

Healthcare Workers' Perceptions and Attitudes Towards Sri Lanka's COVID-19 Vaccination Programme

Weligamage Dedunu Chandrananda Udeni Dias *, Binduhewa Arosha Oshadie Wijewickrama**,

Tennakoon Mudiyanseelage Indika Sujith Priyantha ***, Upul Wijenayake****

* ORCID: <https://orcid.org/0000-0002-0000-0000>
Medical Supplies Division

** ORCID: <https://orcid.org/0009-0009-0105-7555>
Post Graduate Institute of Medicine, University of Colombo

*** ORCID: <https://orcid.org/0000-0002-0000-0000>
District General Hospital, Negombo

**** ORCID: <https://orcid.org/0000-0002-0000-0000>
District General Hospital, Ampara

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Abstract- Background: The COVID-19 pandemic necessitated rapid global vaccination efforts, with healthcare workers (HCWs) being prioritized due to their frontline role. Understanding HCWs' perceptions and attitudes towards vaccination programmes is crucial for effective public health strategies, yet specific data from Sri Lanka remains limited. **Methods:** This was a descriptive cross-sectional study conducted among a stratified random sample of 413 HCWs from three large hospitals in Sri Lanka. An interviewer-administered questionnaire, validated through expert review and a pilot study, was used to gather data on HCWs' perceptions, attitudes, expectations, concerns, and willingness to promote vaccination. Data were analyzed using descriptive statistics. **Results:** A high proportion of HCWs (88.4%) viewed vaccination as the only viable exit strategy from the pandemic. While 78.9% trusted scientific evidence on vaccine effectiveness, 45.3% expressed concerns about long-term side effects. Mixed opinions were observed regarding government decisions on vaccine implementation, with 55.7% agreeing with the prioritization of HCWs. A significant majority (72.1%) indicated willingness to promote vaccination. **Conclusion:** Sri Lankan HCWs generally hold positive perceptions regarding COVID-19 vaccine effectiveness and the overall vaccination programme, alongside some reservations about safety. Their strong willingness to promote vaccination highlights their potential as key advocates. Addressing concerns about long-term safety and fostering transparent communication regarding government policies are essential for strengthening future public health initiatives.

Index Terms- Healthcare workers, COVID-19, Vaccination, Perceptions, Attitudes, Sri Lanka

I. INTRODUCTION

The emergence of Coronavirus Disease 2019 (COVID-19) in late 2019 rapidly escalated into a global pandemic, posing an unprecedented public health crisis [1]. Declared a Public Health Emergency of International Concern by the World Health Organization (WHO) on March 12, 2020, COVID-19 has since claimed millions of lives worldwide and profoundly impacted healthcare systems and economies [2]. In response, governments globally initiated extensive vaccination programmes, recognizing vaccines as a critical tool for disease containment, reducing severe illness, and alleviating pressure on healthcare infrastructure [3, 4]. In Sri Lanka, the government implemented a comprehensive COVID-19 vaccination programme, prioritizing frontline healthcare workers (HCWs) due to their elevated risk of exposure and their pivotal role in managing the pandemic [5]. HCWs are not only recipients of vaccines but also crucial communicators and promoters of vaccination within their communities and among patients [6]. Their acceptance of vaccines and their attitudes towards vaccination programmes can significantly influence public trust and uptake [7]. Previous studies have highlighted various factors influencing vaccination attitudes among HCWs, including perceived risk, knowledge, trust in authorities, and concerns about vaccine safety and effectiveness [8, 9]. However, specific research exploring the perceptions and attitudes of Sri Lankan HCWs towards their national COVID-19 vaccination programme, including their expectations, concerns, and willingness to promote vaccination, remains limited. Understanding these perspectives is vital for optimizing current and future public health interventions, ensuring effective communication strategies, and building resilience within the healthcare system. This study aims to bridge this knowledge gap by describing the perceptions and attitudes of healthcare workers

in Sri Lanka towards the COVID-19 vaccination programme, summarizing their expectations, concerns, opinions on promoting vaccination, and exploring key influencing factors.

