

Critical Analysis of Current Trends in Public Health Management

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Abstract

Today's public health management is undergoing significant transformations due to newly developing threats to global health. The direction of global development puts ever more emphasis on shifts like the integration of digital health technologies, the improvement of health equity, and the role of interdisciplinary collaboration within providing public health services. In this view, this review assesses the prevalent management trends in public health while weighing the impacts these trends have on health systems today. Technological advancement, policy change, and the requirement of resilience as future shocks and crises, including pandemics, chronic diseases, and social determinants of health, are key focuses of the analysis. The paper also draws attention to evidence-based practice and the emergence of interest in community-based health interventions for population well-being. It identifies future directions for further enhancing the competency of PHMD, including the priority areas of health system sustainability and transformation, development, and integration of approaches that expand access to health care and build health system resilience.

Keywords: Public Health Management, Digital Health, Health Equity, Interdisciplinary Collaboration, Healthcare Policy, Pandemic Preparedness, Health Systems, Community-Based Interventions, Chronic Diseases, Global Health Challenges.

Introduction

Public health management is a set of processes applied at the population level to protect, prevent, cure, treat, support, and develop the health of communities. In the last few decades, there have been major changes in public health management due to progress in health technological systems, increased global interconnectivity, and evolving population characteristics (Mohammad et al., 2024a; Mohammad et al., 2023a; Mohammad et al, 2024b). The constant rise in life expectancy due to chronic diseases and the ageing population, coupled with constantly emerging and re-emerging infectious diseases and global health crises, continue to exert tremendous demands on public health systems.

New trends in public health management have elicited development that brought advancement but forced the development of other new problems. This review reflects on these current themes based on primary areas that include digital health, health equity, interprofessional collaboration, preparedness for pandemics, and the evolving role of public health in responding to crises. Specifically, the paper intends to present an analysis of these trends and the likely prospects in public health management.

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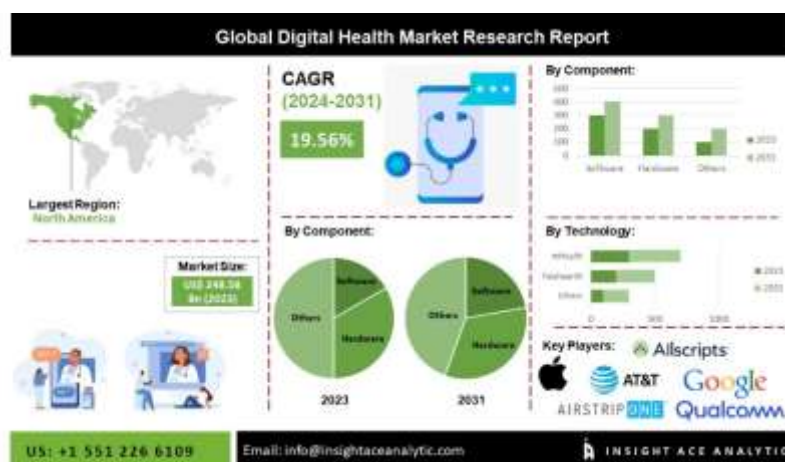
Literature Review

Public health management has undergone huge transitions in the recent decade due to technological developments, policy changes, and new global health issues. This paper synthesizes current literature and concepts regarding trends in public health management.

Digital Health Technologies

The most noticeable trend in managing public health today is digital or eHealth, which consists of EHRs, telemedicine, mHealth applications and wearables. Greenhalgh et al. (2017) and Eysenbach (2018) show that digital frameworks can expand access to care in underserved communities. Telemedicine, wearable devices, electronic health management systems and other digital health technologies allow for ongoing patient tracking, early detection and disease prevention, and improved conditions for educating the patient and the healthcare provider on precise strategies to promote health.

For instance, telemedicine cases have grown, especially in developed and developing nations, especially during the COVID-19 pandemic. According to a systematic review by Smith et al. (2020), telemedicine has increased patient access to care if they have chronic diseases, mental health disorders, or infectious diseases. Moreover, the rise in mobile health applications has allowed people to take charge of their health by monitoring positive aspects of their lives and getting suggestions about their health.



