2024). The increasing workload, emotional toll, and lack of mental health support for public health professionals have been widely documented, underscoring the need for leadership strategies

that prioritize workforce well-being (Lanterman, 2024). Furthermore, the findings highlight the persistent issue of equity and inclusivity, with participants discussing the barriers faced by marginalized communities in accessing healthcare. This is in line with research calling for stronger leadership commitments to health equity and policies that address systemic disparities (Crooks, 2025). Public health leaders must actively work to dismantle these barriers and advocate for inclusive health policies that prioritize vulnerable populations (Ofrane et al., 2023).

The role of digital transformation in public health leadership emerged as another critical theme in the study. Participants emphasized the increasing reliance on digital communication, data analytics, telehealth, artificial intelligence, and cybersecurity in public health decision-making. The rapid expansion of digital health tools has transformed how leaders interact with communities, design interventions, and manage health systems (Webber & Forster, 2017). This aligns with previous research, which has highlighted the potential of digital technology to enhance public health efficiency and accessibility (Allegrante & Auld, 2019). The use of big data and predictive analytics has been particularly significant in improving disease surveillance and response strategies (Jacko et al., 2023). However, participants also noted ethical concerns related to digital health, particularly in terms of data privacy, cybersecurity threats, and algorithmic bias. These concerns have been echoed in recent studies, which emphasize the need for ethical frameworks to guide the integration of digital tools in public health (Lloyd, 2020). The ethical use of artificial intelligence in healthcare remains an ongoing challenge, requiring leaders to balance technological innovation with patient privacy and data protection (Lanterman, 2024).

Ethical and policy considerations were also central to the findings, with participants discussing regulatory frameworks, ethical decision-making, health equity policies, privacy concerns, and legal accountability. Ethical leadership is a recurring theme in public health research, with scholars emphasizing the need for integrity, transparency, and community-centered approaches in leadership decision-making (Clarke & VanDriel, 2020). The findings of this study support the argument that leaders who uphold strong ethical principles are more likely to build trust and achieve sustainable health outcomes (Nittas et al., 2020). Regulatory frameworks and legal accountability were also identified as key concerns, particularly in the context of public health governance and policy implementation. Previous studies have highlighted the complexity of navigating legal and institutional structures, with leaders often facing resistance when attempting to implement policy reforms (Juzwishin, 2024). Strengthening leadership capacities in health law and policy advocacy will be essential in preparing future leaders to navigate these challenges effectively (Coles & Ottolini, 2019).

The study's findings contribute to the ongoing discourse on the future of public health leadership by providing empirical insights into the skills, strategies, and challenges that define leadership in the field. These findings reinforce the need for leadership models that are flexible, data-driven, and community-centered, while also addressing emerging digital and ethical challenges. By aligning with existing research, the study provides a comprehensive understanding of how public health leadership is evolving and what measures can be taken to strengthen leadership capacity in the future.

Despite the valuable insights generated, this study has several limitations. The sample size, while sufficient for qualitative analysis, was limited to participants engaged in online public health communities, which may not fully represent the diversity of experiences across different public health settings. The study also relied on self-reported perspectives, which could introduce biases related to personal experiences and professional backgrounds. Additionally, while efforts were made to ensure a diverse range of viewpoints, the study did not include perspectives from leaders in low-resource settings, where public health challenges may differ significantly. Future research should consider expanding the sample to include a broader demographic and geographic representation to enhance the generalizability of the findings.

Further research is needed to explore the impact of leadership training programs on public health leadership development. Longitudinal studies tracking the career trajectories of public health leaders who have undergone formal leadership training could provide valuable insights into the effectiveness of these programs. Additionally, future research should examine the role of mentorship and coaching in fostering leadership skills among emerging public health professionals. Another important avenue for research is the integration of digital health technologies in

leadership practices, particularly in relation to ethical decision-making and policy regulation. Investigating how leaders navigate digital transformation and address ethical concerns will be critical in shaping future leadership frameworks.

The findings of this study suggest several practical implications for strengthening public health leadership. Leadership training programs should be designed to incorporate interdisciplinary collaboration, digital competencies, and ethical decision-making as core components. Organizations should prioritize mentorship and peer-learning opportunities to support the development of emerging leaders. Additionally, public health agencies should invest in strategies to mitigate workforce burnout, such as providing mental health support and fostering a work environment that values well-being. Public health leaders must also take proactive steps to rebuild public trust by adopting transparent communication strategies and engaging communities in decision-making processes. Finally, future leadership models should embrace adaptive, data-driven, and community-centered approaches to address the evolving challenges of public health.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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