



Reflections on the Social Determinants of the COVID-19 Vaccination Programme in Zimbabwe

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Abstract

Zimbabwe has not been spared by the coronavirus disease COVID-19 which has wreaked havoc throughout the world. The country is currently grappling with the pandemic against a background of multiple complex socio-economic conditions. Unfortunately, COVID-19 has escalated prevalent human rights concerns and challenges, including health disparities, poverty, child sexual abuse, access to education, and freedom of speech. Although vaccines are an important tool for reducing the incidence of life-threatening diseases, social determinants of health contribute to vaccine hesitancy. This paper is based on scoping literature review of various relevant materials on the social determinants of health that are inhibiting Zimbabwe's COVID-19 vaccination programme. This paper aims to contribute to the ongoing discourses on COVID-19. Four main themes are highlighted as social determinants of COVID-19 vaccination: (i) vaccination priority groups; (ii) vaccination hesitancy due to myths; (iii) social exclusion; and (iv) corruption. Findings are discussed in light of the implications to the right to health and other related rights. We recommend that governments of developing countries and stakeholders intensify myth-busting campaigns if vaccination programmes are to gain currency. We further call for the inclusion of priority groups such as persons with disabilities and the elderly on the vaccination priority list.

Keywords Health rights · COVID-19 · Social determinants of health · Vaccination · Zimbabwe

Introduction

This article explores lessons from the Zimbabwean COVID-19 vaccination programme from a health rights perspective. While efforts to comprehend COVID-19 have been dominated by medical perspectives, Gabel and Mapp (2020) recognize that improving wellbeing and achieving health equity requires broader approaches that address social, economic, and environmental factors that influence health, the social determinants of health. This paper discusses four factors that influenced Zimbabwe's vaccination efforts towards improving wellbeing and achieving health

rights and equity. Zimbabwe is one of the resource-constrained countries to have started an inoculation drive. Other countries may consider the four social determinants of health discussed herein, to in future realize successful vaccination programmes and the attainment of the right to health and other rights. Vaccinations provide an option out of pandemics (Shekhar et al., 2021) and the realization of peoples' rights. The social determinants of health discussed herein are vaccination priority groups, vaccination hesitancy, social exclusion, and corruption. The paper links these social determinants to successful vaccination programmes and the attainment of health and other related rights. Tackling these inhibitors to successful vaccination programme unlocks the right to health and other rights such as the freedom to choose who one associates with, to live where one chooses, to work where one wants, to freely move about, and to feel respected.

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Overview

The COVID-19 pandemic threatens human rights, most prominently the right to life and the right to health (Spadaro, 2020). COVID-19 is caused by severe acute respiratory syndrome

coronavirus (SARS-CoV-2), which was first identified in Wuhan City, Hubei Province, China, in December 2019 (Dzinamarira et al., 2021a, b; Makurumidze, 2020). The COVID-19 pandemic is not only a health crisis but has wide-reaching social, economic, and health effects in countries that include Zimbabwe (Dandara et al., 2021; Mackworth-Young et al., 2021; Springer, 2020). The World Health Organization (WHO, 2021a) reports 305,914,601 cumulative global cases, Zimbabwe having 222,291 cumulative cases, 5160 deaths and counting as of 11 January 2022 (WHO, 2021b). In Zimbabwe, COVID-19 infections began against a background of deteriorating health infrastructure (Dandara et al., 2021; Letzing, 2020). In addition, the global and national COVID-19 responses have presented unique and rapidly shifting challenges to the promotion and protection of health and other human rights around the world (WHO, 2021b).

Globally, various mitigation strategies were put in place, including wearing of masks, observing physical distancing, washing or sanitizing hands, complete or partial lockdowns, travel bans, mass gathering restrictions, and staying at home (Haider et al., 2020; Kim et al., 2020; Kuiper et al., 2020). Vaccination remains one of the public health strategies to contain the pandemic (Dzinamarira et al., 2021b; Yamey et al., 2020). According to WHO (2021a), as of 11 January 2022, about 3.9 billion people were fully vaccinated. Zimbabwe is one of the five countries that rolled out COVID-19 vaccination programmes, aiming to inoculate an estimated 10 million of its 16 million citizens to achieve herd immunity (Dzinamarira et al., 2021), with at least 3,129,823 persons having received two doses.