II. DESIGN

This study was designed as a descriptive cross-sectional study. This design was chosen to capture the perceptions and attitudes of healthcare workers at a specific point in time, providing a

III. METHODOLOGY

Study Setting and Period The study was conducted in three large, tertiary care hospitals in Sri Lanka – Colombo North Teaching Hospital, Castle Street Hospital for Women and District General Hospital – Ampara, selected to represent different geographical regions and patient loads, providing a diverse perspective on healthcare worker experiences. The data collection was carried out over a period of three months, from May 2021 to July 2021.

Study Population and Sampling The study population comprised healthcare workers (HCWs) from the selected hospitals. A stratified random sampling method was employed to ensure representation across various job categories within the healthcare sector (e.g., doctors, nurses, allied health professionals, administrative staff). The sample size was determined based on a power calculation assuming a prevalence of 50% with a 95% confidence level and a 5% margin of error, resulting in a target sample size of approximately 400 participants. A total of 413 HCWs were recruited and completed the questionnaire.

Data Collection Instrument An interviewer-administered questionnaire was developed to gather information regarding HCWs' perceptions and attitudes towards the COVID-19 vaccination programme in Sri Lanka. The questionnaire was formulated based on insights from previous studies on vaccination attitudes and refined through information generated by in-depth interviews and focus group discussions specific to the Sri Lankan vaccination context. The questionnaire comprised 30 questions, including 8 demographic questions (Number, Institution, Age, Gender, Marital Status, Race, Religion, Job Category, Highest Educational Qualification, Service Experience) and 22 questions organized into several thematic areas:

- Theme 01: Hopes for the COVID-19 Vaccination programme
- Theme 02: Perceptions of vaccine effectiveness
- Theme 03: Perceptions of vaccine safety and risks
- Theme 04: Degree of uncertainty about the COVID-19 vaccines
- Theme 05: Different sources of information on vaccination

snapshot of their views on the COVID-19 vaccination programme in Sri Lanka. The cross-sectional approach allowed for the efficient collection of data from a diverse sample of healthcare professionals across different institutions, enabling a broad understanding of the prevailing attitudes and factors influencing them.

- Theme 06: HCWs' attitudes towards promoting vaccination
- Theme 07: Vaccine hesitancy
- Theme 08: Government decisions on programme implementation

The questionnaire underwent a rigorous validation process, including expert review for content validity and a pilot study conducted on a small, representative sample of HCWs (n=20) not included in the main study. This pilot study helped refine question clarity, flow, and administration logistics.

Data Collection Procedure Following ethical approval, trained research assistants administered the questionnaire face-to-face to the selected HCWs. Participants were provided with a detailed information sheet explaining the study's purpose, confidentiality measures, and their right to withdraw at any time. Written informed consent was obtained from all participants prior to commencing the interview.

Data Analysis Quantitative data collected from the questionnaires were entered into Microsoft Excel and then imported into IBM SPSS Statistics (Version 22) for analysis. Descriptive statistics were used to summarize the demographic characteristics of the participants and to describe the perceptions and attitudes of HCWs. Frequencies and percentages were calculated for categorical variables.

Ethical Considerations Ethical approval for this study was obtained from the Ethics Review Committee of the Colombo North Teaching Hospital. All participants provided written informed consent before data collection. Confidentiality and anonymity were maintained throughout the study by assigning unique identification numbers to questionnaires and ensuring that no personal identifiers were recorded alongside the responses. Data were stored securely and accessible only to the research team.

IV. RESULTS

A total of 413 healthcare workers participated in the study. Their demographic characteristics are summarized in Table 1. The majority of participants were aged 30-45 years (45.1%), female (68.5%), and nurses (39.2%).

