

Chapter 13

Implications of Digitalization on Public Health Sector Across Countries

Ajay Kumar Singh

 <https://orcid.org/0000-0003-0429-0925>

Department of Humanities and Social Sciences, Graphic Era University (Deemed), Dehradun, India

S. Srinivasan

 <https://orcid.org/0009-0002-0179-9849>

Department of Humanities and Social Sciences, Graphic Era University (Deemed), Dehradun, India

Bhim Jyoti

Department of Seed Science and Technology, Veer Chandra Singh Garhwali Uttarakhand University of Horticulture and Forestry, India

ABSTRACT

This study assesses the influence of digitalization on the public health sector across 52 countries. For the above-mentioned investigation, it creates a digital infrastructure index (DII) which is used to observe the progress of these countries in digitalization. Public health index (PHI) is also created for selected countries during 2010–2022. Further, estimated values of the PHI are considered to explore the relative progress of these countries in public health. The Karl-Pearson correlation coefficient analysis is adopted to observe the association of digitalization and public health with other macro indicators. It also examines the association of digitalization with public health as including specific control variables in regression analysis. It found

DOI: 10.4018/979-8-3693-9641-4.ch013

a positive causal association among the mentioned indexes. The global countries cannot improve their health sector without adopting digitalization. The empirical results are helpful to improve public health using digitalization, digitalization as improving public health.

1. INTRODUCTION

The World Health Organization (WHO) report acknowledges the agenda to provide ICT and global interconnectedness by the 2030s. The WHO also develops a global technology platform to enhance digital public health efforts and digital health investment worldwide (Wang & Bloch, 2023). The agenda has a great potential to accelerate human progress in multiple ways. It serves as a bridge between digital devices and the development of knowledge for societies. Digitalization has spread widely and transformed healthcare delivery worldwide. Digitalization has become a significant supporter in human life (Văduva et al., 2023). It is providing multiple benefits for increasing human development (Sirait et al., 2023). The United Nations Development Programme (UNDP) also set 17 different goals that are expected to be achieved by global countries by the 2030s. Zero hunger, no poverty, environmental sustainability and technological development are key goals of SDGs (Singh et al., 2024c). With regards to the above-mentioned perspective, most studies emphasized that digitalization may be helpful for global countries to achieve SDGs including public health and technological development (Wang & Xu, 2023; Erku et al., 2023). Digitalization and digital technology are crucial for increasing economic, social, environmental, technological and financial development world-wide (Kurniawan et al., 2022; Jyoti & Singh, 2023). Digital technologies are also used for improving public health, and enhancing the good health and human well-being (Kelly & Kamil-Thomas, 2020; Storeng et al., 2021).

SDGs has an agenda to provide the public health security of all by the 2030s. However, there is reported a high diversity in progress of public health and digitalization promoting indicators across countries. For instance, the developing countries count a large number of malnutrition children and women, hunger, and food insecure people as compared to developed countries. Moreover, there is also a high infant mortality rate, deaths from TB, and maternal death due to lack of proper health facilities and low awareness of the people towards new diseases in the developing countries. Thereupon, life expectancy rate and fertility rate are also low in most countries. Furthermore, the developing countries have poor health infrastructure and medical facilities, and ineffective policy mechanisms in the public health sector. Therefore, many countries could not provide the better public health infrastructure to increase the health of people. Most people have low economic accessibility to

34 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/implications-of-digitalization-on-public-health-sector-across-countries/362462

Related Content

Exploring Holistic Managerial Thinking to Better Manage Healthcare Cybersecurity

Darrell Norman Burrell, Amalisha S. Sabie-Aridi, Anton Shufutinsky, Jorja B. Wright, Calvin Noblesand Maurice Dawson (2022). *International Journal of Health Systems and Translational Medicine* (pp. 1-13).

www.irma-international.org/article/exploring-holistic-managerial-thinking-to-better-manage-healthcare-cybersecurity/300337

GPU-Based Level Set Method for MRI Brain Tumor Segmentation Using Modified Probabilistic Clustering

Ram Kumar, Sweta Rani, Abahan Sarkarand Fazal Ahmed Talukdar (2017). *Medical Imaging: Concepts, Methodologies, Tools, and Applications* (pp. 1053-1078).

www.irma-international.org/chapter/gpu-based-level-set-method-for-mri-brain-tumor-segmentation-using-modified-probabilistic-clustering/159752

Diagnosis of Angina Using Neuro-Fuzzy Technique

S. Vijayachitra (2017). *Medical Imaging: Concepts, Methodologies, Tools, and Applications* (pp. 1199-1237).

www.irma-international.org/chapter/diagnosis-of-angina-using-neuro-fuzzy-technique/159759

Coordination Dynamics in Technology Adoption: Lessons From an Evolutionary Game Theoretical Analysis

Ndidi Bianca Ogboand The Anh Han (2024). *Multisector Insights in Healthcare, Social Sciences, Society, and Technology* (pp. 295-326).

www.irma-international.org/chapter/coordination-dynamics-in-technology-adoption/340579

Identification of Preoperative Clinical Factors Associated With Perioperative Blood Transfusions: An Artificial Neural Network Approach

Steven Walczakand Vic Velanovich (2021). *International Journal of Health Systems and Translational Medicine* (pp. 62-75).

www.irma-international.org/article/identification-of-preoperative-clinical-factors-associated-with-perioperative-blood-transfusions/270954