

Original research

Healthcare access, patient experiences and economic impacts due to COVID-19 pandemic in Sri Lanka

Anuji U Gamage^{1*}, Therani Gunasekera¹, Amala de Silva²¹General Sir John Kotalawela Defence University, Ratmalana, Sri Lanka²Faculty of Arts, University of Colombo, Sri Lanka**Abstract**

Background: COVID-19 adversely affected economic activities and resulted in changes in healthcare seeking behaviour among people.


Objective: To assess the healthcare access, patient experiences and economic impacts due to COVID-19 pandemic in Sri Lanka

Methods: An online survey was conducted in June-July 2021 involving 449 adults in the Western Province, Sri Lanka. Data on participants' sociodemographic and economic status, comorbidities, access, and healthcare-seeking behaviours were collected using a questionnaire.

Results: 449 respondents completed the survey. 55% (n=173) and 74% (n=97) had experienced a negative impact on their main and additional income, respectively. Fifteen per cent (n=66) reported cutting down on meals or the amount consumed, and 30% (n=135) reported that they had to cut down on the amount of food bought. Fifteen per cent reported influenza-like illness during the pandemic, of which 34% did not seek healthcare. Of the participants who sought healthcare, 42% (n=19) went to a private hospital, and 22% (n=10) to a general practitioner. Twenty per cent (n=115) had a chronic illness, and 72% (n=83) were on regular medication. The majority (65%; n=70) bought drugs from private pharmacies, and 58% (n=62) got investigations done at private laboratories. Forty-eight per cent agreed that the pandemic led to delays in healthcare seeking, as they were unaware of the services rendered. Of the participants, 9% (n=39) and 3.2% (n=14) had incurred catastrophic healthcare expenses at 10% and 25% of their total income.

Conclusion: Residents of the Western province were severely economically affected by the pandemic. Healthcare access and utilization patterns changed among patients with influenza-like illness and chronic-illnesses during the pandemic. Participants had incurred high out-of-pocket expenditures.

Keywords: Healthcare Access, Patient Reported Experiences, Economic Impacts COVID-19 Pandemic

Copyright: ©2023 Gamage AU *et al.*  This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Funding: None

Competing interest: None

Received: 02.10.2022 **Accepted revised version:** 06.03.2023

Published: 30.04.2023

*✉ **Correspondence:** anujigamage@kdu.ac.lk

 <https://orcid.org/0000-0002-4713-9283>

Cite this article as: Gamage AU *et al.*, Healthcare access, patient experiences and economic impacts due to COVID-19 pandemic in Sri Lanka. *Anuradhapura Medical Journal* 2023; 17 (1): 11-22, DOI: <http://doi.org/10.4038/amj.v17i1.7748>

Introduction

SARS- COV2 was declared a global pandemic by World Health Organisation as of 11th March 2020 [1]. Despite continuous attempts to implement epidemiological controlling strategies to mitigate the pandemic, global mortality continued to rise while reporting a higher incidence of deaths among individuals who are elderly and those with comorbidities [2,3]. Deficient- and middle-income countries, like Sri Lanka, are more vulnerable during a crisis such as a pandemic as their ability to overstretching treatment capacity is limited by economic challenges [4,5]. Combating a pandemic while catering to the current healthcare demands has exacerbated the disparities in these countries, thereby affecting the effective delivery of essential healthcare [6].

The mitigation and suppression measures positively contributed to controlling the disease transmission, although they had a detrimental impact on the global economy sending many countries into a deep economic contraction. As reported by the World Bank, a significant share of the population will be pushed into extreme poverty by the end of 2021[7]. Despite the fear of contracting the virus preventing or delaying individuals from seeking medical attention, the strict lockdown measures implemented as a means of mitigation strategy restricted access to healthcare by individuals with diseases.

Prior to the Emergence of the COVID-19 pandemic, the world was paving its way toward achieving the goal of establishing Universal Health Coverage, a global effort to break barriers to accessing quality healthcare by all individuals regardless of their financial status and safeguard them from financial hardships[8]. Although many countries are making headway toward UHC, most low- and middle-income countries grapple with achieving universal coverage due to severely under-resourced healthcare systems [4].

Being a lower-middle-income country, Sri Lanka faced severe fiscal constraints and macroeconomic instability, further worsened by the pandemic [9]. Sri Lanka has a free public healthcare system funded by government-generated tax and parallels that, the country has a private healthcare system that operates under a fee-levying basis with a substantial contribution from the out-of-pocket expenditure. However, considering the low healthcare financing it is also one of the very resilient systems [10,11]. Despite that, the paucity in financial risk protection is prominent as 40% to 45% of healthcare

spending is attributed to out-of-pocket expenditure (OOPE), with catastrophic health expenditure estimated at 5.4% [10,12]. Factors such as high OOPE would lead to forgone care, and adverse economic effects would lead to differed healthcare utilization. During the pandemic, it was observed a rise in out-of-pocket spending mainly due to the unavailability of quality healthcare which compels individuals to seek alternative health services which operate on fee levying basis.