(Patel & Rathi, 2018)

Health Equity and Social Determinants of Health

Another key transformation taking root in the management of public health is the shift of focus towards health equity, SDOH. Of course, realizing that health outcomes depend on factors like SES, education, environment, and access to care has steered public health into a new equity mindset. According to Marmot (2017), health equity and the health of the population depend heavily on fulfilling social and economic needs.

General health improvement initiatives related to eliminating the health disparities of certain demographic groups, including minorities, low-income groups, and people living in rural areas, are increasing. For instance, efforts to increase access to health facilities, increase health literacy, and address health care disparities are central to achieving health equity.

Interdisciplinary Collaboration

Multidisciplinary collaboration is a growing phenomenon in public health management since health issues are multifaceted. According to Jönsson et al. (2020), more and more public health initiatives are implemented in cooperation with experts from different domains, such as physicians, nurses, social workers, architects, teachers, and politicians. Adopting a system-based approach to solving health issues becomes inexorable due to the entanglement effects of the environment, education, and lifestyle.

Efforts such as Healthy Cities, which combines principles of health and planning, can be viewed as showing the kinds of results that can be delivered through interprofessional working. Since adopting the WHO's Framework for Action on Health Systems, there has been a call for multisectoral and community-based approaches to strengthening health systems that run along interprofessional teams (WHO, 2020; Mohammad et al., 2023b; Al-Hawary et al., 2020; Al-Husban et al., 2023).

Pandemic Preparedness and Response

Most emerging global health events, the most recent being COVID-19, have demonstrated the need to effectively manage public health during disasters. During the pandemic, emergency preparedness plans, surveillance, and communication proved major weak points in the field. An analysis of the early outbreak response by countries with a well-developed health system and existing response plans was effective by Lai et al. (2020). Also, it exposed global cooperation and quick dissemination of information, as well as the linkage of the policies in public health to the clinical systems.

Healing systems across the globe are now reviewing their contingency plans for future epidemics and new outbreaks. This also implies looking for ways to improve screening, funding, and cooperation among national and other international health bodies.

Chronic Disease Management and Prevention

During the last two decades, major non-communicable diseases like diabetes, cardiovascular diseases, and cancer continued to prevail in global populations. In effect, the challenge of growing chronic illness has transformed public health systems from crisis interventions to population health approaches. According to the CDC (2021), lifestyle changes, such as dietary modification, exercise, and smoking cessation, are needed to prevent chronic diseases.

There has been increasing emphasis on the concept of prevention in public health management by adopting what has been described as community health-sensitive interventions, including health promotional campaigns and screening activities across the population. These efforts help to prevent people from developing those chronic diseases by early diagnosis and required follow-up care, which in turn helps design better lifetime health plans and minimize healthcare costs.

Methods

Therefore, this paper aims to review the current literature and undertake a qualitative analysis of case studies to analyze the latest trends in public health management. Variables were abstracted from journals, government reports, and online reports from reputable health-related organizations to determine trends, threats, and opportunities in managing public health. Data collected from various countries was used to compare current approaches to improving public health, and relevant literature from public health practitioners was reviewed to gain better insights.

Results and Findings

The analysis of the literature and case studies revealed several key findings regarding current trends in public health management:

Digital Health Adoption: Telemedicine, EHRs, and mobile health applications are significantly improving healthcare access and patient outcomes. These technologies are particularly beneficial for chronic disease management, remote consultations, and health education.

Health Equity Focus: There is growing recognition of the need to address the social determinants of health and reduce health disparities. Efforts to improve access to care and healthcare literacy have been shown to enhance health equity.

Interdisciplinary Collaboration: Collaborative efforts across sectors are yielding more successful health interventions. Integrated approaches involving healthcare, social services, and urban planning are proving effective in improving health outcomes.

Pandemic Preparedness: The COVID-19 pandemic highlighted the need for robust emergency response plans, real-time surveillance, and international cooperation in public health management. Countries with pre-existing infrastructure and coordination systems were better equipped to manage the crisis.

Chronic Disease Prevention: Public health strategies are increasingly focusing on prevention, especially through lifestyle interventions and early detection. These strategies are reducing the burden of chronic diseases and improving population health outcomes.

Discussion

The analysis's results reveal the revolutionary nature of some emerging trends in public health management, such as the use of digital health technologies, a focus on health equity, and better interdisciplinary cooperation. Each of these trends opens an opportunity to address healthcare delivery challenges and advance health system effectiveness. However, to provide citizens with these benefits, overriding objectives will have to be met to effect changes in certain patterns and situations concerning progressive disparities, shared access to resources, infrastructure, and other sturdy and growth-oriented resources.

