

Research Article

Validation of Fear of COVID-19 Scale and Assessment of Fear of COVID-19 Among People Living in High-risk Zones in Sri Lanka During the First and Second Waves of the Pandemic

Rathnayake, N.¹, Lekamwasam, S.², & Lokanwaththa, C.S.³

¹Department of Nursing, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka

²Population Health Research Centre, Department of Medicine, Faculty of Medicine, University of Ruhuna, Sri Lanka

³Faculty of Nursing, Lincoln University, Sri Lanka

Abstract

Background and objective: Evaluation of fear associated with COVID-19 is imperative to mitigate the negative effects of the pandemic on community. The fear associated with COVID-19 has not been evaluated systematically in Sri Lanka. This study assessed the validity of the Sinhala version of Fear of COVID-19 scale (FCV-19S) and determined the fear of COVID-19 among people in high-risk zones in Sri Lanka during the first and second waves of the pandemic.

Methods: The FCV-19S, a seven-item tool was cross-culturally adapted and self-administered among 148 individuals, conveniently selected from the general public from Galle, Sri Lanka. The psychometric properties including reliability and validity were evaluated. Subsequently, the validated FCV-19S was self-administered among 325 individuals from high-risk zones of Sri Lanka to assess the fear of COVID-19 and associated factors.

Results: FCV-19S showed a high test re-test reliability measured with intra-class correlation=0.86 (0.81-0.90). Cronbach's alpha was 0.87 after deleting the item 3 that did not meet satisfactory validity criteria. The remaining six items showed single-factor structure (Eigen value >1, cumulative variance; 60.8%) in Factor Analysis with Principal Component Analysis. A moderate positive correlation between FCV-19S score and Depression, Anxiety and Stress Scale-21 (DASS-21 score) ($r=0.63$, $p<0.001$) was observed confirming the concurrent validity. Only 40.6% ($n=132$) experienced high level of fear. Those with secondary education ($OR=0.43$) and tertiary education ($OR=0.34$) had low level of fear compared to those with no education and only with primary education. Those living with family members ($OR=7.96$) compared to those living alone and being positive or suspected of COVID-19 or exposed to a COVID-19 patient ($OR=3.71$) compared to those with no history of disease had high level of fear.

Conclusions: Modified, 6-item, Sinhala version of FCV-19S showed adequate psychometric properties. The proportion of people who experienced fear in high-risk zones of COVID-19 was relatively high. Education, living conditions and history of exposure were associated with fear.

Keywords : COVID-19, fear, high risk zones, Sinhala version of FCV-19S, Sri Lanka

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Correspondence: N.Rathnayake, Department of Nursing, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka. Email: nirmala.priyanthi@gmail.com <https://orcid.org/0000-0002-0666-2975>

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Introduction

The Coronavirus disease 2019 (COVID-19) pandemic is considered the most crucial global health disaster of the century and the greatest challenge that humankind has faced since the Second World War. It is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) which was first identified in December 2019 in Wuhan, China resulting the current pandemic (Lai et al., 2020). Sri Lanka reported the first case in early 2020 and later in the same year, the first and second waves emerged. Initially the spread was limited to small sporadic clusters and by April 2021 community spread occurred (Ministry of Health Sri Lanka, 2021; WHO, 2020). Subsequently, a few districts were identified as high-risk zones, including Colombo, Gampaha, Kalutara and Puttalam, based on epidemiological data (Ministry of Health Sri Lanka, 2021).

The COVID-19 pandemic has caused widespread concern, fear and stress, which are partly natural and expected reactions to the changing and uncertain situation (Mertens et al., 2020). People feared the infectivity of the virus and were concerned about the excess mortality observed, particularly among vulnerable populations (Pappas et al., 2009). This led to a series of other psychosocial manifestations including stigmatization and discrimination (Soraci et al., 2020). Fear when intense can interfere with rational thinking and decision making (Baminiwatta et al., 2021). It is likely that different categories of people react differently to stressful situations. The psychological distress such as fear in situations such as a pandemic can lead to disruption of day to day lives and unexplained somatic symptoms (Pappas et al., 2009). Furthermore, prolonged fear can lead to severe mental health sequelae such as anxiety disorders and depression (Baminiwatta et al., 2021; Brooks et al., 2020; Chandradasa & Kuruppuarachchi, 2020; Pappas et al., 2009).