Healthcare provision should not be disturbed during a pandemic and should be readily accessible by everyone regardless of the phenomena. However, many studies around the world had reported a drastic decline in healthcare utilization by non-covid-19 related patients during the pandemic [13]. Amidst the sudden outbreak of the pandemic, Sri Lanka 's healthcare system were overstretched for many reason, with many of the scare resources going into COVID-19 management and prevention has limited the healthcare availability and accessibility for non covid-19 related patients, creating a void in the healthcare system, in result further aggravating the pandemic induced health crisis in the country. Therefore, understanding and identifying determinants which affect healthcare utilization and healthcare seeking behaviour of public in a pandemic context is vital for a robust health response. At a time where the main focus has gone in to combating the pandemic, there is spares research on how it has affected the healthcare accessibility and utilisation by the non covid-19 related patients.

The current study, aim to explore the impact of the COVID-19 pandemic on healthcare-seeking behaviour and the healthcare expenditure in the community living in the Western province of Sri Lanka, which is the epitome of the country's economy is the most densely populated province in the country.

Methods

We conducted a cross-sectional e-survey among adults living for > 1 year in the Western province of Sri Lanka. Sample size was computed using an alpha-value of 0.05, a proportion of high out-of-pocket expenditure of 50%, and an absolute precision of 5.0%, which was subsequently inflated by adding a non-response rate of 15%. The final sample size was 430. The study was conducted from April to August 2021 and data collection was conducted in June 2021.

A self-administered e-questionnaire was used for data collection in all three languages (Sinhala, English, and

Tamil), validated (judgmental), and pretested prior to use. The questionnaire gathered information on sociodemographic, financial and business impact, healthcare seeking for influenza-like illness and chronic illnesses. The questionnaire link was distributed through social media (Messenger, WhatsApp, and Viber) and by emails. Also, we asked the recipients to share with the networks, i.e., snowballing. The eligible persons were recruited by adhering to the inclusion criteria (literate adults who were Sri Lankan citizens, living in the western province for more than a year at the time of pandemic/data collection). Participants were emailed/received the information sheet with the necessary details about the study, and consent was obtained. The monetary data were collected in Sri Lankan Rupees (LKR). Data analysis was done using STATA version 14. Categorical data were expressed as proportions/percentages with 95% confidence intervals. Quantitative data, normally distributed, were summarized in terms of mean and standard deviation (SD) and non-normally distributed as the median and interquartile range (IQR). The project was granted ethical approval by General Sir John Kotelawala Defence University Ethics Committee.

Results

A total of 449 participants responded to the e-questionnaire. The mean age of the participants was 41.6(\pm 0.65) years. Nearly half ($n=196$;43.65% were males (Table 1). The majority ($n=404$;90.18%) of the respondents were Sinhalese. Seventy-four per cent were married. Only 7% ($n=32$) had an education less than the ordinary-level certificate (Table 1). The majority (94.9%) of the participants lived within 10 Km of the city. Seventy-percent of the participants($n=313$) were currently employed (Table 2) and most were involved in Education (18%; $n=57$), health(13%; $n=41$) and other services sector(22%; $n=69$) respectively.

Thirty-six per cent reported that their main job changed due to COVID-19. Twenty-eight per cent ($n=88$) and 27%($n=85$) reported that their income was negatively impacted. The majority reported that their additional income was negatively impacted due to COVID-19. The monthly income dropped across all income strata (Table 1). Thirty-five per cent ($n=146$) reported that their earning capacity was affected due to COVID-19. Being in quarantine affected the ability to earn a livelihood of 28%($n=118$) of the respondents.

Fifteen per cent of participants experienced influenza-like illness (ILI) during the pandemic, of which 34% did not seek healthcare for the episode. Of the participants who sought healthcare, 42%($n=19$) went to a private hospital, and 22%($n=10$) to a general practitioner. Fifty-three per cent ($n=24$) sought treatment immediately after the onset of symptoms. Twenty per cent sought healthcare after three days of symptoms (Table 2). Of the respondents who sought healthcare for ILI($n=44$), 66% ($n=29$) were worried that they might contract the virus at the healthcare facility, and 22% ($n=10$) agreed that the doctors were unavailable at the time of seeking healthcare (Figure 1). Thirty-nine per cent ($n=17$) reported that they had to wait for a prolonged time to receive the treatment. Only 25% ($n=11$) agreed that they could not get the drugs necessary as they were unavailable at the healthcare institution and the pharmacy due to the lockdown (Figure 1).

Twenty-six per cent ($n=115$) mentioned that they had a doctor-diagnosed chronic disease or a disability. Of which 72%($n=83$) were on regular medication. Nearly half($n=55$;48%) mentioned that there was a delay in seeking healthcare during the pandemic (Table 02). Around 38% reported that their perceived health, despite the chronic illness as fair or poor. Figure 2 shows the distribution of people who had a chronic-illness and delayed/did not seek medical care due to the pandemic by disease($n=60$;52.2%). Twenty-five percent had hypertension, 16% suffered from diabetes, and 12.2% had asthma.