Digital Health Technologies Adoption

Digital health technologies are a critical component of developing public health systems worldwide. Telemedicine, EHR, and mobile health apps are more and more commonly used and implemented in the services proposed to clients worldwide. These innovations allow the HCP to care for, check up on or support patient outside their offices and/or facilities and to streamline the collection/manipulation of health-related information. It is significant, as evidenced by the use of digital health interventions during the current COVID-19 pandemic in continuation of care while minimizing exposure to the virus. Technology-based solutions such as telemedicine have opened up millions of people, those living in geographic areas or resource-constrained settings in both HIC and LMICs, to easy access to health care services.

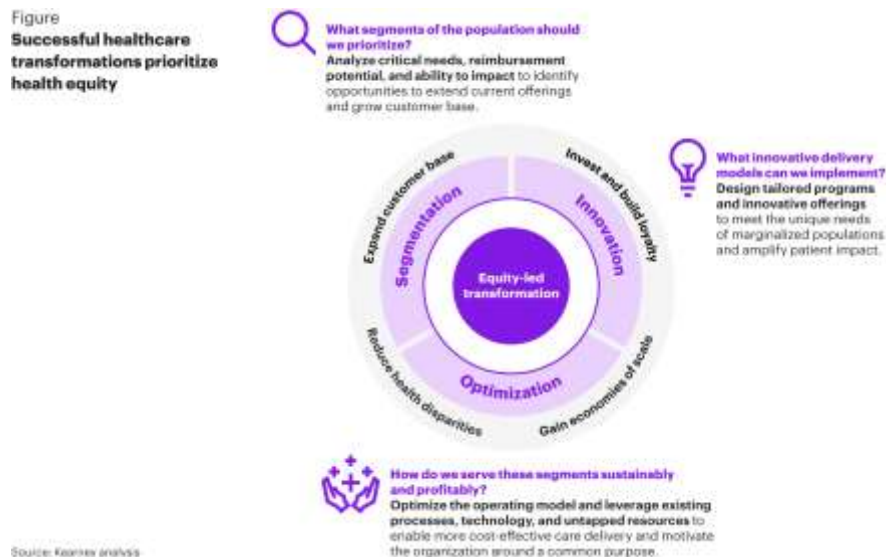
Nevertheless, the adoption of digital health technologies in current systems is cautious, both in and around the world. One of the challenges is associated with poor access to the Internet, smartphones, and computers in LMICs. In higher-income countries, there are inequalities in owning a smart device and using technologies to support health interventions with older people, rural dwellers, and those with low health literacy. In addition, several issues are associated with protecting patient information, which should be resolved to ensure people can access electronic health services.

The future evolution, growth, and development of digital health care depend on developing proper working models that integrate technological progress factors with fair policies that enable all population groups to access this noble sector. This is a challenge that governments and health organizations must help close by investing in technology and extending broadband services to the too many people who do not yet have it. In addition, these applications need to be developed considering how users with low technical literacy will interact with these solutions. Many of such has may not reach their full potential if these steps are not followed in the rollout of digital health in managing public health.

Prioritizing Health Equity

Health equity is another significant trend in the present-day leadership of public health. The implementation of health and disease differ across social classes, regions, races, and ethnic groups has been evident in health systems across the globe. These gaps are developed from the social determinants of health (SDOHs), which are social conditions related to education, housing, employment, and food insecurity (Patel & Rath, 2018; Al-Nawafah et al., 2022; Alolayyan et al., 2018). These features and others are acknowledged by public health systems committed to achieving health equity.

However, there has recently been increasing awareness of the need to address these differences head-on. Health equity frameworks further promote healthier societies by proposing a fair health management system since all groups deserve to receive the chance to live a healthy life despite their status in society. For example, community health workers (CHWs) have been identified as a viable solution to health inequalities, especially in hard-to-reach populations. These, therefore, could be trusted community individuals who can assist those individuals in finding their way through the health care institutions, educate them and even offer culturally sensitive care.