People living in high-risk areas may have experienced fear of COVID-19 more than those in low-risk areas and it may have persisted even after the removal of movement restrictions (Baminiwatta et al., 2021). Repeated health warnings by media and health authorities may have added to this uncertainty and anxiety (Chandradasa & Kuruppuarachchi, 2020). Changes in regular lifestyle and restricted availability of essential commodities can aggravate fear and stress further affecting people's quality of life negatively (Brooks et al., 2020).

The assessment of fear of COVID-19 is essential to implement social support systems (Soraci et al., 2020). A new tool named the Fear of COVID-19 Scale (FCV-19S), assessing an individual's fear of COVID-19 has recently been developed in Iran (Ahorsu et al., 2020). FCV-19S (Ahorsu et al., 2020) is a seven-item self-administered scale. The respondents have to answer the items by providing their agreement in a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree) with scores ranging from 7 to 35. Higher the score indicates the greater the fear of COVID-19. FCV-19S has been validated and used in several other nations affected by the COVID-19 pandemic such as Arabic (Alyami et al. 2020), Bangla (Sakib et al., 2020), Italian (Soraci et al., 2020), Hebrew (Bitan et al., 2020), Russian (Reznik et al., 2021), Turkish (Satici et al., 2021), Chinese (Pakpour et al., 2020), Urdu, Malay (Pang et al., 2020), Brazilian Portuguese (Abad et al., 2020), Brazilian (Giordani et al., 2020), Cuban Spanish (Broche-Pérez et al., 2020) and Greek (Tsiropoulou et al., 2021).

Evaluation of fear associated with COVID-19 is imperative to mitigate the negative effects of the pandemic on community (Ornell et al., 2020). In Sri Lanka, several studies focused on physical and psychological burden of COVID-19 have been published (Baminiwatta et al., 2021; Chandradasa & Kuruppuarachchi, 2020). However, unavailability of a validated short tool to evaluate fear of COVID-19 is a drawback.

Therefore, the current study is aimed to assess the validity of the Sinhala version of FCV-19S and to determine the fear of COVID-19 in people living in high-risk zones in Sri Lanka during the first and second waves of the pandemic.

Methods

A descriptive cross-sectional study was conducted in two stages; Stage I - validation of the scale (first wave; June to July 2020) and Stage II- evaluating the fear of COVID-19 (first and second waves; from August to December 2021).

Stage I - Validation of FCV-19S

The validation process of the scale included the cross-cultural adaptation and analysis of psychometric properties.

Cross-cultural adaptation of FCV-19S

Standard guidelines described by Beaton et al (2000) was followed for cross-cultural adaptation of the Sinhala version. The original English version was translated (forward translation) to Sinhala language by two independent persons; a health professional (the purpose informed) and a lay person (the purpose uninformed), who are fluent in both Sinhala and English languages. The two Sinhala versions were then merged together in to a single questionnaire to maximize the clarity of items and synthesized a common translation by the investigators. The synthesized translation was back translated to English language (backward translation) by two independent persons, fluent in both Sinhala and English languages. The original English version and the back translated versions were compared. However, there were no gross inconsistencies or conceptual errors. A group of experts (a physician, a medical officer, a nursing practitioner, a psychologist, a psychiatrist and the forward and backward translators) independently reviewed all the versions and decided a pre-final Sinhala version ensuring the semantic, idiomatic, experiential and conceptual equivalences with the original version emphasizing the content validity. The pre-final version was further assessed for clarity,

understandability, naturalness of items and time taken to complete the questionnaire in a focus group discussion with ten participants including five individuals from general public from Galle district and five professionals selected from the Faculty of Allied Health Sciences and Faculty of Medicine, University of Ruhuna.