Figure 3 shows the places of care-seeking for chronic illness before and during the pandemic when the country was not in lockdown and when the country was in lockdown. In general, care-seeking declined in all institutions during the lockdown period. Considering care-seeking in the private sector, only slight variations were observed between the three pandemic scenarios. However, considering care-seeking at a government hospital, a drastic drop was observed in this sector during the lockdown period due to the pandemic ($n=13$; =11.3%). Twenty-seven percent ($n=31$) reported not having sought treatment during the lockdown period.

Majority of those who had ILI and chronic-illness/disability opted to go to the closest healthcare institution during the pandemic.

Table 1: Socio demographic and economic characteristics of the study participants

Variable	N (449)	%
Gender		
Male	196	43.65
Female	253	56.35
Ethnicity		
Sinhalese	404	90.18
Tamil	25	5.58
Muslim	8	1.79
Burger	5	1.12
Other	6	1.34
Marital status		
Married	328	73.05
Unmarried	108	24.05
Divorced/ Separated	6	1.34
Widowed	7	1.56
Education level		
No schooling	3	0.67
Grade 1-5	3	0.67
Grade 6-11	26	5.79
Passes O/L	34	7.57
Grade 12 and 13	37	8.24
Passed A/Ls	129	28.73
University education	122	27.17
Postgraduate qualification	95	21.16
Number of household members		
=< 4	303	67.48
5-8	144	32.06
>=nine	2	0.44
Current employment status (n=449)		
Yes	313	69.71
No	136	30.29
The sector which best describes the main job/activity before the pandemic (n=313)		
Agriculture, fishing, or mining	2	0.64
Construction or utilities	20	6.39
Manufacturing	16	5.11
Retail or Wholesale	16	5.11
Transportation and storage	5	1.60
Accommodation and food services	7	2.24
Information and communication	19	6.07
Financial activities or real estate	15	4.79
Education	57	18.21
Health	41	13.10
Defence	4	1.28
Government/ Semi-Government	37	11.82
Non-Governmental Organisation	5	1.60
Other services	69	22.04
Monthly income before the pandemic (n= 312)		
< Rs. 20,000 (< USD 102)	34	10.90
Rs. 20,001 – 40,000 (USD 102 – 205)	98	31.41

Rs. 40,001- 60,000 (USD 205- 307)	52	16.67
Rs. 60,001- 80,000 (USD 307- 409)	32	10.26
Rs. 80,001- 120,000 (USD 409 – 614)	31	9.94
> Rs. 120,001 (> USD 614)	65	20.83
Monthly income during the pandemic (n=312)		
< Rs. 20,000 (< USD 102)	70	22.44
Rs. 20,001 – 40,000 (USD 102 – 205)	89	28.53
Rs. 40,001- 60,000 (USD 205- 307)	51	16.35
Rs. 60,001- 80,000 (USD 307- 409)	19	6.09
Rs. 80,001- 120,000 (USD 409 – 614)	26	8.33
> Rs. 120,001 (> USD 614)	57	18.27
Change of job due to COVID-19 pandemic		
Yes	114	36.42
The impact of the pandemic on the income		
Significant positive impact	15	4.79
Positive impact	14	4.47
No impact	111	35.46
Negative impact	88	28.12
Significant negative impact	85	27.16
Additional income before the pandemic (n=449)		
Yes	130	28.95
The source of additional income (n=130)		
Agriculture	8	6.15
Rent	26	20.00
part-time job	40	30.77
Interest income	17	13.08
Other	39	30
The average monthly additional monthly income (in rupees)?		
< Rs. 20,000 (< USD 102)	42	32.31
Rs. 20,001 – 40,000 (USD 102 – 205)	33	25.38
Rs. 40,001- 60,000 (USD 205- 307)	21	16.15
Rs. 60,001- 80,000 (USD 307- 409)	13	10.00
Rs. 80,001- 120,000 (USD 409 – 614)	6	4.62
> Rs. 120,001 (> USD 614)	15	11.54
Impact of the pandemic on the additional income		
Significant positive impact	10	7.69
Positive impact	9	6.92
No impact	14	10.77
Negative impact	40	30.77
Significant negative impact	57	43.85
The average monthly household income n=413		
< Rs. 30,000 (< USD 153)	74	17.92
Rs.30,001 – 60,000 (USD 153- 307)	107	25.91
Rs. 60,001- 90,000 (USD 307 – 460)	63	15.25
Rs.90, 001 – 120,000 (USD 460 -614)	47	11.38
> Rs. 120,001.00 (> USD 614)	122	29.54
Needing to care for the sick affected the ability to earn a livelihood in the past month (n=418)		
Yes	146	34.93
Being quarantined affected the ability to earn a livelihood in the past month? n=418		
Yes	118	28.23

Table 2: Healthcare seeking for influenza like illness and chronic illnesses/ disability during the pandemic