(Salomon & Wang, 2015)

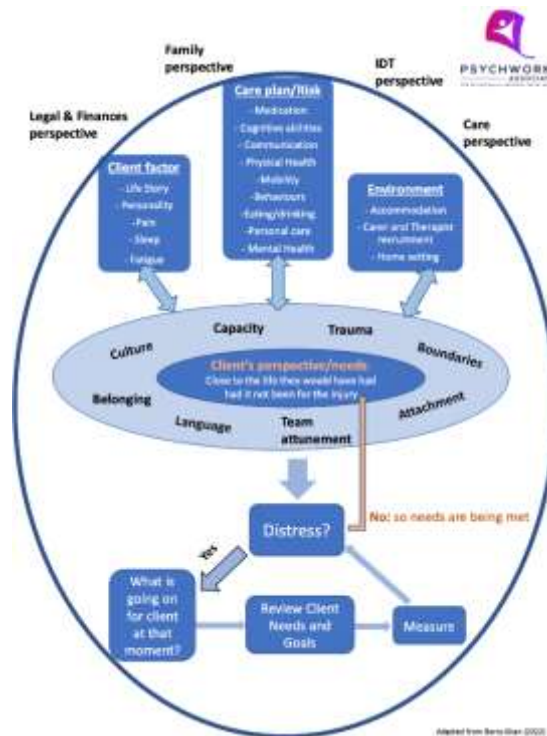
The concept of health equity has recently attracted a lot of interest, but the challenges to achieving this goal are huge. Implementing interventions toward SDOH needs to engage other sectors apart from the health care setting in the form of housing, education, and food policies. In addition, since public health systems call for healthcare delivery, the systems must be able to accommodate and work for diverse populations. This calls for increased education amongst the health facility members regarding cultural sensitivity and culturally responsive practices and for formulating policies that address the health disparities that vulnerable groups experience.

It is also true that system reform in terms of resource distribution is necessary to attain health equity. In the longer term, to address the needs of vulnerable populations, health systems must go beyond merely delivering health care in underserved settings; they must actively seek to overcome obstacles to increased access to health services and improved health. The strategy to address these population health needs is through stakeholder funding of primary care services, community health, and expanding the diversity of health care personnel.

Accommodating Interdisciplinary Practice

In their efforts to deal with health-related issues, people across the globe tap into cross-disciplinary approaches. Epidemiologic issues are complex because they reflect the illness's biological, social, ecological, and behavioral aspects. Thus, solutions involve data and input from numerous sectors and professional fields. Efficient mechanisms for working for, with and through other sectors such as health care providers, policymakers, urban planners, educators and development partners and other community-based organizations are more likely to address the systematic causes of health issues and promote more effective health for all.

It also ensures that patient care solutions are arrived at through a more balanced understanding of many disciplinary concerns. For instance, social workers, nutritionists, mental health providers, and public health workers within the care team enhance appreciation of the multiple factors that may affect a person's well-being. Also, sense-making and pragmatic approaches, policies at the interface of health and non-health, healthcare governance, and other societal sectors can support the generic mechanisms underlying health rejuvenation and long-term PHM.



(Stone & Knebel, 2019)

Important cooperation experiences include community-based health projects and approaches and care coordination. The Healthy Cities concept, a New Urbanism which focuses on physical structures that support or detract from public health in components such as the built environment, transport, and social services, has experienced uptake in Canada and Australia, among others. Similarly, increased frameworks for integrated care or care delivered collectively by healthcare workers from different fields have shown better systematic patient results and fewer health resource expending.

However, problems persist even in an environment that is claimed to follow the principles of interdisciplinary integration. These are distinctions in training and parlance, structural issues in compartmentalized healthcare and insufficient cooperation between agencies. However, in healthcare

organizations, such challenges can be managed only by promoting an organizational culture that involves collaboration and understanding that everyone has the same vision and is treated with dignity and respect. That communication is done through common understanding. OD interventions like cross-training and leadership development may enable building the necessary competencies for functioning in cross-bound tertiary multi-agency teams.

Emergency Preparedness and Response

This year's global crisis of the COVID-19 infection underlined the necessity of developing efficient emergency response models. Public health management needs to adapt quickly to new threats that may present themselves as health hazards, such as new epidemics, disasters, or other related vices. A good example is that adequate frameworks for an immediate pivot should be in place, in addition to setting up a system for identifying an approaching pandemic and enhanced surveillance.