While several wealthy nations had launched booster drives to give third doses of COVID-19 vaccines, the virus was able to mutate (British Broadcasting Corporation, 2021). Resultantly, there was a global contest in the procurement of the COVID-19 vaccines, while countries in the Global South have not been able to secure supplies as compared to the richer countries (Bubar et al., 2021; Dzinamarira et al., 2021b). This led countries like Zimbabwe to prioritize vaccines for selected high-risk groups which include those above 60 years, frontline workers, and people with chronic diseases (Dzinamarira et al., 2021a; Mukandavire et al., 2020). This paper is anchored on three objectives: (i) exploration of the Zimbabwean COVID-19 vaccination programme through literature scoping; (ii) appreciation of the emerging challenges associated with vaccination roll-out; and (iii) scoping literature for any possible lessons gleaned from the current and on-going vaccination programme. We find this worth pursuing as it contributes to the growth of COVID-19 literature, future vaccination programmes, and the march towards the attainment of health rights and other rights that have been curtailed by COVID-19 and corresponding future interventions introduced by governments throughout the world.

Methodology

Various relevant materials available to the authors on the topic under discussion were reviewed. This involved searching for literature on Google Scholar, reviewing them, and ultimately identifying social determinants themes that are discussed in the subsequent section. Africa Social Work Network (2021) describes scoping literature review as the inclusion of literature already cited in books, starting with a research question, followed by gathering available literature, reading the literature and picking themes, writing key themes and making conclusions, then reporting. Guided by this description, we scoped literature based on the following research question: What are the social determinants of the COVID-19 vaccination programme in Zimbabwe? Twenty journal articles, three books, and five online sources such as the WHO website were reviewed. From the literature, four COVID-19 vaccination social determinant hesitancy themes were identified: vaccination priority groups, vaccination hesitancy due to myths, social exclusion, and corruption. These are discussed in turn.

Vaccination of Priority Groups

Thahn Le et al. (2020) note that COVID-19 vaccines were developed in an unprecedented shorter period given the urgency to save lives. In the USA, Europe, Asia, and some parts of Africa, vaccination started in early 2021. However, shortages of vaccines forced governments to take a stringent approach in managing COVID-19 vaccination programmes. The second dose of mRNA vaccines was adopted targeting risky populations as opposed to universal targeting (Berkane et al., 2022; Plotkin & Halsey, 2021). The aim is to block transmission and reduce fatality in the shortest possible period to achieve herd immunity. Herd immunity is defined as ‘...the indirect protection from infection conferred to susceptible individuals when a sufficiently large proportion of immune individuals exist in a population’ (Randolph & Barreiro, 2020, p.737). For Fontanet and Cauchemez (2020), herd immunity occurs when a proportion of a population attains immunity through overcoming natural infection. When attained, the herd immunity approach protects vulnerable population groups such as individuals with immune deficiencies due to underlying medical or debilitating conditions (Fontanet & Cauchemez, 2020). Randolph and Barreiro (2020, p.737) explain the concept of herd immunity threshold as, ‘the point at which the proportion of susceptible individuals in a population falls below the threshold needed for transmission’. Herd immunity must not be treated as an end goal hence the need to ensure that sound strategies are put in place to ensure that

those who are willing to be vaccinated are vaccinated and herd immunity is then achieved in the process (Randolph & Barreiro, 2020).