Variable	n	%
Influenza like illness		
Experiencing influenza-like illness during the COVID-19 pandemic (n=449)		
Yes	68	15.11
No	381	84.67
Did you seek for healthcare during this episode? (n=67)		
Yes	44	64.71
No	23	33.82
Place of visit to seek healthcare for the above ILI episode (n= 44)		
Private hospital	19	42.22
OPD-government hospital	5	11.11
General practitioner	10	22.22
Specialist Consultation	4	8.89
Ayurvedha treatment	3	6.67
Other (please specify)	4	8.89
How long did you wait before seeking healthcare? (n= 44)		
Immediately after onset of symptoms	24	53.33
2 days after onset of symptoms	12	26.67
3 days after onset of symptoms	5	11.11
4-7 days after onset of symptoms	3	6.67
1 week after onset of symptoms	1	2.22
Chronic illness and disability		
Presence of a chronic diseases or a Disability? n=449		
Yes	115	25.61
No	334	74.39
Adherence to regular medication? n=115		
Yes	83	72.17
No	32	27.83
Delay in seeking healthcare for the chronic illness/ disability during the first, second, and third waves		
Yes	55	47.83
No	60	52.17

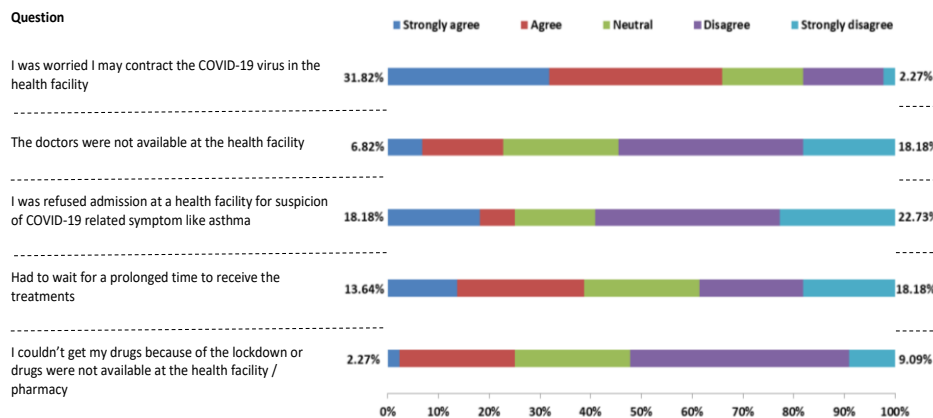


Figure 1: Factors affecting healthcare-seeking behaviour for influenza-like illness

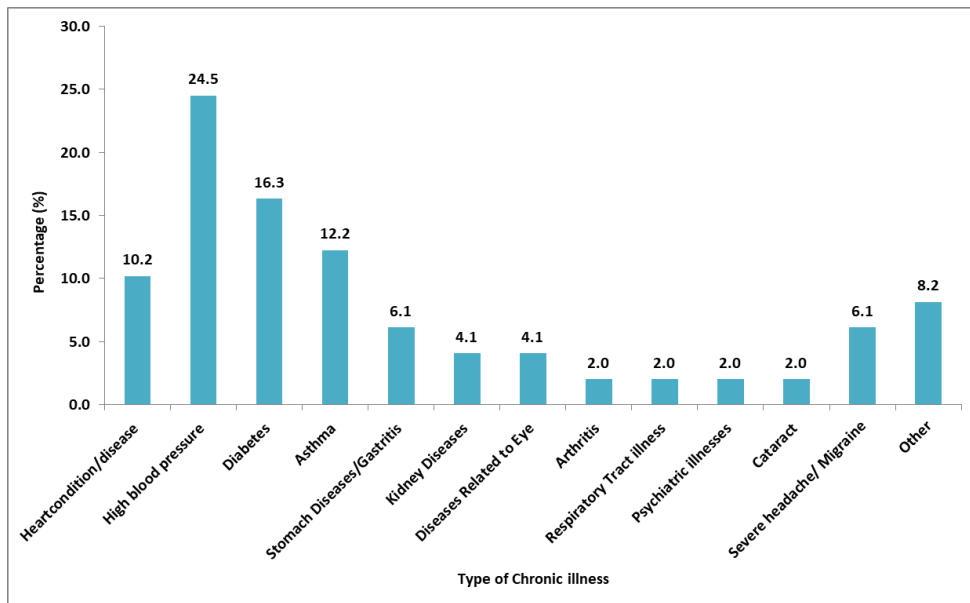


Figure 2: Distribution of Chronic illnesses among individuals who did not seek medical care when the country was in lockdown during the pandemic

Of the respondents who sought healthcare for chronic illness during the pandemic in lockdown (n=85; 73.9 %) and no-lock down (n=107; 93 %), the majority agreed that they had to buy drugs from outside (during lockdown n=53; 62.4%, no lockdown n=70; 65.4%).

Nearly 21% and 35% agreed that the clinics were not functioning on time during the no lockdown and lockdown period (Figure 4). Considering laboratory tests, there were delays at the lab or having had to get the test from outside.