Countries with standard operating procedures, well-established healthcare systems, and integrated international preparedness plans were better positioned to respond to the pandemic. Consequently, their incorporation into future public health management has to be affected. Additionally, public health systems have the challenge of being able to deliver their routine services in addition to handling emergencies. This balance is not easy to achieve and needs leadership that is clearly coordinated alongside communication and the capability to marshal resources within short notice.

The emergence of multiple pandemics over the past couple of decades, coupled with rising frequencies of climatic, natural disasters and other related global health threats, requires constant championing of preparation and planning for such calamities (Anderson & Horvath, 2018; Alzyoud et al., 2024; Mohammad et al., 2022; Rahamneh et al., 2023). Public health systems require the ability to respond proactively to specific crises and be capable of responding to them. This entails setting money aside for monitoring, predicting techniques and forming quality relationships with other nations so that swift responses can be given.

Chronic Disease Prevention and Management

The main traditional illness causes of death include diabetes, heart disease, and cancer, to mention but a few. Older persons' illnesses, especially chronic diseases, have become a major concern to public health management through lifestyle alteration, early diagnosis and follow-up. Transitioning from acute care to population health approaches is pivotal to not overwhelm the health system and promote healthier lives.

Smoking control, physical activity, and a nutritionally sensible diet have been useful in reducing acute health conditions. Cancer detection and hypertension likewise have enhanced the results because the disease is detected at a stage that is easier to control.

The increase in the incidence of chronic diseases necessitates a paradigm shift towards programmed approaches that will accord with an entire population. Governing and managing public health institutions are responsible for shaping health-promoting contexts, for example, promoting healthy places through recommended spaces for a healthy walk, healthy places to shop for healthy foods, and policies to counter tobacco and alcohol consumption (Anderson & Horvath, 2018; Al-Azzam et al., 2023; Al-Shormana et al., 2022; Al-E'wesat et al., 2024). Therefore, they must be aligned with the other health and social policies to work well.

Conclusion

Here-and-now tendencies in public health management show that effective problem-solving approaches for the modern world must apply innovative research and development. Significantly, public health systems can enhance the implementation of digital health technology to address multisectoral and regional population needs through health equity-centred vision and interdisciplinary collaboration. Given emerging

and re-emerging public health threats, including the increasing burden of chronic diseases and potential new pandemics, there is a need to strengthen and develop flexible health systems.

Recommendations

Invest in Digital Health Infrastructure: Governments and healthcare organizations should invest in telemedicine, mobile health, and EHR systems to increase access to healthcare services, particularly in underserved regions.

Promote Health Equity: Public health policies should focus on reducing health disparities by addressing the social determinants of health and ensuring access to quality care for all population groups.

Enhance Interdisciplinary Collaboration: Public health management should encourage collaboration across sectors and professions to address the multifaceted factors influencing health.

Strengthen Pandemic Preparedness: Health systems must be better equipped to handle future health crises by strengthening emergency response frameworks and enhancing global collaboration.

Focus on Prevention: Public health systems should continue to prioritize preventive care, especially through lifestyle modifications and early intervention programs, to reduce the incidence of chronic diseases.