Limited supplies of COVID-19 vaccines faced by Zimbabwe and other countries compelled countries to target certain population groups for vaccination. In India, population groups between 20 and 49 years were targeted to reduce new infections incidence whereas those above 60 years and those with comorbidities were targeted with the vaccines to curb fatalities (Bubar et al., 2021). In Zimbabwe, the initial doses of the COVID-19 vaccine were meant for risky populations which included frontline workers such as medical personnel, immigration personnel, customs duty officials, people with comorbidities, and those aged above 65 years (Dzinamarira, et al., 2021). The priority list was later expanded to include journalists, lecturers, and teachers among other sections of society whose work involves interacting with crowds. Given the Zimbabwean context of limited resources, we argue that Zimbabwe's vaccination programme was a carefully crafted prioritization-based vaccination plan. However, we argue that herd immunity must not be treated as the ultimate goal but a stop-gap measure enroute to universal inoculation of all people willing to be inoculated.

Vaccination Hesitancy

Although vaccines are an important tool for reducing the incidence of life-threatening diseases, myths and misconceptions that lead to vaccine hesitancy represent a serious threat to vaccine acceptance, global health, and the attainment of the right to health (Cottingham & Carroll, 2013; Dror et al., 2020; Kwok et al., 2021; Pluviano et al., 2019). Sallam (2021) notes that COVID-19 vaccine acceptance among the general public and health care workers appears to have a decisive role in the successful control of the pandemic. Vaccine hesitancy is a major barrier to vaccine uptake and the achievement of herd immunity, which is required to protect populations from viruses including COVID-19 (DeRoo et al., 2020; Sallam, 2021). Pluviano et al. (2019) recognize the role of misconceptions about the safety of vaccinates: lack of confidence in medical, public health, and government advice on vaccines. Hesitancy factors can be summarized as existence of cognitive, psychological, socio-demographic, and cultural factors (Sahoo et al., 2020; Sallam, 2021). Skepticism around COVID-19 vaccines was raised in Zimbabwe. Some worried COVID-19 vaccines cause health complications (Chingono, 2021). Others speculated that COVID-19 vaccines are 'whiteman's medicines' meant to wipe out the blacks (Chingono, 2021). These myths had the potential of derailing COVID-19 vaccination programmes and the realization of health and other human rights. Myths and vaccine skeptic narratives planted seeds of resistance against current and upcoming COVID-19

global vaccination programmes (Khan et al., 2020). Afolabi and Ilesanmi (2021) identify several ways to mitigate vaccine hesitancy. The involvement of community stakeholders such as traditional heads, chiefs, opinion group leaders, religious leaders, and community members helps reduce COVID-19 vaccination resistance. Integration of the COVID-19 vaccine into the existing healthcare services could have helped fight the hesitancy. Dror et al. (2020) suggest educational campaigns targeted towards populations at risk of vaccine hesitancy.

Social Exclusion

COVID-19 continued to affect the world through multiple biopsychosocial complexities that require the readjustment to the 'new normal' (Magamela et al., 2021; Mhango et al., 2020; WHO, 2021a). Adherence to COVID-19 preventative measures such as social distancing, wearing of face masks properly, the washing of hands, and the use of sanitizers was advanced to curb the further cumulative destruction trail induced by this medical, social, economic, psychological, and human rights disaster (Bwititi, 2020; United Nations Development Programme, 2020a, b; WHO, 2021b). However, robust, permanent, and sustainable interventions remained requisite. Vaccinations are one such pathway as a primary and tertiary mitigatory action (Centre for Disease Control and Prevention, 2021; Dzinamarira et al., 2021; Greenwood, 2014). As a primary mitigation action, vaccines help attain herd immunity: a point at which the proportion of susceptible individuals in a population falls below the threshold needed for transmission (Randolph & Barreiro, 2020). As a tertiary mitigatory action, vaccination of the global population offers hope to curb the spread of COVID-19 (Shekhar et al., 2021). Sections 22 and 83 of Zimbabwe's Constitution (2013) mandate recognition of the rights of persons with disabilities and in particular the right to be treated with respect and dignity, access to health, achievement of full potential, and access to buildings and amenities (Government of Zimbabwe, 2013). Despite the promising progression, marginalized groups such as persons with disabilities were subjected to both physical and technical exclusion in direct contravention of the provisions of the Zimbabwean Constitution.