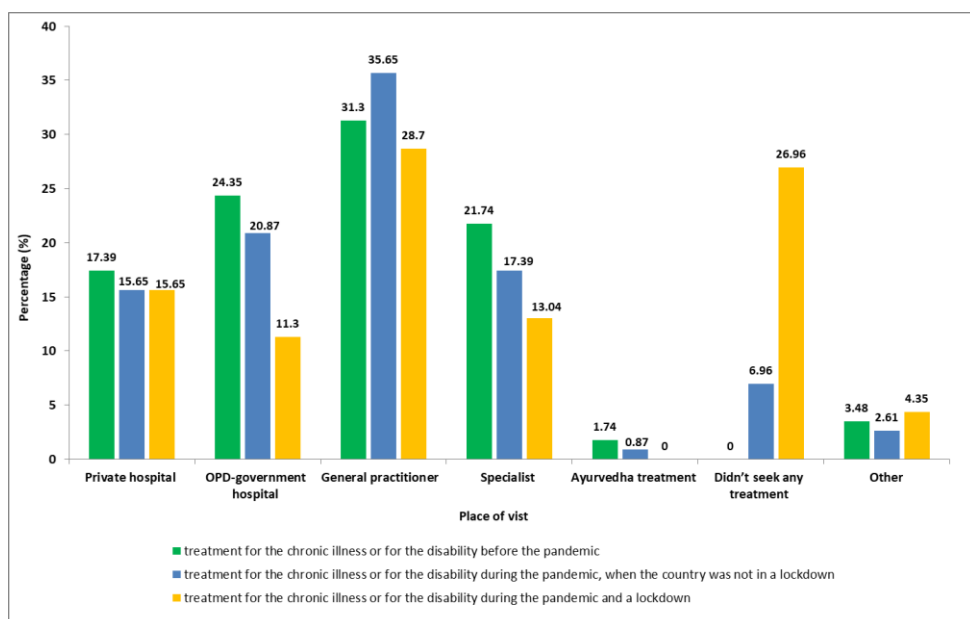


Figure 3: Care seeking behaviour before and during the pandemic (with and without lockdown) among patients with chronic illness.

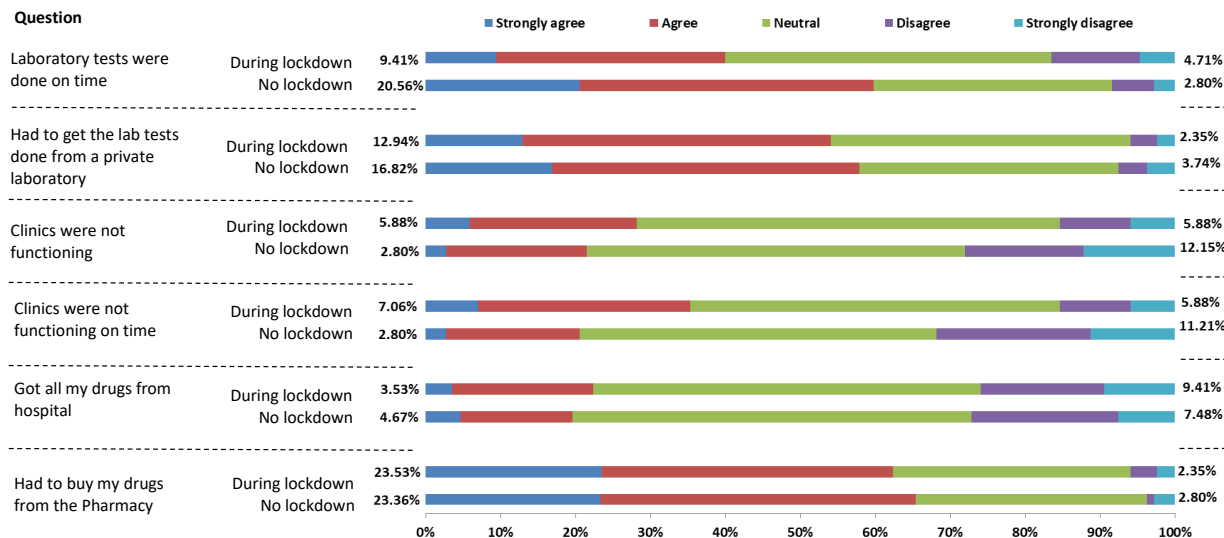


Figure 4: Difficulties encountered by people who sought healthcare for chronic illness or disability during the pandemic, when the country was in lockdown and no lockdown period

The Median cost incurred for food last month for the household is Rs. 30,000.00 (USD 153.45). The median healthcare expense incurred due to ILI during the time of pandemic was Rs.5000.00 (USD 25.57). The healthcare expense incurred due to NCDs before and after the pandemic remained same at Rs.5000.00 (USD 25.57).

Considering catastrophic healthcare expenditure, we calculated the Western province's catastrophic spending at 10% and 25% levels. Of the participants, 9% (n=39) and 3.2% (n=14) had incurred catastrophic healthcare expenses at 10% and 25% of their total income respectively.

Discussion

We conducted an e-survey to assess the economic impact and to identify the healthcare-seeking behaviour of the pandemic among residents in the Western province of Sri Lanka. Western province was chosen because it consisted of three districts (Colombo, Gampaha, and Kalutara) in which the highest caseloads were reported. Also, the Gampaha district is one of the districts where most of the vulnerable socio-economic groups reside [14]. COVID-19 was a health shock contributing to increased poverty rates, affected economic activity leading to tightened fiscal space. Health financing was challenged leading to service disruption and shortages. COVID-19 mitigation measures implemented to suppress the effects of the pandemic led to changes in healthcare utilization. The reduced health utilization could be due to various reasons, namely, income and expenditure-related factors, fear of illness, stigma related issues, limited accessibility of healthcare services;

leading to profound implications and may have a negative impact on the individual and the health system in the longer run.

