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Impact of sanitary restrictions related to the COVID-19 pandemic on the quality of life of the Sri Lankan population.

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ABSTRACT

INTRODUCTION: Coronavirus disease 2019 (COVID-19) is a relatively new disease in Sri Lanka and across the world. It has had a significant impact on all aspects of human life, contributing to a decline in public health. Due to an increasing number of reported and suspected cases, the quality of life in many communities has deteriorated. This study aimed to determine the public perception regarding COVID-19 prevention and work-life balance during the COVID 19 pandemic period in Sri Lanka.

MATERIAL AND METHODS: It is a descriptive cross-sectional study. A cross-sectional online survey of 648 Sri Lankan citizens was conducted from the 30th of April 2020 to the 17th of January 2021. Participants were identified through the snowball sampling method. A pre-tested questionnaire was used for data collection which consisted of details of demographic characteristics, COVID-19 prevention measures, and work-life balance during the curfew period. Descriptive statistics were employed in the data analysis.

RESULTS: Regarding COVID-19 prevention, 94% of the participants perceived that COVID-19 is highly contagious, and 93% believed that there is no proper established treatment plan for COVID 19. The majority of the participants rated self-quarantine (98.9%) and washing hands frequently (81.9%) as an effective measure for preventing COVID-19. 96.8% of participants accepted to cooperate with self-quarantine if they were found to have fever and cough. The social stigma was reported as a major constrain for expressing travel history. In the aspect of work-life balance, the majority of the participants were economically unstable (53.2%) and spending time happily with their families (94.8%) during the COVID-19 curfew (lockdown) period. 95.4% of the participants have not broken any laws (laws related to curfew/ quarantine) during the COVID-19 epidemic in Sri Lanka. The monotone of activities was identified as a major cause for increasing stress during the COVID-19 lockdown period.

CONCLUSIONS: The findings indicated that Sri Lankans who participated in the survey have an acceptable level of awareness in COVID-19 prevention measures, and that monotony of sedentary life was the leading cause of stress throughout the lockdown period.

KEY WORDS: COVID-19, prevention & control, work-life balance, baseline survey, Sri Lanka

INTRODUCTION

Coronavirus disease 2019 (abbreviated “COVID-19”) is an emerging respiratory disease that is caused by the novel coronavirus and was first detected in December 2019 in Wuhan, China [1]. An unknown etiological cluster of 40 pneumonia cases was reported, and among them, some were traders and dealers at the Huanan Seafood Market [2]. The new virus was named the Novel Corona Virus (2019-nCoV) by the World Health Organization (WHO) after working along with Chinese authorities [3]. On the 11th of March, WHO declared COVID-19 is a pandemic, whereas an estimate of 114 countries was affected [4]. The site of infection determines the route of transmitting the virus among people; in the case of COVID-19, it directly spreads via the respiratory system as droplets and secretion and indirectly through contaminated inanimate surfaces. The disease is highly infectious, which represents fever, dry cough, fatigue, myalgia, and dyspnea as the leading clinical symptoms [5].

Since the COVID-19 was declared as a pandemic, many countries ceased their local and international transportation. As a result, the concept of “*working from home*” has emerged in many developing countries and the traditional education system has converted into online education [6]. Since the educational institutions have postponed the examinations, this has increased the stress of the young minds. Due to lock-down, anxiety and social concerns have affected to the various extends of every individual. According to recent evidence, the individuals who are kept in isolation and quarantine, have shown significant distress from anxiety to post-traumatic stress symptoms [7]. The rapid spread of COVID-19 has increased anxiety and fear among the general public. Fear is always followed by hatred and stigma [8]. Certain communities (those from India's north-east) are being criticized for the unexpected epidemic due to social stigma [9]. It is vital to eliminate this social stigma in order to convince individuals not to hide their illnesses and to seek medical assistance immediately [10]. Most countries have joined hand with WHO, which provides expert guidance to public questions to manage and overcome fear, stigma, and discrimination associated with COVID-19 [11]. The continuous research on COVID-19 can help identify myths and educate the general population regarding the prevention and management methods of this infection [12].