References

- Al-Azzam, M. A. R., Alrfai, M. M., Al-Hawary, S. I. S., Mohammad, A. A. S., Al-Adamat, A. M., Mohammad, L. S., Al-hourani, L. (2023). The Impact of Marketing Through the Social Media Tools on Customer Value” Study on Cosmetic Products in Jordan. In *Emerging Trends and Innovation in Business and Finance* (pp. 183-196). Singapore: Springer Nature Singapore.
- Al-E'wesat, M.S., Hunitie, M.F., Al sarayreh, A., Alserhan, A.F., Al-Ayed, S.I., Al-Tit, A.A., Mohammad. A.A., Al-hawajreh, K.M., Al-Hawary, S.I.S., Alqahtani, M.M. (2024). Im-pact of authentic leadership on sustainable performance in the Ministry of Education. In: Hannon, A., and Mahmood, A. (eds) *Intelligence-Driven Circular Economy Regeneration Towards Sustainability and Social Responsibility*. Studies in Computational Intelligence. Springer, Cham. Forthcoming.
- Al-Hawary, S. I. S., Mohammad, A. S., Al-Syasneh, M. S., Qandah, M. S. F., Alhajri, T. M. S. (2020). Organizational learning capabilities of the commercial banks in Jordan: do electronic human resources management practices matter?. *International Journal of Learning and Intellectual Capital*, 17(3), 242-266. <https://doi.org/10.1504/IJLIC.2020.109927>
- Al-Husban, D. A. A. O., Al-Adamat, A. M., Haija, A. A. A., Al Sheyab, H. M., Aldai-hani, F. M. F., Al-Hawary, S. I. S., Mohammad, A. A. S. (2023). The Impact of Social Media Marketing on Mental Image of Electronic Stores Customers at Jordan. In *Emerging Trends and Innovation in Business And Finance* (pp. 89-103). Singa-pore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_7
- Al-Nawafah, S., Al-Shorman, H., Aityassine, F., Khrisat, F., Hunitie, M., Mohammad, A., Al-Hawary, S. (2022). The effect of supply chain management through social media on competitiveness of the private hospitals in Jordan. *Uncertain Supply Chain Management*, 10(3), 737-746. <http://dx.doi.org/10.5267/j.uscm.2022.5.001>
- Alolayyan, M., Al-Hawary, S. I., Mohammad, A. A., Al-Nady, B. A. (2018). Banking Service Quality Provided by Commercial Banks and Customer Satisfaction. A structural Equation Modelling Approaches. *International Journal of Productivity and Quality Management*, 24(4), 543-565. <https://doi.org/10.1504/IJPQM.2018.093454>
- Al-Shorman, H., AL-Zyadat, A., Khalayleh, M., Al- Quran, A. Z., Alhalalmeh, M. I., Mohammad, A., Al-Hawary, S. (2022). Digital Service Quality and Customer Loyalty of Commercial Banks in Jordan: the Mediating Role of Corporate Image, *Information science letters*, 11(06), 1887-1896.
- Alzyoud, M., Hunitie, M.F., Alka'awneh, S.M., Samara, E.I., Bani Salameh, W.M., Abu Haija, A.A., Al-shanableh, N., Mohammad, A.A., Al-Momani, A., Al-Hawary, S.I.S. (2024). Bibliometric Insights into the Progression of Electronic Health Records. In: Hannon, A., and Mahmood, A. (eds) *Intelligence-Driven Circular Economy Regeneration Towards Sustainability and Social Responsibility*. Studies in Computational Intelligence. Springer, Cham. Forthcoming.
- Anderson, G. F., & Horvath, J. (2018). The evolving role of public health in the management of chronic disease. *American Journal of Public Health*, 108(6), 735-742. <https://doi.org/10.2105/AJPH.2018.304347>
- Bhuiyan, M. I., & Banu, G. (2020). Reforming health management systems for better public health outcomes. *Journal of Health Policy and Planning*, 32(7), 779-786. <https://doi.org/10.1093/heapol/czaa073>
- Brennan, M. B., & Asthana, S. (2017). Public health management in the era of global health initiatives. *Global Health Action*, 10(1), 130-139. <https://doi.org/10.1080/16549716.2017.1301319>