Selection of the sample for validation

Conveniently selected 148 (sample size = 1 item:15 subjects for minimum requirement) (Hair, 2006) individuals conversant in Sinhala were the sample. It included healthcare staff (medical officers, nurses and public health inspectors) and security personal (Police and Military services) who were actively involved in COVID-19 activities and the general public in Galle district.

Research instrument used for concurrent validity Depression, Anxiety and Stress-21 scale (DASS-21) (Oei et al., 2013) was used to assess concurrent validity of the scale. DASS-21 is a scale including three sets of self-report sub-scales designed to measure the emotional states of depression, anxiety and stress. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items. This scale has been translated into Sinhala language and validated previously (Rekha, 2012).

Administration of questionnaires for validation

Sinhala version of FCV-19S and DASS-21 was first self-administered to the 148 participants, thereafter, only the FCV-19S was re-administered among the same individuals after two weeks of the first administration.

Analysis of psychometric properties of the FCV-19S

The test-retest reliability of FCV-19S was examined using intra-class correlation coefficient (ICC) and comparing the overall scores of two consecutive administrations (Arafat et al., 2016). Internal consistency was assessed with Cronbach's alpha. Cronbach's alpha of 0.7 or

higher indicates acceptable level of reliability (Arafat et al., 2016). Construct validity was evaluated by Factor Analysis (FA) performed with Principle Component Analysis (PCA) while keeping Varimax with Keiser normalization as rotation method to determine whether the latent item structure mirrored the three domains specified in the instrument construction (Arafat et al., 2016). The Kaiser-Meyer-Olkin (KMO) and Bartlett's test of Sphericity statistics was analyzed and correlation matrix was observed. The number of extracted components was determined by the Scree plot, percentage of variance explained by each component, number of Eigen values over one (Kaiser-Guttman rule) (Arafat et al., 2016). Items were considered representative of a component if their individual item loading is ≥ 0.40 (Arafat et al., 2016). Concurrent validity was evaluated with Pearson correlation coefficients between the overall scores of FCV-19S and DASS-21 (Arafat et al., 2016). All analyses were performed using SPSS (version 25).

Stage II - Evaluation of fear of COVID-19

Selection of sample for assessment of fear

General public aged above 18 years who are conversant in Sinhala, living in four high-risk districts in Sri Lanka, namely Colombo, Gampaha, Kalutara and Puttalam districts participated in the study (Ministry of Health Sri Lanka, 2021). They were recruited through multiple sources such as social media and telephone directories using the non-probability sampling approach.

The questionnaire including socio-demographic and health characteristics (consisting of age, gender, education, living status, income, history of exposure to COVID-19) and FCV-19S was developed as a Google form.

The sample size was calculated using the formulae; $n = p(1-p) \times z^2/d^2$ (Lwanga & Lemeshow, 1991), assuming that 50% of general public in the selected districts having

high level of fear and further adding 50% for non-responses ($n=576$). Hundred and forty-four individuals from each district were selected to form the sample of 576. The questionnaires were distributed among them through either email or social media.

Reminders were sent twice for those who did not respond, after one month of sending the questionnaire. The second reminder was sent after two weeks and thereafter, no further reminders were sent.

Analysis of fear of COVID-19 and associated factors

Descriptive statistics such as mean (SD) and frequencies (%) were used to describe fear of COVID-19 among the study participants. Level of fear was categorized as low and high taking the mean as the cut-off point which is an in-house categorization. Independent sample t-test was performed to identify the difference of fear between categories of socio-demographic characteristics. Further, socio-demographic characteristics associated with fear were identified using the Chi square test of independence. Univariate logistic regression analysis was performed with unadjusted (crude) OR at 95% CI to identify the factors that are associated with fear. Multiple logistic regression (backward-conditional) was applied for the variables that were significant in the Univariate analysis for retaining only the most significant associated factors for fear and presented with adjusted OR and 95% CI. The level of significance was considered as <0.05 .

