Critical Review of Cross-Cutting Themes in Global Healthcare

Fatemah Ayeed Salmeen Alsayari[1], Salaha Saleh Bishr Alsaiari[2], Mohammed Ahmad Ali Alzogly[3], Abdulmajeed salem alsaad[4], Mana Saud Mohd Almothel[5], Dawlah Nasser Salem Alkorbi[6], Nuha Faleh Albalawi[7], Mohammed Alhumaidi[8], Ali Hussain Ahmed Alyami[9], Sultana Hussean Alshammmry[10]

Abstract

Global health is a bracing complex of multidimensional and cross-cutting issues that define health care and policy worldwide and the models of health care administration. These themes are UHC, social conditions influencing health, technology, health workforce, and climate change. This paper aims to review and contrast these themes through High-Income Countries and Low-Income Countries to identify key emerging challenges and opportunities in global health. The publication also considers the need to combine efforts and work intelligently to solve these problems, focusing on the organization's work on the international level to create conditions for achieving improved health for everyone. Finally, the authors present policy implications that may help promote fair and sustainable models for healthcare organizations internationally.

Keywords: *Global Healthcare; Health Equity; Universal Health Coverage (UHC); Healthcare Workforce; Social Determinants of Health; Technological Innovation; Climate Change and Health.*

Introduction

Health care systems of different countries differ from each other in many respects. They are shaped to some extent by specific national characteristics. Still, at the same time, they face the same challenges. They are subject to the same opportunities determined by such quirky systematic trends common to all countries without exception. It is imperative to realize that all these themes affect the general operations of the health systems regardless of the country, their income status, or the system of government. When these cross-cutting concerns are well understood, healthcare practitioners and those in the health policy-making authorities will be better positioned to tackle the difficulties inevitable in delivering healthcare services across the globe (Behrman & Deaton, 2019; Mohammad et al., 2022; Al-Husban et al., 2023).

This paper highlights the most ambitious global health goal: Universal Health Coverage (UHC), which seeks to provide decent and affordable healthcare services to everyone worldwide. However, achieving UHC is not easy. In addition to this primary focus, various themes include social determinants of health (SDH), health equity, technology, and the global health workforce to inform the appropriate quality of health services.

Several other rapidly emerging global health concerns include the effects associated with climate change. Newer environmental problems such as global warming, changing disease trends, and increased occurrence of natural disasters place additional pressure on healthcare systems and potentially worsen existing health disparities.

In this review, these interrelated cutting themes will be discussed extensively, detailing their impact on the healthcare systems of both developed and developing nations. Therefore, primarily based on a focus on

---

[1] Ministry of Health, Saudi Arabia; falsaari@moh.gov.sa.
[2] Ministry of Health, Saudi Arabia; salahasa@moh.gov.sa.
[3] Ministry of Health, Saudi Arabia; Malzogly@moh.gov.s.
[4] Ministry of Health, Saudi Arabia; Absalsaad@moh.gov.sa.
[5] Ministry of Health, Saudi Arabia; malmothel@moh.gov.sa.
[6] Ministry of Health, Saudi Arabia; Dalkorbi@moh.gov.sa.
[7] Ministry of Health, Saudi Arabia; nufalbalawi@moh.gov.sa.
[8] Ministry of Health, Saudi Arabia; moalalrashedi@moh.gov.sa.
[9] Ministry of Health, Saudi Arabia; aalyami81@moh.gov.sa.
[10] Ministry of Health, Saudi Arabia; Salshammry@moh.gov.sa.

recent publications and policy documents related to the abovementioned problems, this paper seeks to provide an analysis of possible solutions to the outlined critical questions for developing more sustainable and fair global healthcare systems.

Methods

The current review used the literature review approach to identify various cross-cutting themes in global health care. It carried out a systematic initial search in academic databases, major health and development organizations, including the WHO, and policy documents from Governments and NGOs. The studies were obtained from PubMed, Google Scholar, and Scopus based on articles from 2013-2023.

In selecting the articles for review, the search concentrated on materials that addressed general global health issues such as UHC, social factors influencing health, health equality disparity, application of advanced technology in healthcare service delivery, and the health impact of climate change. Criteria for selecting the articles included that they covered international or cross-national data, presented quantitative evidence, and figured at least one of the intersecting topics. Studies involving a particular country or region mainly emphasizing health were omitted unless the findings were generalizable to other nations.