Impact on the economy

COVID-19 mitigation and suppression efforts had many positive externalities from a health perspective; economically, it has many adverse effects. Typically, health shocks tend to be negative and would include declines in domestic demand, supply disruption, changes in consumption patterns, and investment [9]. The current study showed that the main job activity of 37%(n=114) of respondents changed. Fifty-five per cent of the participants reported that their monthly income was significantly affected. Thirty per cent(n=130) reported having an additional monthly income prior to the pandemic, and of them, 75% (n=97) had a negative impact on the additional monthly income. This is supported by another study conducted in Sri Lanka [15]. Business closure, partial operations of businesses were observed during lockdowns [14,15]. The government sector workers were not affected by lockdowns. However, private companies responded by cutting down labour / partial payments for employers.

Around 58% of employees in the country are in the informal sector [16], and while agricultural workers were allowed to continue with their occupation, most of these informal sector employees had no work in this period. Sri Lanka rolled out several responses to mitigate the hardships of the vulnerable and the affected business [9]. This study aims to provides evidence of wider socio-economic and health impacts due to a pandemic.

Healthcare seeking behaviour of patients with ILI during the pandemic

Only a third sought healthcare among the participants who had ILI during the pandemic. Majority of the participants went to a private hospital or a general practitioner. Due to various reasons a majority avoided the government healthcare institutions, although it is free of charge. A similar pattern was observed in a study conducted in Lahore, Pakistan where they have observed a drastic decline in healthcare utilization by public and the proportion who utilized government hospital reduced by half during the pandemic, with many preferring seeking healthcare at private institutions over public institutions[1]. A study conducted in India reports that people with NCDs, especially the marginalised population, have experienced difficulties in accessing healthcare. Additionally this study reports that these people have been affected financially and socially during the COVID-19 pandemic[17].

The avoidance of public healthcare institutions could be due to the worry of contracting the virus at the institution, unavailability of doctors, prolonged waiting time for treatment, and the lack of necessary drugs or could be due to relying on self-medication. This could be also due to not having trust in the public healthcare system and the effect of mitigation strategies implemented in curbing the disease transmission, such as limited public transportation and restricted mobility which happened during the peak of the outbreak. The resulting dissatisfaction would have prevented patients from seeking healthcare for ILI during the pandemic. Patient satisfaction which is an indicator of the healthcare quality delivered is considered as an outcome measure. Our findings are also similar to a study conducted in Australia among 1289 eligible respondents presenting to the Emergency Department (ED) [18]. This study reports 25% of the respondents avoided an ED presentation during the pandemic, of which 58% (179/309) used an alternative form of health care and 42% (130/309) self-managed.

The government had to bear costs of disease control and vaccination against COVID-19[19,20]. Many of the healthcare facilities were converted into COVID-19 treatment centers and the staff were reallocated for prevention and treatment. This scenario would have led to shortages of services, drugs, and resources for other health needs leading to lower healthcare quality and access. Social media generated misinformation misled

the people as well as lessened the trust placed on the government healthcare institutions. This might be a reason for inadequate care seeking and differed practices shown by a majority.

Healthcare seeking behaviour of patients with NCD

With a home-grown model of healthcare financing system, the functions within the health sector have been robust and resilient to some of the challenges of the pandemic. However, the pandemic disrupted services related to chronic illnesses, and people with chronic conditions were found vulnerable to COVID-19 related severe disease and mortality[9,17]. The reasons being healthcare workers being reassigned to duties related to COVID-19, care-seeking choices by patients, and the crisis heightened with more caseloads. This trend was observed globally, and a WHO survey [21] reports that 94% of countries had reassigned healthcare staff, and 53% of countries had disrupted services for hypertension, 49% for diabetes, and 31% for cancer treatment.

Similarly, it is observed in the current study that patients with chronic illnesses delayed/did not seek medical treatment during the pandemic, especially during the lockdown. The care-seeking options changed as patients avoided government hospital clinics for various reasons. High out of pocket expenditure, and stigma and fear resulted in a decreases demand for health services. Other than the mobility restrictions imposed limiting the accessibility to healthcare institution, stigma and fear and high out of pocket expenditure resulted in a decreases demand for health services [17,22]. The majority of the people who differed from healthcare-seeking were hypertensives, followed by diabetes, asthma, and heart diseases. This is similar to the findings of the WHO survey and a study conducted in India [17,21]. Delay in seeking for healthcare especially for chronic illnesses can inflict long term implications to the patient and the health system. Our findings resembles a study done in Ethiopia where the fear and the limited transportation being the major cause for the disruption in healthcare uptake by patients with NCD [23]. Another study conducted in Ethiopia reports that patients with chronic illness were dissatisfied with the healthcare system and that they avoided visiting the healthcare institutions due to doubts on safety precautions and lack of drugs in the institutions [22].