Ethical considerations

Ethical clearance was obtained from Ethics Review Committee, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka (Ref no; 02.06.2020:3.4). Written informed consent was obtained online from all participants included in Stage I and Stage II; the first part of the relevant Google form included the informed consent. The subjects were able to proceed

Table 1: Internal consistency evaluation of individual items of FCV - 19S

Item no	Item	Mean (SD)	Scale means if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's Alpha if Item deleted
1	I am most afraid of the coronavirus-19	2.97 (1.03)	14.35	20.121	.636	.565	.834
2	It makes me uncomfortable to think about coronavirus-19	2.79 (1.03)	14.53	19.448	.721	.746	.821
3	My hands become clammy when I think about the coronavirus-19	1.63 (0.65)	15.69	24.692	.310	.352	.870
4	I'm afraid of losing my life because of the coronavirus-19	2.47 (1.10)	14.85	18.985	.715	.615	.821
5	When I watch news and stories about coronavirus-19 on social media, I get nervous or anxious	3.16 (1.00)	14.16	21.982	.440	.516	.861
6	I can't sleep because I worry about getting coronavirus-19	2.22 (1.11)	15.10	18.391	.789	.825	.809
7	My heart races or palpitates when I think about the coronavirus-19	2.09 (1.08)	15.23	19.253	.707	.793	.823

answering the questions only if they read and agreed to participate. The anonymity and confidentiality of data were protected in the process.

Results

Stage I : Validation of the FCV-19S

The individuals involved in the validation of FCV-19S (n=148) were; general public (91), health care staff (31) and security personnel (Police and Military services; 26). FCV-19S showed a high test-retest reliability, measured with ICC=0.86 (0.81-0.90). Although, the full scale showed a high internal consistency (Cronbach's alpha of 0.85), the item 3 "My

hands become clammy when I think about the coronavirus-19" did not meet satisfactory consistency criteria (Table 1).

Deleting the item 3 improved Cronbach's alpha marginally (0.87) while the remaining 6 items showed single factor structure with Eigen value exceeding 1 (Figure 1), explaining 60.8% of cumulative variance, observed in FA with PCA (KMO=0.70, $p<0.001$) with high factor loadings (Table 2).

A strong positive correlation was observed between FCV-19S score and the DASS-21 score ($r=0.63$, $p<0.001$) confirming the concurrent validity of the scale.

Table 2: Factor loading of items of FCV-19S

Item no.	Items	Component factor loading 1
1	I am most afraid of the Coronavirus-19	.75
2	It makes me uncomfortable to think about Coronavirus-19	.83
4	I'm afraid of losing my life because of the Coronavirus-19	.82
5	When I watch news and stories about Coronavirus-19 on social media, I get nervous or anxious	.61
6	I can't sleep because I worry about getting coronavirus-19	.84
7	My heart races or palpitates when I think about the Coronavirus-19	.77

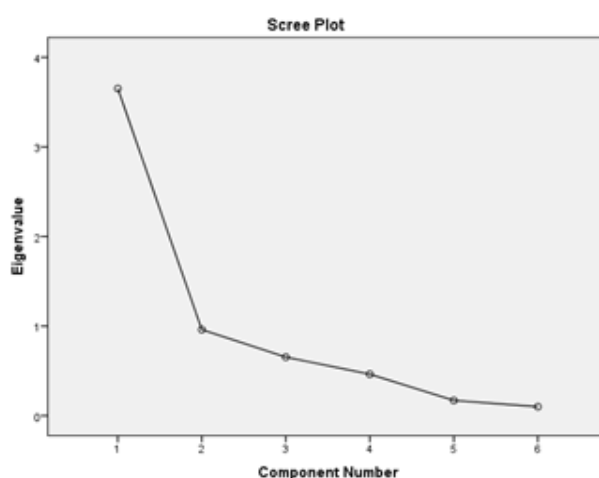


Figure 1 : Scree plot for FA with PCA of FCV-19S

Table 3: Socio-demographic and health characteristics of participants (n=325)