By the beginning of February 2021, the world statistics on COVID-19 represented 103 million, with COVID 19 and 2.24 million deaths [13]. Currently, the highest cases were reported by the United States of America, India, Brazil, Russia, and the United Kingdom [13]. Further, as a preventive measure, vaccination programmes have been implemented in most countries since the beginning of February 2021.Considering Sri Lanka, the first confirmed case of a coronavirus-infected person was reported on 27th January 2020 [14]. The patient was a Chinese national who came to Sri Lanka as a tourist two weeks prior to the incident. At the initial stage (1st wave), 12 hospitals around the country were arranged and established as treatment centers for the suspected people with COVID 19. By the 23rd of April, in the first wave, the number of confirmed cases has risen to 330+ cases. The second wave of the COVID-19 was reported on 4th October 2020, and it was reported with 3,396 cases with 13 deaths [15].

A year later, since detecting the first COVID 19 case in Sri Lanka, the cases have increased to 66409+ and 332 deaths (2nd February 2021) according to the statistics published by Sri Lankan Epidemiology Unit in 2021 [15].

The government of Sri Lanka enforced a curfew from time to time in different areas, provinces, as well as an all island curfew, which was imposed from 20th March to 23rd March 2020. Furthermore, an island-wide curfew was established with the country locked down for two months with extreme travel restrictions in place in an effort to reduce the spread of COVID-19 [16]. The Sri Lankan government has increased the facilities for quarantine, COVID-19 testing methods, screening methods, and decisive social interventions such as the compulsory public use of face-masks and the limitation of public meetings to control the transmission of COVID 19 within the community [16, 17].

Sri Lanka has its own socio-economic problems as a middle-income nation, trying to cope with limited resources and funding. As an example, tourism remains the key contributor to the national income. However, travelers are required to adhere strictly to certain government-introduced policies. These include higher visa processing fees, a negative Polymerase Chain Reaction (PCR) test before and after arrival in the country, as well as a mandatory quarantine of 14-21 days for those with symptoms [16, 17].

Sri Lanka has acquired between 2 and 3 million doses of the Oxford-AstraZeneca vaccine from its Indian manufacturer, the Serum Institute of India. In view of the high priority prerequisite of safeguarding critical healthcare services for the nation, initial vaccination against COVID-19 were provided to the healthcare staff and other front line support workers (from security, police, port of entry services) as recommended by the National Advisory Committee on Communicable Diseases. This vaccination programme was launched on the 29th of January 2021 [18].

Anyhow, the disease is newer to Sri Lanka, and the knowledge related to COVID-19 is unknown due to the lack of experience and literature. Furthermore, this pandemic situation has affected the general lifestyles of the citizen and because of the curfew laws enforced by the government, the emotional instability has increased and has altered the balance between work and daily living among citizens. This study has investigated the knowledge attitude and work-life balance towards COVID-19 of Sri Lankan residents during the period of the rapid rise of the COVID-19 outbreak.

MATERIAL AND METHODS

Study design

A quantitative approach was applied to attain the objective of this study. A survey is the most efficient method to assess the perception of large populations. In this study, a cross-sectional survey was considered to obtain public perception on COVID-19 for the Sri Lankan context. Data collection was performed online using the google form. The call for participation was made on social media and email.

Ethical Statement

Ethical approval was obtained from the Ethics Review Committee of the KAATSU International University Sri Lanka (Reference Number KIU/ERC/20/40). Participants' information sheet was provided with an anonymized online questionnaire. Participants were clearly informed that the voluntary submission of the questionnaire indicates their consent to participate. The collected data were stored in the investigator's personal computer, and only the researcher had access to the database. Any single data was not be used individually and it was analyzed as a whole and was interpreted using statistics while ensuring the participants' privacy.

Recruitment procedure

A pre-tested questionnaire was transformed into an electronic version in a google form embedded with the participants' information sheet. The anonymized questionnaire was sent through emails (to 20 close contacts), WhatsApp, and Facebook. The recipients of the google form were encouraged to share it, among their networks. Inclusion criteria was set up as Sri Lankan citizens above the age of 18. The calculated sample size was 384 (CI - 95%, Prevalence - 50% as an estimate). However, successively, through a snowball sampling, 648 participants were recruited to the study. The study was conducted from the 30th of April 2020 to the 17th of January 2021.