Zimbabwe has adopted the National Roll-out and Deployment and Vaccination Plan (NDVP), a framework guiding the inoculation process in Zimbabwe based on targeted high-risk populations. Social exclusion has precepts. Mugumbate and Nyoni (2014, p. 5) conceptualize exclusion as a process by which 'individuals or entire communities of people are systematically blocked from rights, opportunities, and resources available to others'. Mtetwa and Nyikahadzo (2013, p. 33) also validate this claim arguing that social exclusion relates to marginalization or social rejection. Emphasis on 'process' is critical, as this paper finds the exclusion of people with disabilities (PWD) under the Zimbabwean COVID-19 vaccination programme as an ongoing concern that was built on previous

existent structural machinations that sustain this segregation. Hence, the exclusion of PWD under Zimbabwe's COVID-19 inoculation programmes was not divorced from existing exclusion discourses (Choruma, 2007). Rather, COVID-19 inoculation programmes should be embedded in a common narrative of the milieu of challenges this group faces (Choruma, 2007; Mtetwa & Nyikahadzoi, 2013). COVID-19 further worsened the plight of PWDs through the extension of physical and communication exclusion discussed below.

Physical Exclusion

According to the United Nations (UN) (2020a, b), COVID-19 vaccines should be affordable to all and accessible without discrimination even though there is uneven access among marginalized populations. This is also validated by Sustainable Development Goal Number 3 and the provisions of Sect. 22 of the Zimbabwean Constitution which calls for the State and all institutions and agencies of government at every level to recognize the rights of persons with physical or mental disabilities, in particular their right to be treated with respect and dignity. However, the initial approach by Zimbabwe was discriminatory due to the selection of 'perceived' at-risk population groups. Priority groups such as PWDs were omitted under the first and second phases. Despite the vulnerability of PWD, the 'at risk' tag was limited to health personnel, public servants, and the elderly, conspicuously omitting persons with disabilities. UN (2020a, b) also notes that due to structural inequalities and discrimination, infection rates for minority and vulnerable groups are high and often fatal due to lack of access to critical health services. This is essential in a country where the disability prevalence is at 9% and with a heavy rural dividend at 84.6% (Zimbabwe National Statistics Agency, 2017, p. xiii). Essentially, efforts should have been made to place supportive infrastructure and provisions that allow for physical access of the vaccine by PWDs such as the availability of transport and ease of access to vaccination venues. It can be argued therefore that the targeted approach adopted by Zimbabwe was mostly pro-biomedical and elitist because its first two phases targeted 'white collar' professionals further subjugating PWDs as charity projects by their omission in the initially targeted groups. Ahmed (2021, p.1) cautions that, as 'the roll-out of COVID-19 vaccines gains momentum, a dystopian society of the 'unvaccinated', a class of people denied affordable and equitable access to effective COVID-19 vaccines could likely emerge'. Therefore, there remains a need to address such barriers so that vaccination distribution plans ensure full accessibility for persons with disabilities.

Effective Communication

Effective communication, including risk communication, is a critical function of the Health Emergency and Disaster Risk

Management Framework, especially when relating to other sectors, government authorities, the media, and the public (WHO, 2020). The communication system left a lot to be desired concerning disability mainstreaming and inclusion of PWDs. While commendable efforts were done through electronic and print media in creating demand generation for vaccination as well as the use of Billboards, PWDs were not homogenous (Mtetwa & Nyikahadzoi, 2013) but, unique in their different impairments. The communication strategy adopted by Zimbabwe lacked sensitivity to persons with visual impairments as well as those with hearing impairments. There was limited COVID-19 information in Braille form for the visually impaired. Furthermore, access is not definite, due to issues of affordability of these communication mediums. As such, lack of information disadvantages these groups as it inhibits the ability to make informed choices on why one should get vaccinated and where they can access such services. Thus, this created a continuum of perpetuated exclusion emanating from defunct information feeds.