Characteristic	Sub category	Frequency (%)
Age (years)	15 – 29	187 (57.5)
	30 – 75	138 (42.5)
Gender	Male	115 (35.4)
	Female	210 (64.6)
Monthly income	<50,000 LKR*	246 (75.7)
	>50,000 LKR	79 (24.3)
Educational background	Primary /No education	59 (18.2)
	Secondary education	177 (54.5)
	Tertiary Education	89 (27.4)
Ethnicity	Sinhala	310 (95.4)
	Non-Sinhala	15 (4.6)
Employment status	Unemployed	93 (28.6)
	Employed (self, private sector and government sector)	232 (71.4)
Living with	Living alone	15 (4.6)
	Living with family members	310 (95.4)
History of the disease	Positive for COVID-19	19 (6.0)
	Suspected of having COVID-19	23 (7.0)
	Exposed to a COVID-19 patient	22 (6.7)
	None	261 (80.3)

1 USD = 200 LKR* (At the time of survey; year 2020)

Stage II: Fear of COVID-19 among the participants in high-risk zones

Only 325 responded to the Google form keeping the response rate as 61.7%. The basic characteristics of the participants are shown in Table 3. Median (IQR) age of participants was 30 (25-40) years and the majority were young (aged 15-29 years). Most of them were females, Sinhalese, employed, living with family and had history of the disease (Table 3).

Mean (SD) fear was 17.7 (5.0). Only 40.6% (n=132) (score range; 19-30) experienced high level of fear, while the rest had low level of fear (score range; 1-18). Higher mean scores were observed for the items “It makes me uncomfortable to think about coronavirus-19: (mean±SD; 3.47±1.04) and “when I watch news and stories about coronavirus-19 on social media, I get nervous or anxious” (mean±SD; 3.33±1.06).

The severity of fear showed significant associations with age ($p<0.001$), the level of education ($p<0.001$), living with family members ($p=0.01$), ethnicity ($p=0.03$), the state of employment ($p=0.02$) and positivity/suspected of COVID-19 and exposed to a COVID-19 patient ($p<0.001$) (Table 4). The same variables remained significant when univariate logistic regression was performed (data not shown in Tables). Multivariate logistic regression, however, confirmed that those with secondary education (OR=0.43, 0.22-0.82) and tertiary education (OR=0.34, 0.16-0.70) had lower fear compared to those with no education and only with primary education. Further it was found that those living with family members (OR=7.96, 1.63-38.70) compared to those living alone and being positive or suspected of COVID-19 or exposed to a COVID-19 patient (OR=3.71, 1.99-6.91) had high level of fear compared to those no history of disease (Table 5).

Table 4: Associations between fear of COVID-19 and Socio-demographic and health related characteristics (n=325)

Basic characteristic	Sub category	Independent sample t test		Chi square test		
		Fear score Mean (SD)	P value	Low level of fear Frequency (%)	High level of fear Frequency (%)	Chi square value
Age (years)	29 – 15*	16.65 (4.32)	<0.001	127 (39.1%)	60 (18.5%)	13.28
	30 - 75	19.29 (5.49)		66 (20.3%)	72 (22.2%)	
Gender	Male*	17.74 (5.39)	0.91	72 (13.9%)	43 (13.2%)	0.76
	Female	17.70 (4.84)		121 (37.2%)	89 (27.4%)	0.41
Monthly income	<50,000 LKR*	17.97 (5.19)	0.10	139 (42.8%)	107 (32.9%)	3.48
	>50,000 LKR	16.92 (4.42)		54 (16.6%)	25 (7.7%)	0.06
Educational background	Primary/No education*	20.91 (6.19)	<0.001	22 (11.4%)	37 (28.0%)	15.13
	Secondary education	17.06 (4.61)		111 (57.5%)	66 (50.0%)	
	Tertiary education	16.91 (4.13)		60 (31.1%)	29 (22.0%)	
Ethnicity	Sinhala*	17.58 (5.05)	0.03	188 (57.8%)	122 (37.5%)	4.42
	Non-Sinhala	20.46 (3.90)		05 (1.5%)	10 (3.1%)	0.05
Employment status	Unemployed*	17.32 (4.87)	0.02	52 (16.0%)	41 (12.6%)	0.65
	Employed (self, private sector and government sector)	18.69 (5.32)		141 (43.4%)	91 (28.0%)	0.42
Living with	Living alone*	14.73 (4.46)	0.01	13 (4.0%)	02 (0.6%)	4.83
	Living with family members	17.86 (5.02)		180 (55.4%)	130 (40.0%)	0.03
History of disease	None*	16.78 (4.24)	<0.001	172 (52.9%)	89 (27.4%)	23.33
	Being positive or suspected of COVID-19 or exposed to a COVID-19 patient	21.51 (6.14)		21 (6.5%)	43 (13.2%)	<0.001
*Reference category						