Out of pocket expenditure

The study also assessed the out-of-pocket expenditure during and after the pandemic for ILIs and chronic illnesses. High OOPE for health, would lead to reduce access to healthcare, deepen poverty and exacerbate inequalities. Considering the OOPE for ILI and chronic illness before and after the pandemic, the median was Rs. 5000.00. Catastrophic health expenditure, defined as out-of-pocket spending for healthcare that exceeds a certain proportion of a household's income with the consequence that the household suffers the burden of disease. Different approaches are being used to estimate the ability to pay for healthcare [24-26]. In the current study, we calculated the budget share, the ratio between out-of-pocket healthcare expenditure (numerator), and the pre-defined share of the household's ability to pay for healthcare (denominator) [25]. Considering the catastrophic healthcare expenditure, we calculated the Western province's catastrophic spending at 10% and 25% levels. Of the participants, 9% (n=39) and 3.2% (n=14) had incurred catastrophic healthcare expenses at 10% and 25% of their total income. The share of household consumption spent on healthcare is an indicator for financial burden related to health. Many disadvantages could occur when health systems rely on out-of-pocket healthcare payments, people may not seek the care they need or suffer severe financial hardship due to incurring such payments while seeking healthcare. Generally, health services will be traded for other necessities such as food and education. A community-based cross-sectional analytical study conducted among 316 individuals aged 30 years and above in Kerala reports that The expenditure on NCD care during COVID-19 was high and for a patient seeking care at a private facility, it was much higher compared to a government facility utilizer [27]. The estimation of the proportion of catastrophic expenditure is essential in understanding the patterns of healthcare expenditure during a pandemic. The study is not without limitations. Since this is a cross sectional survey it would limit causal

inferences between dependant and independent variables. This survey was an online survey it may have underrepresented people with limited experience in the use of digital technology. ILI and chronic conditions that were reported were self-reported health conditions and therefore might be subjected bias. However, in general people would know the chronic conditions that they suffer from and information pertaining to ILI was obtained from describing symptoms.

Conclusions and recommendations

Residents of the Western province were severely economically affected by the pandemic. Healthcare access and utilization patterns changed among patients with ILI and chronic-illnesses during the pandemic. Participants had incurred high out-of-pocket expenditures during care seeking. Difficulties encountered by people who sought healthcare for chronic illness or disability, and fear of obtaining services and prolonged waiting times would have alleviated financial hardships among people who sought care. The government needs to invest in resilient health systems to be better equipped to provide uninterrupted care for health needs in any circumstances. Health system responsiveness to a pandemic should be better planned to ensure equitable health coverage and uninterrupted delivery of routine services such as the provision of essential drugs and laboratory facilities. Innovative platforms should be developed and tested for accurate information, and disseminate details on functionality of government hospital clinics.

Abbreviations


GDP- Gross Domestic Product, ILI-Influenza like illness, NCD- Non-communicable Diseases, OOPE- Out of pocket expenditure, WHO- World Health Organization .

References

1. Arshad A, Bashir, I., Tariq, A., Ijaz, F., Aftab, R. and Farooq, O., . 3, p.e14. A Population based study on the healthcare seeking behaviour during the COVID-19 outbreak. *Discoveries Reports*,. 2020;3, p.e14. doi: 10.15190/drep.2020.8
2. Tandon A, Ivatts S, Cowley P, Roubal T, Dodd R, Pepperall J, et al. Economic contraction from COVID-19 in the Pacific: Implications for health financing. *Health Systems & Reform*. 2020;6(1):e1847991. doi: 10.1080/23288604.2020.1847991

