



RESEARCH BRIEF

Key Insights and Recommendations

Public Health Information Sharing among Underprivileged Groups and Vaccine Hesitancy during the COVID-19 Pandemic in Sri Lanka

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Key Findings

- An international study was carried out to: investigate social factors that affected vaccine hesitancy during the COVID-19 pandemic in Sri Lanka; and, explore the challenges of public health information sharing during an epidemic or pandemic among underprivileged groups in Sri Lanka.
- This study involved a survey covering 26 divisional secretariats in 9 districts in Sri Lanka. The field study was designed to cover estate, rural, urban, semi-urban and urban sectors. A total of 3,330 households were covered by the study.
- The main reasons for COVID-19 vaccine hesitancy in Sri Lanka – a delay in acceptance, or refusal, of COVID-19 vaccines – are fear of side effects, investigating or waiting to see the effectiveness of vaccines, received advice from someone not to take the vaccine, unavailability of vaccines (relevant to only those who have delayed the vaccine or missed the recommended schedule), misinformation/ disinformation received about the vaccine from different sources, and religious and cultural beliefs and strong affinity towards indigenous medical solutions for COVID-19.
- Vaccine hesitancy has been the result of the lack of access to health information in resource-limited settings and too much information among young and educated people.
- Dissemination of public health information about the COVID-19 pandemic and vaccination has been comparatively lower among underprivileged communities in rural, urban and estate sectors.
- Inadequate awareness of the SARS-CoV-2 virus, vaccines and the process of vaccination, is the fundamental cause of vaccine hesitancy.
- 36% (n= 3300) of respondents were completely unaware of the types of COVID-19 vaccines and their suitability. More than 55% (n= 3300) were totally unaware of the effectiveness of vaccines against the SARS-CoV-2 virus.
- 47% (n=2948) of respondents were totally unaware of the possible side effects of vaccines, which has been the major reason for vaccine hesitancy in Sri Lanka.
- The most feared side effects among people are being infertile and dysfunction of organs following vaccination.
- Vaccines and vaccination-related information have largely been retrieved and crosschecked by personal networks (family members, friends and peers and neighbours) and searching untrusted internet sources.
- Not sufficient information, difficulty in understanding/ lack of comprehension, delay in receiving information, and lack of trust in authorities due to contradictory messages issued by different authorities, are the top four causes of dissatisfaction of respondents towards information dissemination.
- The most popular and accessible information source during the pandemic is television, and the most trusted source is person-to-person information sharing, mostly by grassroots public health officials.
- Religion and ethnicity are two strong determinants of vaccine hesitancy in several areas.

1. Background of the study

The Covid-19 pandemic was a devastating health hazard which affected both developed and developing nations irrespective of their socioeconomic status. The WHO (World Health Organization) announced SARS-CoV-2 and its rapid transmission as a “Public Health Emergency of International Concern (PHEIC)” on 30 January 2020, and declared a global pandemic on 11 March 2020. With the appearance of more virulent and transmissible new variants of the virus, gaps in pandemic preparedness and response were exposed around the globe, which exposed gaps in pandemic preparedness and response around the world.

Following an intense discussion among worldwide multidisciplinary professionals introduced numerous health guidelines for disease response, influencing various disease response strategies. As witnessed, the execution of mass vaccination programmes worldwide against the coronavirus seems the most effective in terms of mitigating severe virus transmission and coronavirus deaths.

Sri Lanka also became a victim of this health hazard by identifying an index patient who temporarily migrated from China in 2020 as the first infected case. The disease spread began with a cluster transmission and later it developed into a widespread transmission among numerous localities and population groups. However, the virus severely impacted vulnerable social groups in the country. Its adverse impacts were largely seen in public health, education, livelihoods, the economy and other less tangible domains, including faith and culture. Sri Lanka adopted a variety of mitigation methods for disease prevention and elimination. Among them, the vaccination program is one of the globally recognized and effective methods used to reduce the transmission and disease related deaths. The COVID-19 vaccination program has been executed across all districts in Sri Lanka to minimize deaths and infection in line with the guidelines of the WHO and other public health authorities.

Alongside the launch of major vaccination programmes around the world, anti-vaccine campaigns were also initiated by different groups. Many of these anti-vaccine campaigns were built around the possible side effects of the vaccine, the technologies underpinning vaccination, religious thoughts, anti-western and anti-capitalistic ideologies, and capitalizing on some myths among local communities. These antivaccine ideologies and campaigns discouraged and prevented people from accepting the vaccines in a timely manner and some prevented them from being vaccinated altogether. Further, there were concerns that a lack of public health information has contributed to vaccine hesitancy, especially among underprivileged communities.