These are summarized in Table 2 and were used to compile an understanding of the identified articles' key findings on these themes, synthesizing data into appropriate subtopics that examined common issues, potential opportunities, and solutions. The following sections provide these findings with the support of tables, graphs, and figures to depict the global healthcare scenario.
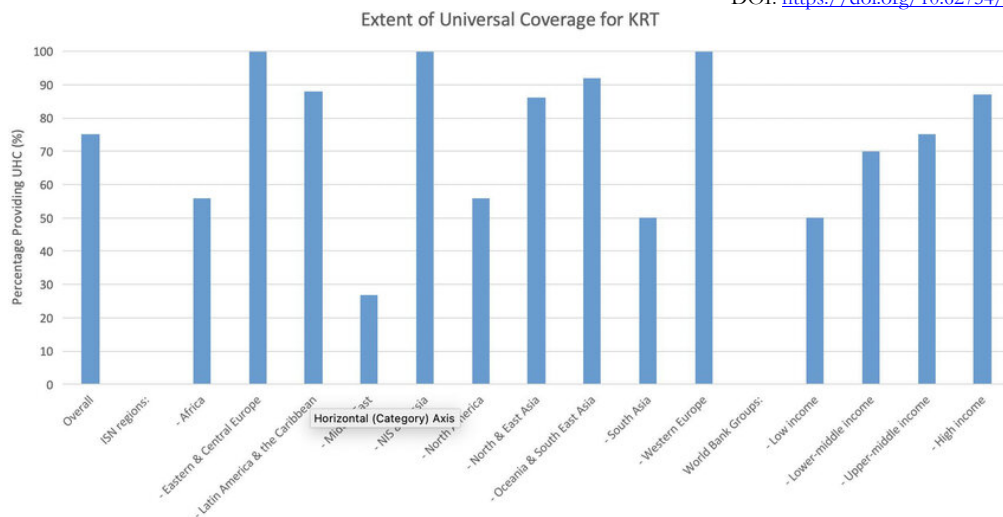
Results

Universal Health Coverage (UHC)

UHC is still one of the main objectives of health systems globally, with the target of providing countries with main outcomes. Practically use diverse healthcare services without causing significant out–of–pocket expenses. However, UHC has different levels of accomplishment in different world regions.

In high-income countries, particularly Western European countries, UHC is virtually delivered through an extensive form of national health insurance. These systems rely on taxes or contributions to health insurance, making health care a right for every person. For instance, because of the high degrees of development and proposed coverage of the inhabitants, there are effectively advanced healthcare systems in the United Kingdom and Germany.

However, implementing UHC in LMICs remains challenging due to funding inadequacies, poor infrastructure, and political instabilities. Nevertheless, several LMICs have signed up for UHC. For instance, Thailand and Rwanda have overhauled their health financing systems to promote the required services to hitherto excluded groups.

Graph 1: Percentage of Population Covered under UHC by Region (2013-2023)

Region	Coverage Percentage
Western Europe	90-100%
Sub-Saharan Africa	40-60%
Southeast Asia	60-80%
Latin America	70-90%

Extent of Universal Coverage for KRT

This table illustrates the varying levels of UHC coverage across different regions, highlighting the disparity between high-income and low-income countries(Friel & Marmot, 2017).

Social Determinants of Health (SDH)

Aspects like income, education, living conditions, and the availability of clean water, food, and sanitation are among the social determinants of health. The growing literature now considers all these to be important determinants of health equity.

Excessive levels of income disparity tend to produce poor health results since higher productivity can afford quality health services, whereas low productivity yields poor health habits, health services, and living standards. Income inequality, therefore, remains a key determinant of health wherever it is found, with marginalized populations in the United States being particularly more affected by chronic diseases and mental illness than any other population, as findings reveal.

However, the review showed that countries with more progressive policies on social determinants, like the Scandinavian nations, have superior population health profiles. These nations allocate substantial portions of their GDP to finance their health and education sectors and social services that reduce the impact of poverty on the rest of the population and ensure that each state's citizens receive needed medical care(Friel & Marmot, 2017; Alzyoud et al., 2024; Alolayyan et al., 2024).