- 3.WHO. WHO Coronavirus (COVID-19) Dashboard 2020 [Available from: <https://covid19.who.int/>].
- 4.Okereke M, Ukor NA, Adebisi YA, Ogunkola IO, Favour Iyagbaye E, Adiola Owzor G, et al. Impact of COVID-19 on access to healthcare in low- and middle-income countries: Current evidence and future recommendations. *The International journal of health planning and management*. 2021;36(1):13-7. doi: 10.1002/hpm.3067. Epub 2020 Aug 28.
- 5.Rainisch G, Undurraga EA, Chowell G. A dynamic modeling tool for estimating healthcare demand from the COVID19 epidemic and evaluating population-wide interventions. *International Journal of Infectious Diseases*. 2020;96:376-83. DOI:<https://doi.org/10.1016/j.ijid.2020.05.043>
- 6.Singh DR, Sunuwar DR, Shah SK, Karki K, Sah LK, Adhikari B, et al. Impact of COVID-19 on health services utilization in Province-2 of Nepal: a qualitative study among community members and stakeholders. *BMC health services research*. 2021;21(1):174. DOI:<https://doi.org/10.1186/s12913-021-06176-y>
- 7.Kurowski C, Evans, B. D., Tandon, A., Eozenou, H. P., Schmidt, M., Irwin, A., et al. HNP Discussion Paper, March 2021, World Bank, Washington, DC. From double shock to double recovery-implications and options for health financing in the time of the COVID-19,. World Bank, Washington, DC. © World Bank. License: CC BY 3.0 IGO.”: World Bank.; 2021.
- 8.Saksena P, Hsu J, Evans DB. Financial risk protection and universal health coverage: evidence and measurement challenges. *PLoS medicine*. 2014;11(9):e1001701-e.Doi:<https://doi.org/10.1371/journal.pmed.1001701>
- 9.Anuji Gamage and Amala De Silva. Public health interventions and economic implications due to COVID-19. *Journal of the College of Community Physicians of Sri Lanka*. 2020 26 (5). DOI: <http://doi.org/10.4038/jccpsl.v26i5.8355>
- 10.Rajapaksa L, De Silva P, Abeykoon P, Somatunga L, Sathasivam S, Perera S, et al. Sri Lanka Health System Review. World Health Organization; 2021.
- 11.Unicef Sri Lanka. Budget Brief: Sri lanka 2019. 2019. [Available from: Available from: <https://www.unicef.org/srilanka/media/1706/file/BUDGET%20BRIEF:%20HEALTH%20SECTOR.pdf>].
- 12.World Health Organization Hawii. Monitoring progress on universal health coverage and the health-related Sustainable Development Goals in the WHO South-East Asia Region. 2019.
- 13.Ahn S, Kim S, Koh K. Associations of the COVID-19 pandemic with older individuals' healthcare utilization and self-reported health status: a longitudinal analysis from Singapore. *BMC health services research*. 2022;22(1):66. DOI:<https://doi.org/10.1186/s12913-021-07446-5>
- 14.IPS. Sri Lanka: State of the Economy 2020. In: Lanka IoPSS, editor. Pandemics and Disruptions: Reviving Sri Lanka's Economy Beyond COVID-19. Colombo Sri Lanka Institute of Policy Studies Sri Lanka; 2020.
- 15.Wimalaweera A. Covid 19 & Beyond-The impact on the Labour Market of Sri Lanka. Sri Lanka: Department of Labour, Sri Lanka. 2020.
- 16.Department of Census and Statistics. Sri Lanka Labour Force Survey Annual Report - 2017. Colombo. Report No.: ISBN 978-955-702-096-9.
17. Singh K, Kondal D, Mohan S, Jaganathan S, Deepa M, Venkateshmurthy NS, et al. Health, psychosocial, and economic impacts of the COVID-19 pandemic on people with chronic conditions in India: a mixed methods study. *BMC Public Health*. 2021;21(1):685.

18. Gray J, Partington A, Karnon J. Access, Use, and Patient-Reported Experiences of Emergency Care During the COVID-19 Pandemic: Population-Based Survey. *JMIR Hum Factors*. 2021;8(3):e30878.
19. Epid Unit Sri Lanka. Epidemiology Unit Ministry of Health Sri Lanka [English]. Sri Lanka: Ministry of Health Sri Lanka; 2022 [updated March, 2019].
20. Ministry of Health PS. VACCINATION STATISTICS 2022 [Available from: <https://covid19.gov.lk/vaccination-statistics.html>].
21. WHO. COVID-19 significantly impacts health services for noncommunicable diseases 2020 [Available from: <https://www.who.int/news/item/01-06-2020-covid-19-significantly-impacts-health-services-for-noncommunicable-diseases>].
22. Deriba BS, Geleta TA, Beyane RS, Mohammed A, Tesema M, Jemal K. Patient Satisfaction and Associated Factors During COVID-19 Pandemic in North Shoa Health Care Facilities. *Patient Preference and Adherence*. 2020;14:1923-34. doi: 10.2147/PPA.S276254
23. Aklilu TM, Abebe W, Worku A, Tadele H, Haile T, Shimelis D, et al. The Impact of COVID-19 on Care Seeking Behavior of Patients at Tertiary Care Follow-up Clinics: A Cross-Sectional Telephone Survey. Addis Ababa, Ethiopia. *medRxiv*. 2020:2020.11.25.20236224. doi: <https://doi.org/10.1101/2020.11.25.20236224>
24. O'Donnell O, van Doorslaer E, Rannan-Eliya RP, Somanathan A, Adhikari SR, Akkazieva B, et al. Who pays for health care in Asia? *J Health Econ*. 2008;27(2):460-75. doi: 10.1016/j.jhealeco.2007.08.005.
25. Wagstaff A, Eozenou P, Smitz M. Out-of-Pocket Expenditures on Health: A Global Stocktake. *The World Bank Research Observer*. 2020;35(2):123-57.
26. Xu K, Evans DB, Kawabata K, Zeramdini R, Klavus J, Murray CJ. Household catastrophic health expenditure: a multicountry analysis. *The Lancet*. 2003;362(9378):111-7. DOI: 10.1016/S0140-6736(03)13861-5
27. Mathew R, Olickal JJ. Out-of-pocket expenditure on non-communicable diseases during Covid-19. A cross-sectional study from a semi-urban area of Kannur, Kerala. *Clinical Epidemiology and Global Health*. 2023;19:101210. DOI: 10.1016/j.cegh.2022.101210



**Submit your next manuscript to
Anuradhapura
Medical Journal**

Submit your manuscript at
<http://amj.sljol.info/>