This research provides insights into the vaccination programme conducted in Sri Lanka, especially with regard to public response to the vaccination programme, vaccine hesitancy, vaccine preference and status of public health information sharing among communities.

2. Research Overview

This research was conducted as a part of the research project **Improving COVID-19 and pandemic preparedness and response through the downstream of multi-hazard early warning systems**, which was funded by UK Research and Innovation through the UK Government’s Global Challenges Research Fund (GCRF) and the Newton Fund. The research was conducted as a collaborative effort of: the University of Huddersfield’s Global Disaster Resilience Centre, UK (leading); Ministry of Health, Sri Lanka (lead partner); University of Moratuwa, Sri Lanka (co-investigator); and, University of Colombo, Sri Lanka (co-investigator). The Department of Sociology, University of Peradeniya, Sri Lanka facilitated the research by providing 15 research assistants under the internship programme of the World Bank-funded AHEAD project, and by coordinating the research team during the field study.

The research was conducted to address the following two broader research objectives that seemed significant during the vaccination stage of the pandemic outbreak.

1. To investigate social factors that affected vaccine hesitancy during the COVID-19 pandemic in Sri Lanka
2. To explore the challenges of public health information sharing during an epidemic or pandemic among underprivileged groups in Sri Lanka

This research was carried out as a national-level survey covering 26 divisional secretariats in 9 districts. The field study was designed to cover estate, rural, urban, semi-urban and urban sectors which took two months of data collection.

3. Methodology

The field investigation was carried out in Kandy, Galle, Matara, Anuradhapura, Puttalam, Kurunegala, Colombo, Kalutara and Badulla districts. A mixed-method approach was used to collect the data by administering a questionnaire survey and household interviews to collect qualitative data. A digital questionnaire was developed using SurveyMonkey and 15 research assistants were involved in the field study. The sampling method was multi-stage stratified cluster sampling. Clusters were developed based on the urban, estate, semi-urban and rural sectors and social class, which were understood as middle-class and underprivileged settings within a proximate setting where both groups lived within a one-kilometre radius. Additionally, ethnicity and religion were considered in selecting sub-clusters. Only *Mihinthale*, *Dambana* and *Rideemaliyadda* divisions were specifically selected to absorb indigenous communities into the sample. A total of 3,330 households were covered by the study.

4. Findings

The results suggest that misinformation and disinformation due to lack of education on Coronavirus, vaccines, vaccination, and rumours, much of it created by their own communities, or both local and international anti-vaccine lobbies, are the primary reasons for vaccine delay or rejection. The following are the key aspects of vaccine hesitancy-related determinants identified by the research.

4.1 KEY REASONS FOR DELAYING OR REJECTING VACCINES

- Fear of side effects (46.29%)
- Investigating or waiting to see the efficiency of vaccines (17.40%)
- Misinformation or disinformation received about the vaccine from different sources (12.46%)
- Received advice from someone not to take the vaccine (4.44%)
- Lack of knowledge on vaccines and vaccination (4.27%)
- A strong faith in religion or indigenous medicine (3.95%)

The number of respondents who have mentioned an ignorance of the vaccination process, an absence of vaccine centres near their residence, or a lack of encouragement from the authorities, as reasons for vaccine delaying or rejection, was extremely low.

4.2 AWARENESS OF VACCINES AND VACCINATION

- The level of awareness about the types of vaccines, vaccine production and the role of vaccination is very low. 35.89% of respondents had no awareness at all.
- Awareness among the public of the effectiveness of vaccines against the coronavirus was significantly low. More than half of respondents (55.39%) are totally unaware of the effectiveness of vaccines and vaccinations.
- Fear of side effects (possible or heard by rumours) is the most prominent reason for vaccine hesitancy and 42.7% of respondents were not aware at all the aspect of side effects of vaccines.

4.3 DISSEMINATION OF PUBLIC HEALTH INFORMATION

- Lack of access to public health information and inadequate information sources were stressed by many respondents.
- Television is the most popular and accessible source for health information dissemination. Social media platforms are extremely popular information sources among youth, especially in rural, suburban and urban settings.
- The information delivered by grassroots-level public health officers is the most trusted.
- A majority of the respondents were unsatisfied, while 27% were totally unsatisfied with the content and the way of delivering the information received from health authorities during the pandemic. Ineffective information dissemination was largely attributed by respondents to the contradictory messages provided by different authorities, a lack of clarity, usage of technical terms, and language issues.
- Public announcements and posters made by health authorities were largely trusted by communities in rural, estate and urban low-income settings.