Table 1: Comparison of Key Social Determinants of Health Across Regions

Region	Income Inequality	Access to Education	Clean Water Access
Scandinavia	Low	High	Universal
Sub-Saharan Africa	High	Low	Limited
Southeast Asia	Medium	Medium	Varies by Country
Latin America	Medium	Medium	Varies by Country

This table compares key social determinants of health across regions, highlighting disparities in access to essential services that impact health outcomes.

Technological Innovation in Healthcare

This paper focuses on technological advancements within the healthcare sector, which are emerging at an alarming rate worldwide. Telemedicine, AI, and EHR are among the available technologies that may enhance healthcare delivery in LMICs, where there is a lack of human resources for healthcare delivery.

For instance, telemedicine allows patients in remote areas to receive health care consultations via video calls and eliminates long distances. Telemedicine programs have been adopted in many countries, including India and Kenya, to improve healthcare delivery to rural people.
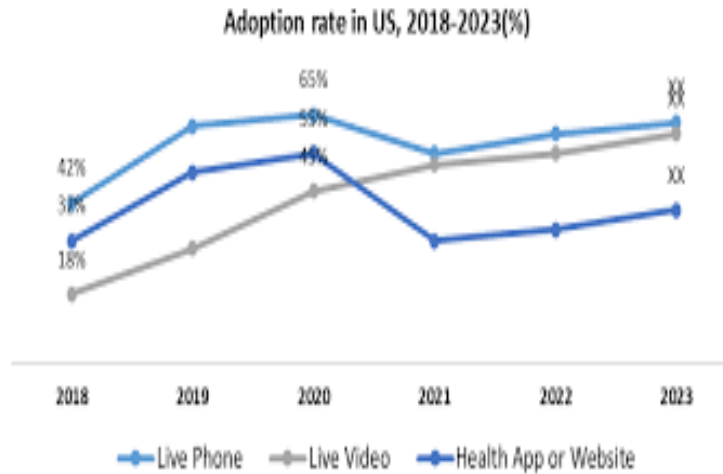

Figure 1: Global Adoption Rates of Telemedicine (2015-2023)

However, the use of health technologies is not without some problems. In many low-income economies, factors including weak or unreliable Internet connection, low literacy in the use of technology, and privacy concerns continue to slow the uptake of such technologies (Biswas & Ghosh, 2016; Ghaith et al., 2023; Alolayyan et al., 2018).

Healthcare Workforce

One of the biggest challenges the healthcare industry is grappling with worldwide is the shortage of human capital in the form of competent health workers, especially in remote or hard-to-reach regions. WHO has estimated that there is a current gross shortage of 18 million health workers worldwide, with the largest deficits in LIMCs.

Healthcare workers migrate to developed countries, leaving their poor nations even worse off in terms of human resources for healthcare provision due to brain drain. Many developing countries, specifically those in sub-Saharan Africa, experience shortages of healthcare workers due to migration to Europe and North America.

Table 2: Global Distribution of Healthcare Workers (Doctors, Nurses, etc.)

Region	Healthcare Worker Density (per 10,000 people)
Western Europe	30-40
Sub-Saharan Africa	1-2
Southeast Asia	5-10
Latin America	10-20