Study instrument

A questionnaire was developed by the research group with the consultation of the Sri Lankan public health experts. The questionnaire consisted of three main parts: (1) sociodemographic details of the participants; (2) perception on COVID-19 preventive measures; (3) work-life balance during the lockdown period. The survey was offered in the English and Sinhala and Tamil languages. The final version of the questionnaire was pre-tested with five participants who were fluent in all three languages.

Statistical analysis

Descriptive statistics were employed to calculate public perception in percentages and frequencies. All analyses were done by using IBM SPSS ver. 26.0 (IBM Corp., Armonk, NY, USA).

RESULTS

Participants' demographic characteristics

Figure 1 illustrated the participants' and their geographical location. Sri Lanka is an island divided by nine provinces. The majority of the study participants represented Western province which accounts for 52.6%. Meanwhile, the least participation was obtained from North-Central province (1.5%). The mean age of the participants was 25.61(±6.00). Interestingly, females (73.5%) highly responded to the questionnaire. The majority of the participants (31.6%) were educated up to graduation (Basic Degree).

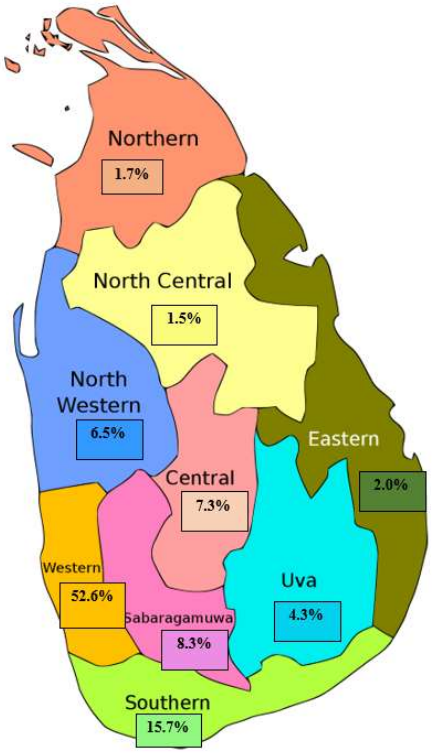

Figure 1. Geographical location of the participants'.

Public perception regarding the COVID-19 prevention

Public perception regarding COVID-19 prevention was assessed using 10 statements which were rated by a 3-point Likert scale of "yes", "no", and "do not know" (Table 1). The majority of the participants believed that COVID-19 is a highly contagious disease (94%) and self-quarantine could prevent the spreading of the disease (98.9%), while 87.9% agreed that washing hands frequently will stop spreading the disease. WHO highly recommended personal proactive equipment's usage and as an observation many of the Sri Lankans were noticed to be wearing masks made from cloth materials. In assessing the perception related to mask-wearing and personal protection, 60.8% of the participants agreed that wearing cloth masks will not provide protection against COVID-19. The majority of the participants have perceived that fever (88%), cough (94%), sore throat (88.1%), and difficulty in breathing (86.3%) are the frontline symptoms of COVID-19.

Result 99.2% of the participants accepted that if they were represented with fever & cough they are ready to inform to the relevant health authorities. Interestingly, 96.8% of the participants informed that they will self-quarantine, if they found them selves to have fever and cough. Meantime, 93% believed that there is no established treatment for COVID-19 and 96.3% stated that traveling is unsafe while curfew is enforced due to COVID-19. The participant was also asked about the travelers' reasons for hiding international traveling history. The majority (48%) stated that social stigma is the main concern for hiding the travel history (Figure 2).

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Table 1. Perception regarding the COVID-19 prevention.