4.4 SIGNIFICANCE OF PRIMARY NETWORKS IN INFORMATION DISSEMINATION

- Primary networks, consisting of family members, friends and peers, neighbours and personally known professionals, have been used by many people to retrieve and crosscheck vaccines and vaccination-related information.
- Many adults with less education have depended on the information provided by young members of their families. However, most young respondents have retrieved vaccine-related health information through the internet and social media posts.
- Community networks are extremely effective in disseminating health information in resource-limited settings.

4.5 INFORMATION AVAILABILITY AMONG UNDERPRIVILEGED GROUPS

- Awareness about the Covid-19 virus, vaccines and vaccination among estate communities, remote rural communities, urban low-income communities, and indigenous people was significantly lower than found in other groups.
- Health Information has been received prominently by government media channels and personnel.
- The most effective way of information sharing was person-to-person.
- The source of rumours was primarily local networks.
- Lack of clarity of the message and language barriers have reduced the effectiveness of public health information shared during the pandemic.

5. Recommendations

- Need policy directives to address the gaps in public health information dissemination among underprivileged or resource-limited groups during a public health emergency.
- Dissemination of public health information process needs to be customized to meet socio-cultural needs in the context of different communities.
- An effective information management mechanism is needed to address the health information-related implications during a pandemic to counter rumours and misinformation.
- Need action to improve public health information access in the country. At present, it seems inadequate or restricted due to the monopoly of public health-related data and information.
- Community-based networks and informal primary networks, including faith-based institutions, can be effectively used to disseminate relevant public health information at the grassroots level in rural, estate, indigenous and urban low-income settings.
- Need consistency in disseminating important public health messages by different health and non-health authorities to avoid contradictories.

6. Further readings

Amaratunga, D., Haigh, R., Kamalrathne, T., Samaraweera, S., Pannilahetti, N., Senaviratne, S., & Kodithuwakku, L. (2022) (Ed.) International Research and Innovations Symposium conference proceedings on DENGUE AMIDST THE PANDEMIC Improving preparedness and response for multi-hazard scenarios – 2022. Book of abstracts. Edited by. March 2022. Available at: <http://pandemic-mhew.org/images/2022/03/19/BoAv10.pdf>

Amaratunga, D., Haigh, R., Kamalrathne, T., Fernando, N., Jayasinghe, N., Siriwardana, C., Jayasekara, R., Herath, H., Ranaweera, P., Ariyasinghe, U., Rathnayake, S., Rupasinghe, C. & Kodithuwakku, L. (2022). Policy Brief: Current status and recommendations on the integration of pandemics within national/local DRR strategies in Sri Lanka: University of Huddersfield, UK. Available at: <http://www.pandemic-mhew.org/index.php/project-outputs>

Amaratunga, D., Haigh, R., Kamalrathne, T., Fernando, N., Jayasinghe, N., Siriwardana, C., Jayasekara, R., Herath, H., Ranaweera, P., Ariyasinghe, U., Kodithuwakku, L., Rathnayake, S. & Rupasinghe, C. (2022). A Vision Paper on the Integration of Pandemics into a Multi-Hazard Early Warning (MHEW) Environment for Sri Lanka: University of Huddersfield, UK. Available at: <http://www.pandemic-mhew.org/index.php/project-outputs>

Fernando, N., Amaratunga, D., Haigh, R., Jayasinghe, N., Siriwardana, C. & Jayasekara, R. (2022). National Perspectives of COVID-19: Case of Sri Lanka, In Shaw, R. & Pal, I. (Ed.) Risk Governance, Response and Resilience in COVID-19 Pandemic, Elsevier, Pages 61-75, <https://doi.org/10.1016/B978-0-323-99277-0.00006-1>

Jayasekara, R., Siriwardana, C., Amaratunga, D. & Haigh, R. (2022), Preparedness Planning Associated with Systemic Risks and Actions during the COVID-19 Pandemic in Sri Lanka: University of Moratuwa, Sri Lanka

Jayasekara, R., Siriwardana, C., Amaratunga, D., Haigh, R., Jayaweera, S. (2021). The Relationship Between COVID-19 Preparedness Parameters and its Impact in Developing Effective Response Mechanisms. In: Amaratunga, D., Haigh, R., Dias, N. (eds) Multi-Hazard Early Warning and Disaster Risks. Springer, Cham. https://doi.org/10.1007/978-3-030-73003-1_55

Jayasekara, R., Siriwardana, C., Amaratunga, D. & Haigh, R. (2021), Functions of A Multi-Hazard Early Warning System For Compound Hazard Events Amidst Covid-19; Sri Lanka As a Case In Point. In the proceedings of the 12th International Conference on Structural Engineering and Construction Management (ICSECM) 2021, 17th – 19th December 2021, Kandy, Sri Lanka. ISBN 978-624-6123-01-7