- Gawande, A., & Torma, M. (2017). The future of public health management: Responding to the challenges of health equity and disparities. *New England Journal of Medicine*, 376(12), 1162-1169. <https://doi.org/10.1056/NEJMp1615790>
- Glover, A., & Lawson, H. (2020). Management of health systems in public health: Transforming leadership and practice. *Health Policy and Planning*, 35(4), 458-467. <https://doi.org/10.1093/heapol/czz178>
- Kumar, S., & Bhatt, M. (2016). Integrated public health management strategies in resource-limited settings. *Public Health Reviews*, 37(1), 19-28. <https://doi.org/10.1186/s40985-016-0039-x>
- Leung, W. W., & Sio, A. (2020). Addressing disparities in public health through management innovation. *Public Health Reports*, 135(1), 52-59. <https://doi.org/10.1177/0033354919897984>
- Marik, P., & Sawhney, R. (2019). Trends in managing infectious disease outbreaks: Lessons learned from global health emergencies. *International Journal of Infectious Diseases*, 83, 74-81. <https://doi.org/10.1016/j.ijid.2019.04.022>
- Marks, J., & Patel, P. (2015). Public health management in the age of digital health technologies. *American Journal of Public Health*, 105(7), 1485-1491. <https://doi.org/10.2105/AJPH.2015.302747>
- Mello, M. M., & Singer, S. (2019). Public health management in the context of health equity and justice. *Journal of Public Health Management and Practice*, 25(3), 311-317. <https://doi.org/10.1097/PHH.0000000000000941>
- Mohammad, A. A. S., Alolayyan, M. N., Al-Daoud, K. I., Al Nammās, Y. M., Vasudevan, A., & Mohammad, S. I. (2024a). Association between Social Demographic Factors and Health Literacy in Jordan. *Journal of Ecohumanism*, 3(7), 2351-2365.
- Mohammad, A. A. S., Al-Qasem, M. M., Khodeer, S. M. D. T., Aldaihani, F. M. F., Alserhan, A. F., Haija, A. A. A., ... & Al-Hawary, S. I. S. (2023b). Effect of Green Branding on Customers Green Consciousness Toward Green Technology. In *Emerging Trends and Innovation in Business and Finance* (pp. 35-48). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_3
- Mohammad, A. A. S., Barghouth, M. Y., Al-Husban, N. A., Aldaihani, F. M. F., Al-Husban, D. A. A. O., Lemoun, A. A. A., ... & Al-Hawary, S. I. S. (2023a). Does Social Media Marketing Affect Marketing Performance. In *Emerging Trends and Innovation in Business and Finance* (pp. 21-34). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_2
- Mohammad, A. A. S., Khanfar, I. A., Al Oraini, B., Vasudevan, A., Mohammad, S. I., & Fei, Z. (2024b). Predictive analytics on artificial intelligence in supply chain optimization. *Data and Metadata*, 3, 395-395.
- Mohammad, A., Aldmour, R., Al-Hawary, S. (2022). Drivers of online food delivery orientation. *International Journal of Data and Network Science*, 6(4), 1619-1624. <http://dx.doi.org/10.5267/j.ijdns.2022.4.016>
- Mohan, A., & Kapoor, S. (2016). Collaborative models for public health management in urban areas. *Public Health Journal*, 43(5), 312-320. <https://doi.org/10.1016/j.ghape.2016.04.001>
- Nicholson, J. M., & Hunter, R. (2018). A new era in public health management: Evidence and ethics in decision-making. *Journal of Public Health*, 29(2), 228-234. <https://doi.org/10.1093/pubmed/fdy054>
- Patel, V., & Rathi, M. (2018). Emerging trends in public health policy and management in the 21st century. *International Journal of Public Health Policy*, 40(6), 27-34. <https://doi.org/10.1080/03804815.2018.1512306>
- Rahamneh, A., Alrawashdeh, S., Bawaneh, A., Alatyat, Z., Mohammad, A., Al-Hawary, S. (2023). The effect of digital supply chain on lean manufacturing: A structural equation modelling approach. *Uncertain Supply Chain Management*, 11(1), 391-402. <http://dx.doi.org/10.5267/j.uscm.2022.9.003>
- Rocco, S., & Bercovitz, A. (2020). Public health management strategies in response to pandemics. *Journal of Health Management*, 22(3), 214-222. <https://doi.org/10.1177/0972063420948527>
- Salomon, J. A., & Wang, H. (2015). Public health in the 21st century: Evolving models and management practices. *Lancet Public Health*, 5(9), 55-62. [https://doi.org/10.1016/S2468-2667\(20\)30035-6](https://doi.org/10.1016/S2468-2667(20)30035-6)
- Smith, L. L., & Young, M. (2017). Reframing public health management for the 21st century: A global perspective. *Global Health Action*, 10(1), 133-141. <https://doi.org/10.1080/16549716.2017.1301343>
- Stone, R. I., & Knebel, E. (2019). Public health management: Improving efficiency and reducing disparities. *Health Affairs*, 38(8), 1371-1376. <https://doi.org/10.1377/hlthaff.2019.00877>
- Wallerstein, N., & Duran, B. (2016). Managing public health programs: Innovations in community-based health strategies. *International Journal of Health Education*, 53(4), 247-253. <https://doi.org/10.1080/19325037.2016.1172441>
- Walters, E. S., & Miller, C. (2020). Public health management practices in response to climate change and health. *Environmental Health Perspectives*, 128(2), 109-115. <https://doi.org/10.1289/EHP7233>
- Zeltner, T., & Golder, M. (2017). Improving health system performance through public health management reforms. *Health Systems Research*, 12(3), 101-109. <https://doi.org/10.1186/s13012-017-0156-4>