No	Statement	Responses in %		
		Yes	No	Don't know
1.	COVID-19 is a highly contagious disease	94.0	6.0	-
2.	Self-quarantine can prevent the spreading of the disease	98.9	1.1	-
3.	Washing hands frequently will stop spreading the disease	87.9	8.3	3.7
4.	Masks prepared by a cloth will provide protection against Corona-virus transmission.	60.8	39.2	-
5.	Regarding the symptoms of COVID-19:			
	Fever is a symptom of the COVID-19	88.0	8.3	3.7
	Cough is a symptom of COVID-19	94.0	4.3	1.7
	Sore throat is a symptom of COVID-19	88.1	8.2	3.7
	Difficulty in breathing is a symptom of COVID-19	86.3	12.0	1.7
6.	If you found that you are having a fever & cough will you be ready to inform it to the relevant health authorities?	99.2	0.8	-
7.	Will you able to self-quarantine if you found yourself to have fever and cough?	96.8	-	3.2
8.	There is no proper established treatment for COVID-19	93.0	7.0	-
9.	Do you think if curfew is not enforced, traveling across the country is safe during this pandemic period?	3.7	96.3	-

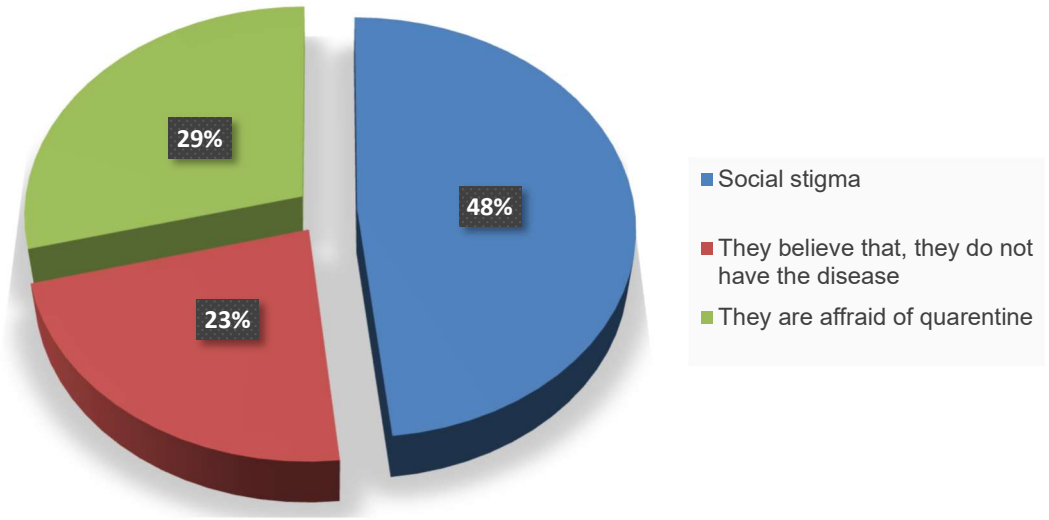

Figure 2. Reason for hiding international travel history.

Work life balance during the COVID-19 pandemic

In assessing the work-life balance, 53.2% of the participants stated that their current income (during the COVID-19 epidemic) is inadequate to withstand the immediate expenses, and 59.3% of the participants perceived that income was neither hard nor easy to when fulfilling the basic human needs such as food, and medicine. The majority of the participants (94.8%) were happy as they were able to spend more time with their family members during the COVID-19 curfew period in Sri Lanka. In assessing the mental stability during the COVID-19, only 38% of the participants stated that they are mentally unstable or anxious because of the COVID-19 pandemic. According to this study, 60.5% of the participants stated that working from home is harder than working at the office. Among the participants, 48.9% stated that their office/ workplace gives too many online tasks to complete within a specific deadline. Furthermore, 71.6% agreed that established workplace-related restrictions such as salary deductions, leaves, and workplace workload are affecting their mental and physical health.

Table 2. Work-life balance during COVID-19.