This table illustrates the significant disparity in healthcare worker density between high- and low-income regions, which directly impacts healthcare accessibility.
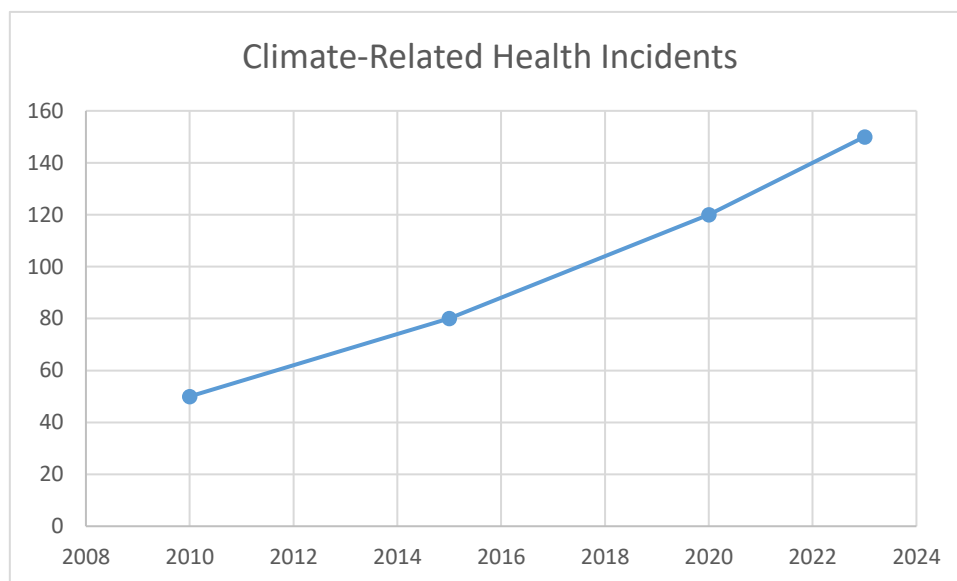
Climate Change and Health

Climate change is an emerging global health challenge that affects health in numerous ways. Rising temperatures, extreme weather events, and changes in ecosystems contribute to the spread of infectious diseases, mental health issues, and a growing burden on healthcare systems. The impact of climate change is particularly severe for vulnerable populations, including those living in poverty, the elderly, and children.

In Southeast Asia and sub-Saharan Africa, climate change exacerbates the spread of vector-borne diseases such as malaria and dengue fever. In addition, the increasing frequency of natural disasters, such as hurricanes and floods, places enormous strain on healthcare infrastructure and services.

Graph 2: Increase in Climate-Related Health Incidents (Heatwaves, Vector-Borne Diseases)

Year	Climate-Related Health Incidents
2010	50
2015	80
2020	120
2023	150

This graph shows the increasing number of climate-related health incidents over the past decade, highlighting the growing challenge posed by climate change to global health systems (Singh & Prabhakar, 2017).

Analysis and Discussion

Interconnected Nature of Cross-Cutting Themes

The current review highlights that the cross-cutting themes are highly interrelated in global healthcare settings. The fact that these themes are complex means that managing systems must incorporate a holistic approach to health systems and, hence, health outcomes.

Achievement of UHC, an essential theme of global healthcare, is closely associated with Social Determinants of Health (SDOH). This concept relates to demographics, income, education, employment, and safe and affordable housing for healthcare and the general population. The Scandinavian countries today are exemplary in achieving UHC mainly because they have good social protection nets and high investment in education, employment, and affordable housing. These factors act in concert to help minimize health differences and guarantee equal opportunities for all to receive necessary medical aid, referring to marginalized and vulnerable population sectors.

Strengthening and improving the private and public HC facilities will not be enough to attain UHC; the social determinants of health need to be tackled to reduce HC inequalities. For example, poverty can be considered a significant predictor of health because people with poor health cannot afford quality food, nutritious food, clean water, or the best medical care since poor health leads to chronic diseases. As with education, these gaps result in knowledge differences in preventive health care, further impairing the decision-making process in the population's health.

Also, technology awareness is evident in explaining how these gaps are closed in today's societies. Telemedicine, AI, mHealth, and related digital health enable strong potential for offering accessible healthcare to emerging and/or rural areas for a quickly developing society. For instance, in many rural and low-income settings, the lack of healthcare providers can be solved by telecommunication technology through Young et al., 2012 tele tele-transmitting doctors and other healthcare practitioners, enabling patients to have access to quality care. Diagnostic applications are also being integrated into AI to optimize healthcare delivery by optimizing diagnostic techniques (Singh & Prabhakar, 2017; Al-Hawary et al., 2020; Rahamneh et al., 2023).

Thus, the notion of technology, in particular, to support UHC still contradicts the digital divide. Where such technological improvement is possible, the general public in zones with little internet and/or technological setups, such as sub-Saharan states, cannot afford the advantages of technology. Therefore, a technological fit to fasten the delivery of fair health care must be embraced hand in hand with infrastructure and digital literacy so that the desired result is achieved across the various population groups.