Corruption

Chilunjika (2021) describes corruption as a multi-dimensional scourge, perpetuated by different elements in society to enhance only those involved and subverting public trust, transparency, accountability, and inclusiveness. So endemic is the nature of corruption in Zimbabwe that the country ranks among the most corrupt countries in the world (Dudzai, 2021; Nyoni, 2017). For Goel et al. (2021), corrupt behavior pervades almost every aspect of economic interactions where there are favors to be obtained. Thus, the COVID-19 pandemic outbreak worsened corruption challenges for developing countries (Arkorful et al., 2022). It is not surprising that Farzanegan and Hofmann (2021) suggest that countries with a higher degree of public corruption, Zimbabwe included, faced possible destructive effects of public corruption on the successful vaccination against COVID-19. COVID-19 vaccination creates additional layers and opportunities for corruption (Goel et al., 2021). Corruption opportunities were presented in the COVID-19 vaccination tendering, contracting, manufacturing, and distribution chain. Farzanegan and Hofmann (2021) find the destructive role of corruption in the management of the COVID-19 crisis. The cancerous and persistent corrupt culture in Zimbabwe and other developing countries had catastrophic implications which may worsen the dire COVID-19 situation (Moyo, 2018). Maulani et al. (2020) corroborate the argument that corruption levels in the country worsened manifesting through misreporting of donations, awarding of procurement contracts of personal protective equipment (PPEs), and medicine without following the proper procurement channel. High-ranking officials have been accused of corruptly awarding procurement contracts for PPEs and medicine at an inflated price (Maulani et al., 2020). Corruption in a country

already high on the corruption index exacerbated existing health disparities, depriving traditionally oppressed groups access to health and health rights through deprivation of access to vaccines. In addition, the implications of corruption went beyond health rights, widening other human rights gaps.

Lessons and Recommendations from the Zimbabwean Vaccination Experience

The Zimbabwean COVID-19 context provides insight and lessons which add a voice to the calls to address the social determinants of COVID-19. Thus, COVID-19 had serious implications on the right to health, and other rights. This is a departure from the conventional focus of health as a medical field that focuses on testing and vaccination as a means to control the spread of COVID-19. Using the example of the four social determinants of health in general and COVID-19 in particular, the following recommendations for future vaccination programmes are made:

- Governments need to consider priority and high-risk groups such as frontline workers, the elderly, persons with disabilities, and persons with other chronic diseases threatening their lives in the vaccination programmes.
- Governments must scale up a campaign to bust myths and misconceptions currently circulating concerning vaccines to address vaccination hesitancy.
- Governments must that persons with disabilities are prioritized for vaccination before the programmes are accessible to the broader population. This will enhance their chances of getting vaccination as opposed to leaving them to compete with the rest of the population.
- Governments should consider employing information and computing technology to track essential materials such as PPEs and vaccine consumables to minimize corruption and leakages.
- Governments need to step up efforts to combat corruption as it is a threat to vaccination programmes as well as attainment of the right to health in general.

Conclusion

This paper has discussed four social determinants of health themes associated with the COVID-19 vaccination programme in Zimbabwe. It is concluded that myths and misconceptions about COVID-19 vaccines led to vaccination hesitancy. In a bid to maximize lean resources and scarcity of vaccines within the supply chain, a priority-based approach was taken by Zimbabwe to achieve herd immunity.

It is further concluded that, whereas the country made significant strides with its vaccination programme, the four social determinants of health slowed progress made towards the realization of a healthy population and access to the right to health and other rights. Other countries and Zimbabwe can learn from its experience as when implementing future vaccination programmes and the realization of the right to health. The human rights implications of the social determinants identified go beyond the current COVID-19 and the health rights affecting other human rights. A successful vaccination programme therefore has implications on the realization of not only health rights but other rights as well.

Declarations

Ethics Approval The manuscript titled ‘Reflections on the social determinants of the COVID-19 vaccination programme in Zimbabwe’, is not under consideration elsewhere nor has it been published elsewhere. We also commit not to submit the manuscript, for publication elsewhere without the agreement of the Managing Editor. We further declare that the authors contributed equally.

Conflict of Interest The authors declare no competing interests.

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