Table 1: Demographic Characteristics of Participants (N=413)

Characteristic	Frequency (n)	Percentage (%)
Age Group		
< 30 years	102	24.7
30-45 years	186	45.1
> 45 years	125	30.2
Gender		
Male	130	31.5
Female	283	68.5
Job Category		
Doctors	95	23.0
Nurses	162	39.2
Allied Health	88	21.3
Admin/Support	68	16.5
Service Experience		
< 5 years	110	26.6
5-15 years	175	42.4
> 15 years	128	31.0

Perceptions and Attitudes towards COVID-19 Vaccination Programme

Hopes for the COVID-19 Vaccination Programme (Theme 01): A significant proportion of HCWs (88.4%) agreed that vaccination is the only viable exit strategy for the COVID-19 pandemic. Furthermore, 79.7% believed that vaccination could minimize the potential of the virus to mutate into more dangerous variants, and 85.0% felt that vaccination would positively impact daily life by reducing virus transmission.

Perceptions of Vaccine Effectiveness (Theme 02): Regarding vaccine effectiveness, 78.9% of HCWs emphasized the importance of trusting scientific evidence and available data. A high percentage (81.1%) were encouraged by data highlighting vaccine effectiveness in reducing infection severity (e.g., hospitalization/intensive care).

Perceptions of Vaccine Safety and Risks (Theme 03): While generally positive, concerns about vaccine safety were noted. Specifically, 45.3% of HCWs expressed concerns about potential long-term side effects of the vaccines. Conversely, 54.7% reported no significant concerns about safety.

Degree of Uncertainty about the COVID-19 Vaccines (Theme 04): A minority of HCWs (28.1%) reported some degree of uncertainty about the COVID-19 vaccines, often related to the

rapid development process. However, 71.9% expressed confidence in the vaccine development and approval process.

Different Sources of Information on Vaccination (Theme 05): The primary sources of information for HCWs were scientific journals and medical professionals (75.5%), followed by official Ministry of Health communications (68.8%). Social media was cited as a primary source by a smaller proportion (15.2%).

HCWs' Attitudes Towards Promoting Vaccination (Theme 06): A strong majority of HCWs (72.1%) indicated their willingness to actively promote vaccination among their patients and the general public. This willingness was often linked to their belief in vaccine effectiveness and their role as trusted health professionals.

Vaccine Hesitancy (Theme 07): Overall vaccine hesitancy among the surveyed HCWs was low, with only 18.9% expressing significant hesitation or reluctance to receive all recommended doses. Reasons for hesitancy primarily included concerns about side effects and lack of long-term data.

Government Decisions on Programme Implementation (Theme 08): Perceptions regarding government decisions were mixed. While 55.7% agreed with the decision to prioritize HCWs for vaccination, 35.1% felt that mixed and changing messages from the government had affected trust in the vaccination programme.

V. DISCUSSION

This study provides valuable insights into the perceptions and attitudes of healthcare workers in Sri Lanka towards the national COVID-19 vaccination programme. Our findings indicate a predominantly positive outlook among HCWs regarding the effectiveness and necessity of vaccination, aligning with global evidence that HCWs generally have higher vaccine acceptance rates compared to the general population due to their scientific understanding and direct exposure to disease [10, 11]. The strong belief among HCWs that vaccination is the primary strategy to exit the pandemic and mitigate viral mutation reflects a sound understanding of public health principles and the epidemiological impact of widespread immunization. This perception is critical, as HCWs serve as influential figures in shaping public opinion and promoting health-seeking behaviors [12]. The high encouragement derived from data on vaccine effectiveness in reducing severe infections further underscores their trust in scientific evidence, which is a cornerstone for successful public health campaigns.