Table 5: Multivariate logistic regression of associations between fear of COVID-19 and Socio-demographic and health related characteristics (n=325)

Variable	Beta value	Standard Error	Wald value	P value	Adjusted Odds Ratio (OR)	95% CI for OR	
						Lower	Upper
Living with family members	1.89	0.81	5.40	0.02	6.65	1.34	32.91
Being positive or suspected of COVID-19 or exposed to a COVID-19 patient	1.37	0.31	19.13	<0.001	3.69	2.13	7.35
Secondary education	-0.83	0.32	6.61	0.01	0.43	0.22	0.82
Tertiary education	-1.06	0.36	8.49	0.004	0.34	0.16	0.70

Discussion

This study showed that modified 6-item Sinhala version of FCV-19S has satisfactory psychometric properties to be used by those conversant in Sinhala language. The proportion of people who experienced high degree of fear of COVID-19, in high-risk zones was relatively high. Those with low level of education, living with family members and having a history of exposure to COVID-19 have shown high level of fear.

Validation of FCV-19S

The original FCV-19S scale developed by Ashoru et al. (2020) has shown robust psychometric properties including high internal consistency ($\alpha = 0.82$), test-retest reliability (ICC = 0.72) and satisfactory concurrent validity with scales such as the Hospital Anxiety and Depression Scale (with depression, $r = 0.425$ and anxiety, $r = 0.511$) and the Perceived Vulnerability to Disease Scale (with perceived infectability,

$r = 0.483$ and germ aversion, $r = 0.459$) (Ahorsu et al., 2020). FCV-19S has been translated into and validated in many languages such as and have shown satisfactory psychometric properties including internal consistency (α or $\omega > 0.82$); test-retest reliability (r or ICC > 0.72); concurrent validity (absolute $r > 0.21$); and construct validity determined as uni-dimensional or two-factor structure in either confirmatory factor analysis or exploratory factor analysis across all language versions (Lin et al., 2021).

Although most of the studies conducted to date have reported a uni-dimensional structure (Lin et al., 2021), a few studies have reported a two-factor structure in Spain (Huarcaya-Victoria et al., 2020), Russia (Reznik et al., 2021) and the Hebrew version in Israel (Bitan et al., 2020). Further, a recent study in Japan has showed a two-factor model and named it as *emotional fear reactions and symptomatic expressions of fear* (Midorikawa et al., 2021).

High psychometric properties associated with

FCV-19S scale indicate its reliability and validity in assessing fear of COVID-19 among general public. Most of the psychometric properties observed in the Sinhala version of FCV-19S are consistent with previous analyses (Alyami et al., 2020; Bitan et al., 2020; Giordani et al., 2020; Sakib et al., 2020; Soraci et al., 2020). The item 3 of the FCV-19S “My hands become clammy when I think about the coronavirus-19”, however, had to be excluded due to its poor performance. This may be a symptom unfamiliar to the local population in fear situations. The cultural variations of the expression of symptoms of fear are well known (Hofmann & Hinton, 2014). Even after the exclusion of the item 3, the 6-item scale showed adequate psychometric properties to be recommended for the assessment of fear of COVID-19 among Sinhala conversant public in Sri Lanka.