No	Statement	Responses in %		
		Agree	Disagree	Neutral
1.	My current income (during COVID-19 epidemic) is enough to withstand my immediate expenses	46.8	53.2	-
2.	It is hard to find/ get basic needs such as food & medicine	20.4	20.4	59.3
3.	I am happy that I am spending more time with my family members	94.8	5.2	-
4.	I am mentally unstable or anxious because of the COVID-19 pandemic	38.0	23.0	39.0
5.	My office / workplace gives me too many online tasks to complete	48.9	24.4	26.7
6.	It is easier to work at home than in the office	39.5	60.5	-
7.	Currently established workplace-related restrictions such as salary deductions/ leaves/ workload are affecting my mental and physical health	71.6	28.4	-
8.	I have recently broken laws (laws related to curfew/ quarantine) during the COVID-19 epidemic in Sri Lanka	4.6	95.4	-

The study examined reasons that triggered the stress during the COVID-19 pandemic, majority of the participants (53.3%) perceived monotone activities as the primary reason for stress, followed by the daily raise of the patient count (46.7%). Interestingly, household violence remained in the bottom line (2%) factor for increasing stress. (Figure-2).

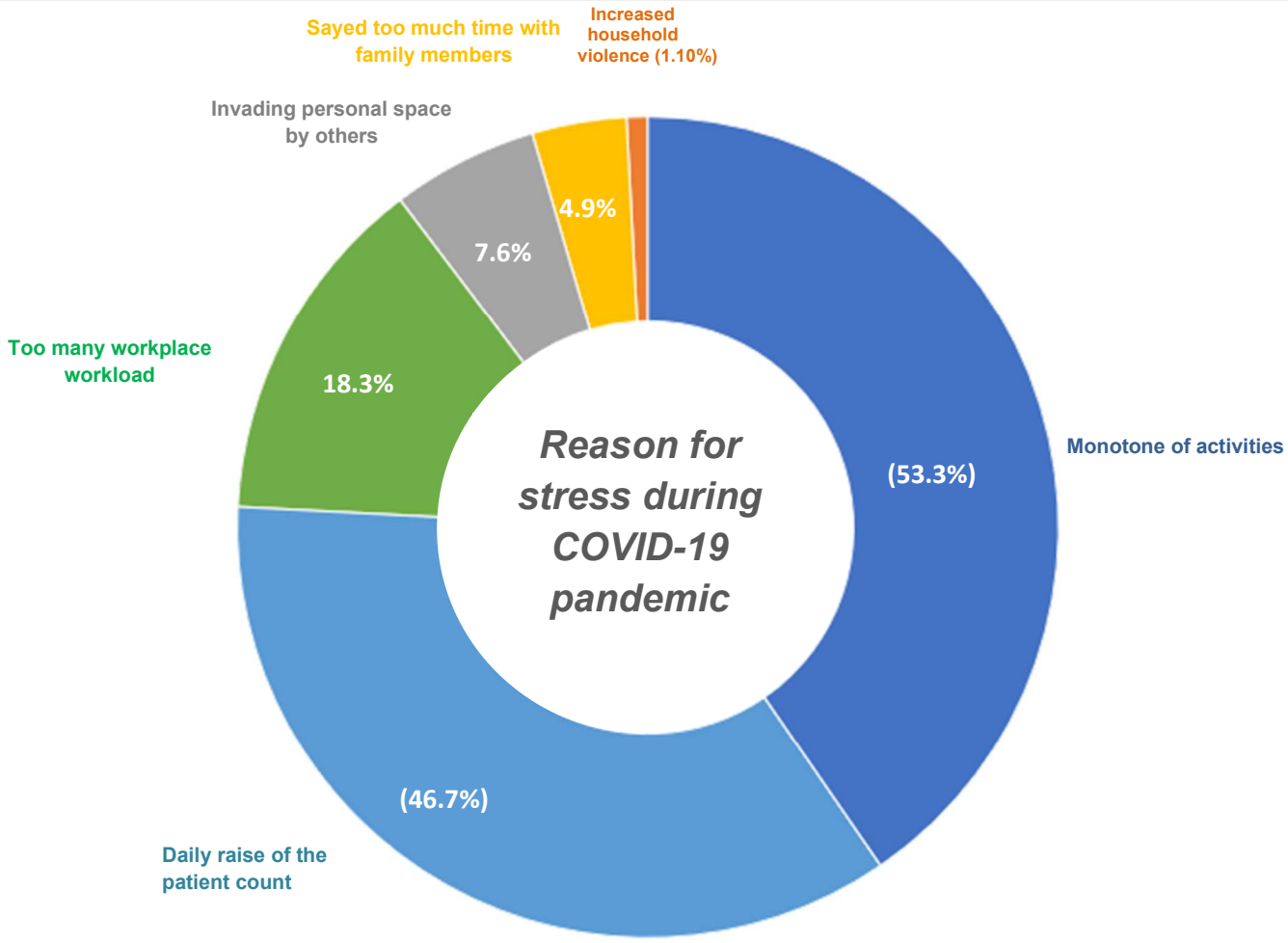

Figure 2. Reasons for increasing the participants stress during COVID-19 pandemic.