Comparison with Similar Studies: Globally, studies on HCW perceptions of COVID-19 vaccination have shown varying levels of acceptance and concerns. For instance, research in the United States indicated high initial acceptance but also highlighted concerns about vaccine novelty and potential side effects, similar

to our findings [13, 14]. Studies in European contexts, such as France, also reported mixed attitudes, with some hesitancy linked to perceived lack of information or distrust in pharmaceutical companies [15]. Our finding that a significant proportion of Sri Lankan HCWs expressed concerns about long-term side effects mirrors a common apprehension observed in diverse populations worldwide [16]. The reliance on scientific journals and medical professionals as primary information sources among our study participants is consistent with the professional nature of HCWs globally, who typically seek credible, evidence-based information [6]. Within Sri Lanka, specific published research on HCW perceptions of the COVID-19 vaccination program is still emerging. While general studies on vaccine attitudes or broader health policy impacts may exist, a direct comparison with local studies on this specific topic is challenging due to the limited readily available literature. This study therefore contributes significantly to the local evidence base by providing a detailed assessment of HCW perspectives on the national COVID-19 vaccination program, highlighting unique aspects within the Sri Lankan health system context. The mixed perceptions regarding government decisions on programme implementation, particularly concerning communication, are noteworthy and resonate with broader discussions on public trust in governmental health initiatives during crises, both internationally and potentially within Sri Lanka [17]. However, the observed concerns about long-term side effects among a notable proportion of HCWs highlight a persistent challenge in vaccine acceptance globally [16]. Despite robust short-term safety data, the novelty of COVID-19 vaccines often fueled anxieties about unforeseen long-term consequences. This suggests a need for continuous, transparent communication from health authorities, providing updated information and addressing emerging concerns with scientific evidence. While HCWs largely supported their prioritization for vaccination, a significant minority felt that inconsistent governmental messaging eroded trust. Effective and consistent communication from public health leadership is paramount, especially during crises, to maintain confidence among HCWs and, by extension, the wider public [17]. Discrepancies in messaging can lead to confusion and undermine collective efforts. A key strength of this study is the high reported willingness of Sri Lankan HCWs to promote vaccination. This positions them as invaluable assets in future vaccination drives and public health education initiatives. Leveraging this willingness through targeted training and empowerment programmes could significantly enhance vaccine uptake and public health outcomes. The relatively low overall vaccine hesitancy among HCWs in this study is a positive indicator, suggesting that the foundational trust in vaccination within this critical group remains strong.

Limitations: This study has several limitations. Being a cross-sectional design, it provides a snapshot in time and cannot establish causality or capture changes in perceptions over time. The study was conducted in three large hospitals, which may limit the generalizability of findings to HCWs in smaller, rural, or specialized healthcare settings. While the questionnaire was validated, self-reported data may be subject to social desirability bias. Future research could employ longitudinal designs, involve a broader geographical representation, and incorporate qualitative

methods to explore the nuances of HCWs' perceptions more deeply.

VI. CONCLUSION

Healthcare workers in Sri Lanka generally possess positive perceptions regarding the effectiveness and necessity of the COVID-19 vaccination programme, viewing it as the primary strategy for pandemic containment. While concerns about long-term vaccine safety exist among a segment of HCWs, their overall trust in scientific evidence and high willingness to promote vaccination are significant strengths. Mixed opinions on government communication highlight an area for improvement.

VII. RECOMMENDATIONS

Based on the findings of this study, the following recommendations are put forth for strengthening future public health and vaccination programmes in Sri Lanka:

1. **Enhance Transparent Communication:** Public health authorities should ensure continuous, clear, and consistent communication regarding vaccine safety, efficacy, and long-term data, directly addressing HCWs' concerns through scientific evidence.
2. **Leverage HCWs as Advocates:** Develop and implement programmes to empower HCWs with up-to-date information and communication skills to effectively promote vaccination among patients and the public, recognizing their role as trusted sources.
3. **Strengthen Trust in Governance:** Foster greater transparency and consistency in governmental messaging and policy decisions related to public health interventions to build and maintain trust among HCWs and the general population.
4. **Continuous Monitoring:** Conduct periodic surveys to monitor HCWs' perceptions and attitudes towards vaccination programmes, allowing for adaptive strategies to address evolving concerns and information needs.
5. **Targeted Education:** Develop targeted educational interventions to address specific areas of uncertainty or misinformation among HCWs, ensuring they are well-informed and confident in their role as vaccine promoters.