Fear of COVID-19 among Sinhala speaking people

The degree of fear of COVID-19 detected among study participants in high-risk areas in Sri Lanka, is consistent with previous studies; 45.2% of study participants in India (Doshi et al., 2021) and 53% (mean $\pm$ SD; 19.8 $\pm$ 5.3) in Brazil (Giordani et al., 2020) were found to have fear of COVID-19. However, of the study participants in Cuba (Broche-Pérez et al., 2020), and Bosnia and Herzegovina (Šljivo et al., 2020) reported high level of fear only among 22.7% and 18.1% respectively. The variation of the extent of disruption of civil society, preventive measures adopted to curb the spread of infection and the publicity given by media in different countries would be the reason for the differences in the degree of fear.

Further, the manner people have responded to the stressful situations and their coping skills vary between populations. The level of fear is associated with resilience, tolerance of the unknown, tolerance to social isolation, levels of disgust sensitivity, granted financial support

and the use of caution relatively to the COVID-19 media coverage (Coelho et al., 2020).

In the analysis of the current study, higher mean scores were found for the items “it makes me uncomfortable to think about coronavirus-19”: (mean $\pm$ SD; 3.47 $\pm$ 1.04) and “when I watch news and stories about coronavirus-19 on social media, I get nervous or anxious”. This is somewhat similar to the Brazilian observations (Giordani et al., 2020). Social media through uncensored news can exaggerate the true picture and create a fear psychosis among general public (Mishra & Gupta, 2021) and this is a plausible reason for the latter item to have a higher score.

Certain factors were associated with the fear of COVID-19 in the analysis of the current study including aged >30 years, those having no education and only with primary education, living with family members, employed and having become positive or suspected of COVID-19 or having exposed to a COVID-19 patient compared to their counterparts. These factors are likely to vary in different populations. While higher age (30–75 years) was found to be associated with fear among study subjects in Bosnia (Šljivo et al., 2020), young adults from Brazil and Turkey (Giordani et al., 2020) had higher degree of fear which is consistent with the current study. Further, the low level of education showed significant associations with fear in Indian (Doshi et al., 2021) and Brazilian (Giordani et al., 2020) studies concordant to findings of the current study.

People with lower levels of education may have been misinformed and misled by uncensored social media, therefore experienced unnecessary fear (Tsoy et al., 2021). Living with family members may also have created an additional fear due to the possibility of many in the family getting infected within a short period. People who were employed probably had to engage with those in the community compared to those who were unemployed and this may have

increased their fear (Levy & Cohen-Louck, 2021). It is understandable for those who were infected, suspected or exposed to COVID-19 infected people to have fear due to the unpredictable adverse outcomes of the pandemic (Bhanot et al., 2021).

Several studies, for example; Brazil (Andrade et al., 2020), Turkey (Bakoğlu et al., 2021), Cuba (Broche-Pérez et al., 2020), India (Doshi et al., 2021) and Bosnia and Herzegovina (Šljivo et al., 2020) have identified gender as a predictive factor of the level of fear indicating females being more sensitive to fear. However, in the current study, gender was not a significant factor which could be due to the fact that most of the women in Sri Lanka being unemployed (Department of Census and Statistics, 2020) could be less exposed to the society.

Limitations of the study

This study, has several limitations including the non-probability sampling approach and possible inclusion of those already having psychological disturbances. The movement restrictions enforced during the study period did not allow a valid method of sampling. Further, when compared to the studies done elsewhere, the response rate was comparatively low in the current study having a 38.3% of non-response rate despite several reminders.

Conclusions

FCV-19S modified 6-item Sinhala version had sound psychometric properties, and can be utilized in studies assessing the effects of the pandemic on mental health of people who are conversant in Sinhala Language. The fear experienced by people in high risk-zones found to be relatively high while education, living conditions and history of exposure were associated with the fear of COVID-19. Identified associations of fear are important for health and social care providers to implement measures to reduce the

progression of fear towards devastating psychological consequences. It is recommended to conduct an island-wide study using this validated tool to investigate the real picture of fear of COVID-19 that would provide more comprehensive data using the validated tool. Health care and social care providers can further design appropriate programmes to overcome fear.

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Conflict of interest

The authors declare that they have no conflict of interests.

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