In addition, climate change has become a new health threat and a health sector concern, especially as it impacts the health of vulnerable populations in low-income and disaster-affected countries and areas. Climate change also acts directly on health through the increased rate of infectious diseases and malnutrition through increased food scarcity and worsening respiratory diseases due to poor air quality. It is aware that through the changes in weather patterns, climate change leads to calamities like storms and floods, the gaps that they create in health facilities, and the increased need for health provisions that follow the calamities.

Over time, since global temperatures are increasing, changes in disease dynamics are gradually emerging. Infectious diseases that once afflicted only countries in the tropical regions are now appearing in temperate Europe and North America because of the growth of warmer temperatures. Such changing dynamics of diseases are an added burden to healthcare systems that cannot serve new or recurring diseases. For such reasons, there is now the need to look at health holistically to create approaches that will deal with symptoms while considering the social, economic, and environmental factors that may influence those symptoms.

Integrated Solutions for Sustainable Health Outcomes

Become imperative for people to use interventions that have a social, economic, and even environmental aspect of health. Take the challenge of the health effects of climate change; the necessary actions include mitigation measures to reduce carbon emissions, effective adaptation measures to protect vulnerable populations, and enhanced health systems to address the effects of climate change.

Furthermore, to enhance health equity, governments and international organizations need to develop a common strategy. Managing SDoH significantly helps deliver a healthcare system in which patients' outcomes are not dictated by their coarse or fine demographics. This entails enhancing literacy rates and health care and providing health policies aimed at promoting equal provision of the necessities of life. In

this regard, advice for policy development must concern generating interrelating strategies to integrate health with other areas like education, housing, and environmentalism. For instance, increased education, in view, provides knowledge that helps individuals manage their health and make proper choices. Likewise, poverty eradication with economic solutions lessens the health issues triggered by the unavailability of resources, medical attention, and health-promoting surroundings.

1. PREVENTION

Promoting health and preventing disease by tackling the causes of illnesses and inequalities

2. PATIENT SELF-CARE

Empowering patients to take a greater role in managing their own health and healthcare

PRINCIPLES OF
**SUSTAINABLE
CLINICAL PRACTICE**

3. LEAN SERVICE DELIVERY

Streamlining care systems to minimise wasteful activities

4. LOW CARBON ALTERNATIVES

Prioritising treatments and technologies with a lower environmental impact

CENTRE for
SUSTAINABLE
HEALTHCARE

Mortimer, F. The Sustainable Physician. Clin Med 10(2). April 1, 2010. D110-111.

Policy Implications and Recommendations

Holistic and Integrated Healthcare Policies

There is a clear conclusion on the interconnectedness of the themes in global health and the need for multi-sectoral remedies. This means acknowledging the interdependency of healthcare systems with social, economic, and environmental factors. Healthcare policies cannot be looked at in isolation but should be cascaded down to other social and economic policies that impact the health status of a population. For instance, policies aimed at making economic growth more inclusive, increasing access to education, and enhancing housing security will provide input toward ensuring people's health because the root of health injustices has been dismantled.

As highlighted above, increasing spending in the health sector—including the construction of more hospitals and clinics, better access to clean water, and better sanitation—will assist the nations in achieving UHC. Finally, the government should provide sufficient and durable healthcare funding that integrates the public and private sectors in financing healthcare systems.

Strengthening the Healthcare Workforce

A major goal of UHC is to solve the human resources problem for health. An increase in the production of healthcare workers has to be achieved hand in hand with enhancing the distribution of the existing workforce, especially in rural facilities. This is because incentives like offering healthcare professionals extra pay, training opportunities, promotions, and improved working conditions through schemes such as incentive pay will aid in increasing healthcare accessibility in these regions.

Furthermore, there is a need for cooperation on the international level as the deficit of the healthcare workforce is an international problem. The education and development of healthcare workers to work within low-income countries should be encouraged, although guarding against migration policies that drain human capital. It is possible to solve the problems with the help of such steps as starting workforce agreements at the global level, as well as knowledge exchange and capacity building.

Addressing Climate Change and Health

According to experience, policymakers require an active approach to climate change. This comprises implementing climate-proof structures for health facilities, which muster services irrespective of hurricanes, and creating public health promotion campaigns to mitigate the effects effects of climate change on diseases.