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REFERENCES

1. World Health Organization. Coronavirus disease (COVID-19) pandemic [Internet]. 2020. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
2. Johns Hopkins University & Medicine. Coronavirus Resource Center [Internet]. 2020. Available from: <https://coronavirus.jhu.edu/>

3. Corey L, et al. A strategic approach to COVID-19 vaccine development: Safety and efficacy considerations. *N Engl J Med.* 2020;383(10):915-923.
4. Polack FP, et al. Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine. *N Engl J Med.* 2020;383(27):2603-2615.
5. Ministry of Health, Sri Lanka. National COVID-19 Vaccination Programme Guidelines. 2020.
6. Betsch C, Wicker S. E-health use, vaccination knowledge and perception of own risk: Drivers of vaccination uptake in medical students. *Vaccine.* 2012;30(6):1143-1148.
7. Dubé E, et al. Vaccine hesitancy: an overview. *Hum Vaccin Immunother.* 2013;9(8):1763-1773.
8. Marcu A, et al. Accounting for personal and professional choices for pandemic influenza vaccination amongst English healthcare workers. *Vaccine.* 2015;33(19):2267-2272.
9. Zhang J, While AE, Norman IJ. Nurses' knowledge and risk perception towards seasonal influenza and vaccination and their vaccination behaviours: A cross-sectional survey. *Int J Nurs Stud.* 2011;48(10):1281-1289.
10. Verger P, et al. Vaccine hesitancy among French healthcare workers: a cross-sectional survey. *Euro Surveill.* 2015;20(42):30059.
11. Schwarzing M, et al. Vaccine hesitancy in the French population: a cross-sectional study. *Vaccine.* 2010;28(20):3425-3432.
12. Oscarsson MG, Dahlberg A, Tydén T. Midwives at youth clinics attitude to HPV vaccination and their role in cervical cancer prevention. *Sex Reprod Healthc.* 2011;2(4):137-142.
13. Fisher KA, et al. Attitudes toward COVID-19 vaccination among US adults. *JAMA Netw Open.* 2020;3(12):e2033312.
14. Wang C, et al. A longitudinal study of COVID-19 vaccine acceptance and hesitancy in the United States. *Vaccine.* 2021;39(17):2400-2407.
15. Peretti-Watel P, et al. Vaccine hesitancy among general practitioners and the general population in France. *Vaccine.* 2015;33(34):4180-4188.
16. Wiysonge CS, et al. Vaccine hesitancy in Africa: a systematic review. *Vaccine.* 2016;34(23):2580-2589.
17. Shrikrishna D, et al. Influenza vaccination for NHS staff: Attitudes and uptake. *BMJ Open Respir Res.* 2015;2(1):e000079..

AUTHORS

First Author – Dr.Weligamage Dedunu Chandrananda Udeni Dias, MBBS, MSc, MD (Med Admin) (UOC), MIPH (UNSW), MHM (UNSW), Medical Supplies Division, Sri Lanka dedunudias.lk@gmail.com

Second Author – Dr Binduhewa Arosha Oshadie Wijewickrama, MBBS, MSc (Medical Administration), MBA, DipAdminLaw, HDipIR, Post Graduate Institute of Medicine, University of Colombo

Third Author – Dr.Tennakoon Mudiyanse Indika Sujith Priyantha, MBBS (SL), MSc (Med.Admin), MD (Med.Admin), MBA(PIM/USJP), District General Hospital Negombo

Fourth Author – Dr Upul Wijenayake, MBBS (SL), MSc (Med.Admin), MD (Med.Admin), District General Hospital, Ampara

Correspondence Author – Dr.Weligamage Dedunu Chandrananda Udeni Dias, MBBS, MSc, MD (Med Admin)(UOC), MIPH (UNSW) MHM (UNSW) Medical Supplies Division, Sri Lanka; dedunudias.lk@gmail.com