DISCUSSION

Since the COVID-19 is a novel disease in the Sri Lankan context, published data related to the disease condition was extremely limited within the country. Therefore, the current baseline survey is aimed to assess the public perspective regarding the prevention of transmission and work-life balance during the COVID-19 pandemic.

The majority of the study populations were from the Western and Southern provinces (52.6% & 15.7% respectively) of Sri Lanka. The highest representation of being, Western and Southern province population is given credibility to this study for the following four reasons: firstly, the Ministry of Health, Sri Lanka has declared the Western province as the highest risk area according to the largest number of confirmed cases. Secondly, the two provinces represent two different ethnic groups in Sri Lanka. Thirdly, both provinces are the major transportation hubs in Sri Lanka and in corporate international airports and harbors. The study revealed that the majority of the participants had a high level of awareness about COVID-19 prevention. The finding was supported by other studies conducted in different Asian countries [19-21].

However, the discrepancy between the study instrument and the scoring system does not allow to compare the perception level across the studies. Since Sri Lanka is a developing country with minimal public welfare initiative, 46.8% of the participants have perceived that their current income (during the COVID-19 epidemic) is enough to with stand their immediate expenses and have not perceived it as hard to find/ get their basic needs such as food & medicine. These findings provide a surprising reaction to pragmatic economic prediction in the South Asian region [22-24]. Approximately 95% of the participants perceived happiness to spend more time with their family members during the lockdown period, while studies from other developing countries reported unpleasant outcomes [25, 26]. Interestingly, only 1.1 % of the participants stated that in-house violence increased during the COVID-19 pandemic (Figure-2). These finding are considerably low with the prediction of the United Nations Population Fund (UNPF). The UNFPA forecasted a 20% increase in domestic violence during the pandemic [27].

The majority of the participants (48%) perceived that social stigma is the main reason for hiding international traveling history. Social stigma is recognized as a hidden threat to eliminating the COVID-19 pandemic [28]. Sri Lanka is a culturally tight country [29] where people may think expressing their travel history may end up in discrimination against others. This can be identified as a major risk factor that can increase failure rates in supporting the quarantine process.

Considering the limitation of the study, this is an online survey. Convenience samples were recruited through networks of researchers and social media (Facebook and WhatsApp). Thus, there may be a possibility of having missed underprivileged populations who do not have the facilities to access the online survey. Nevertheless, the preliminary finding of the public perspective may add valuable insights to the health professional for designing COVID-19 preventive measures for the Sri Lankan population. Further, future research is needed to observe the public attitude changes after the introduction of the COVID-19 vaccine and qualitative approaches would also be recommended in order to understand the public insights of COVID-19 prevention and work-life balance.

CONCLUSIONS

In summary, the present study was able to provide a preliminary prediction of public perception regarding preventing the transmission and work-life balance during the COVID-19 pandemic in Sri Lanka. The findings suggest that Sri Lankans who participated in the survey have an acceptable level of awareness regarding the preventive measure of COVID-19. Social stigma has been identified as a primary reason for hiding the travel history. Participants were economically stable, enjoyed with their family, and stressed by the monotone of activities during the lockdown (curfew) period.

SUPPLEMENTARY INFORMATION

Funding: *This research received no external funding.*
Institutional Review Statement: *The study was conducted according to the guidelines of the Declaration of Helsinki.*
Informed Consent Statement: *Informed consent was obtained from all subjects involved in the study.*
Data Availability Statement: *The datasets generated and analyzed during the current study are available from the corresponding author on reasonable request.*
Conflicts of Interest: *The authors declare no conflicts of interest.*

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