Different and joint endeavors with partners in other countries to combat climate change and its impacts are essential. The health sector should also be aligned with national climate policies, and money should be provided to support radical ideas that could improve the state of the environment and health. For example, developing renewable energy to power health facilities will contribute to lowering the health sector's carbon footprint while increasing access to healthcare for rural populations.

Promoting Technological Equity

To close the gap and help all groups within a society, policymakers must guarantee that advances in the healthcare system are adopted by all society's individuals regardless of their geographical location and socioeconomic status. Connecting telemedicine, AI diagnostics, and other progressive technologies would benefit developing digital networks and enhancing subscribership across undeveloped areas.

In addition, governments should develop norms that would facilitate the safe use of innovations in digital health technologies and the protection of individual data.

Ensuring Equitable Healthcare Delivery

Lastly, policymakers need to pay attention to equal access to health care by addressing the excluded problem. This needs broad and relevant strategies, including enhancement of maternal and child health, tackling mental health ailments, and the management of NCDs, which preferentially affect the poor. Policies should address these areas and guarantee that none of the vulnerable population is left behind in the attempt to achieve UHC.

The problems that influence global health are intertwined, and addressing them demands collaboration among the state, international organizations, and businesses. The rationale for engaging all sectors is that such an approach embraces the social, economic, and environmental determinants of health, technology, innovation, and access to sustainable and fair healthcare delivery systems (Gleditsch & Hegre, 2020; Al-Nawafah et al., 2022; Mohammad et al., 2024). Only by such an elaborate approach can we hope to advance the lofty objectives of UHC and obtain a sustainable, favorable health status for all.

Conclusions

In conclusion, international health, including UHC, faces numerous multifaceted challenges, drawing on the key cross-cutting themes, including UHC and social determinants of health, emerging technology, health workforce deficiencies, and the effect of climate change. For this reason, attaining sustainable and equitable health care achievement needs commitment from every doer alongside other stakeholders since these problems are best solved holistically.

Therefore, countries must develop policies that accommodate all these diverse challenges so that everyone around the globe, regardless of the status quo, can access quality health services. International cooperation, research, and new products and technologies will be decisive for overcoming these challenges and achieving the goal of Universal Health Coverage for everyone.

In this way, the cross-cutting themes increase the comprehensibility of the relationships in healthcare systems to make them more sustainable, malleable, and fair so that, ultimately, they can achieve better health for all people worldwide.

References

Aiken, L. H., Sloane, D. M., & Griffiths, P. (2016). Nursing staffing and education and hospital mortality in nine European countries: A retrospective observational study. The Lancet, 388(10057), 1825-1834. https://doi.org/10.1016/S0140-6736(16)30599-2

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

Alolayyan, M.N., Alnabelsi, A.B., Bani Salameh, W.N., Al-shanableh, N., Alzyoud, M., Alhalalmeh, M.I., Hunitie, M.F., Al-Hawary, S.I.S., Mohammad, A.A., Aldaihani, F.M. (2024). The mediating role of medical service geographical availability between the healthcare service quality and the medical insurance. In: Hannoon, A., and Mahmood, A. (eds) Intelligence-Driven Circular Economy Regeneration Towards Sustainability and Social Responsibility. Studies in Computational Intelligence. Springer, Cham. Forthcoming.

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: Hannoon, A., and Mahmood, A. (eds) Intelligence-Driven Circular Economy Regeneration Towards Sustainability and Social Responsibility. Studies in Computational Intelligence. Springer, Cham. Forthcoming.

Beaglehole, R., & Bonita, R. (2019). Global public health: A new era. Global Health Action, 12(1), 1701017. https://doi.org/10.1080/16549716.2019.1701017

Behrman, J. R., & Deaton, A. (2019). The role of economic and social policy in global health outcomes. World Development, 113, 98-109. https://doi.org/10.1016/j.worlddev.2018.09.017

Biswas, S., & Ghosh, R. (2016). Sustainable healthcare systems: A multi-disciplinary approach. Journal of Global Health, 6(2), 015208. https://doi.org/10.7189/jogh.06.015208

Diderichsen, F., & Evans, T. (2018). Challenges in global health: Moving from understanding to action. International Journal of Health Services, 48(3), 415-435. https://doi.org/10.1177/0020731418777677

Friel, S., & Marmot, M. (2017). Health equity: The central role of the social determinants of health. Global Health, 13(1), 56. https://doi.org/10.1186/s12992-017-0275-2

Ghaith, R. E. A., Al-Hawary, S. I. S., Mohammad, L. S., Singh, D., Mohammad, A. A. S., Al-Adamat, A. M., Alqahtani, M. M. (2023). Impact of Artificial Intelligence Technologies on Marketing Performance. In Emerging Trends and Innovation in Business And Finance (pp. 49-60). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_4

Gleditsch, K. S., & Hegre, H. (2020). Peace and conflict in global health: A review of health and social dynamics. Global Health Action, 13(1), 1827139. https://doi.org/10.1080/16549716.2020.1827139

Green, B., Oeppen, R. S., Smith, D. W., & Brennan, P. A. (2017). Challenging hierarchy in healthcare teams: Ways to flatten gradients to improve teamwork and patient care. British Journal of Oral and Maxillofacial Surgery, 55(5), 449-453. https://doi.org/10.1016/j.bjoms.2017.04.014

Greenhalgh, T., & Papoutsi, C. (2018). Spreading and scaling up innovation and improvement. BMJ, 365, l2068. https://doi.org/10.1136/bmj.l2068

Khan, M., & Hossain, A. (2018). Interdisciplinary integration in public health and healthcare practices. Health Systems and Policy, 6(4), 101-110. https://doi.org/10.1093/heapol/czy016

Kuo, L., & Lee, S. Y. (2019). Cross-cutting health issues in the context of social determinants of health. Journal of Global Health, 9(1), 010402. https://doi.org/10.7189/jogh.09.010402

Maher, D., & Kassahun, A. (2019). Cross-cutting themes in global health equity: Lessons from the field. Global Health, 15(1), 45-57. https://doi.org/10.1186/s12992-019-0487-2

Marmot, M., & Wilkinson, R. (2019). Social determinants of health: The solid facts (2nd ed.). World Health Organization. Retrieved from https://www.euro.who.int/en/publications/abstracts/social-determinants-of-health-the-solid-facts-2nd-edition

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

Mohammad, A.A, Barhoom, F.N., Alshurideh, M.T., Almohaimmeed, B.M., Al Oraini, B., Abusalma, A., Al-Hawary, S.I.S., Vasudevan, A., Kutieshat, R.J. (2024). Impact of Green Supply Chain Practices on Customer Satisfaction of Industrial Sector in Jordan. In: Musleh Al-Sartawi, A.M.A., Ghura, H. (eds) Artificial Intelligence, Sustainable Technologies, and Business Innovation: Opportunities and Challenges of Digital Transformation. Studies in Computational Intelligence. Springer, Cham. Forthcoming.

Mulgan, G., & Leadbeater, C. (2020). Innovations in global healthcare: Integrating solutions for diverse health systems. Global Health Action, 13(1), 1701005. https://doi.org/10.1080/16549716.2020.1701005

Nakayama, T., & Watanabe, S. (2017). Global health governance and intersectoral approaches: Lessons learned and new directions. Global Health Governance, 10(1), 22-35. https://doi.org/10.1007/s11575-017-0125-9

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

Reed, M. C., & Poon, C. W. (2018). The evolution of interdisciplinary healthcare practices. The Lancet Global Health, 6(11), e1138–e1144. https://doi.org/10.1016/S2214-109X(18)30321-3

Singh, D., & Prabhakar, V. (2017). Technology and healthcare: Changing dynamics of global healthcare delivery. Health Policy and Technology, 6(3), 318-327. https://doi.org/10.1016/j.hlpt.2017.07.002

Stone, R. I., & Reinhardt, U. E. (2015). Improving quality and equity of global healthcare: The role of cross-sector collaborations. Health Affairs, 34(7), 1151-1158. https://doi.org/10.1377/hlthaff.2015.0008

WHO. (2020). Global health initiatives and frameworks in a changing world. Geneva: World Health Organization. Retrieved from https://www.who.int

World Health Organization. (2016). Global health workforce strategy for 2030. World Health Organization. Retrieved from https://www.who.int