The Open Psychology Journal

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RESEARCH ARTICLE

Confirming The Validity And Reliability Of The Korean Language Fear Of COVID-19 Scale In The University Context

Boram Lee[1] and Yang Eun Kim[2,*]

[1]*Department of Early Childhood Education, Woosong University, Daejeon, South Korea*
[2]*Department of Global Child Education, Woosong University, Daejeon, South Korea*

Abstract:

Background:

The widespread of the newly emerged infectious human disease labeled coronavirus 2019 (COVID-19) has caused a prolonged public health crisis of pandemic proportions. The emergence and severe consequences of COVID-19 heightened anxieties and concerns. The Fear of COVID-19 Scale (FCV-19S) was developed recently to specifically measure the fear sensed by an individual about COVID-19. This study aimed to establish the factor structure, reliability, and validity of the Korean version of the FCV-19S (KF-COVID-19S) in the context of a Korean university.

Methods:

Data were collected from 402 university students enrolled in undergraduate degree programs at a private university in the central region of South Korea. The sample was randomly bifurcated to execute exploratory factor analysis (EFA, N = 201) and confirmatory factor analysis (CFA, N = 201). Cronbach's alpha reliability coefficient was also applied to assess consistency.

Results:

Both the EFA and CFA supported a two-factor model: factor 1 (somatic symptoms) and factor 2 (emotional fear) were significantly correlated. Additionally, the two-factor model exhibited a superior fit to the data compared to the unidimensional and bifactor models. Cronbach's alpha revealed acceptable internal consistency.

Conclusion:

Our results suggest that the Korean version of the FCV-19S can multidimensionally assess the severity of fear of COVID-19. However, we recommend using the single FCV-19S total score for practical purposes, given the high correlation among factors, the robust reliability of the total scale, and items implying a higher order factor of the fear sensed by individuals toward COVID-19.

Keywords: Anxiety, COVID-19, Fear, South korea, Students, Pandemic.

Article History	Received: April 19, 2022	Revised: September 25, 2022	Accepted: October 13, 2022

1. INTRODUCTION

The novel coronavirus disease 2019 (COVID-19) outbreak was declared a pandemic quickly because of its rapid transmission rate and high morbidity and mortality. As of April 19, 2022, COVID-19 has infected more than 24,000,000 individuals and has caused more than 28,000 deaths in South Korea (hereafter Korea) [1]. Fear and anxiety have surged in people because of the uncertainty about the return to a normal social life, the high infectivity rate of COVID-19, the rapid spread of its variants, and the limited availability of effective treatment [2]. The COVID-19 pandemic appears to continue and exercises a long-term and profound impact on individual health. Therefore, researchers and clinicians have expressed concerns about the potential adverse effects of COVID-19 on the mental health of the general population, including university students [3 - 5]. Recent studies have evidenced support for such apprehensions. The pandemic's impact on students' mental health is a particular cause for trepidation. For example, Cao *et al.* conducted a cross-sectional study in China and found that 24.9% of university students suffered from anxiety because of the COVID-19 outbreak [6]. An online survey of university students in Korea (n = 261) evidenced that 61% of students reported depressive symptoms and that their

* Address correspondence to this author at the Department of Global Child Education, Woosong University, Daejeon, South, Korea;
E-mail: yekim@wsu.ac.kr

depressive symptoms intensified in tandem with the increased perception of restrictions in their social activities [7]. Other studies involving university students have found that students testified to high levels of COVID-19-related fear. This trepidation was positively associated with depression and anxiety [8, 9]. Since, many university students have been forced to shift their activities to the digital sphere, they inevitably confront unprecedented challenges because of the ongoing pandemic and its associated mandatory physical distancing measures [10, 11].

The fear of COVID-19 is a core factor for heightened stress and anxiety levels during the pandemic [3]. Specifically, people are afraid that they or their family members will become infected or sick [12]. Recent evidence suggests that the fear of COVID-19 infection could elicit anxiety reactions or exacerbate preexisting conditions related to somatic symptoms [13]. Other studies have similarly reported that the fear of becoming infected by COVID-19 could trigger an anxiety-related disorder [14, 15]. These scholarly findings indicate the importance of assessing the fear of COVID-19 so that its effects on health and mentally vulnerable populations can be predicted and controlled. A reliable screening tool to identify the specific fears of COVID-19 during the pandemic has thus become a significant public health issue, given the growing prevalence of mental health problems among university students. In fact, measures aimed at evaluating an individual's psychological response to COVID-19 have recently begun to emerge. These instruments include the (a) five-item Coronavirus Anxiety Scale (CAS) [16], (b) four-item Obsession with COVID-19 Scale (OCS) [16], (c) 36-item COVID Stress Scale (CSS) [17], and seven-item Fear of COVID-19 Scale (FCV-19S) [18]. Ransing *et al.'s* review of the features of these four instruments suggested that existing instruments could achieve their maximum utility only through appropriate translation, cultural adaptation, assessment, and validation [19]. The FCV-19S, recently developed by Ahorsu *et al.* is the most popular of the mentioned measures because of its brevity along with the proven satisfactory psychometric properties of its different language versions. Indeed, the scale had been translated within three months of the original Persian FCV-19S being developed [20]. It has now been translated into 13 languages and empirically validated in diverse cultures.

The FCV-19S assesses fear sensed by individuals toward COVID-19 and helps healthcare providers design and implement appropriate interventions to reduce such fear [18]. In particular, the FCV-19S measures the psychological response to COVID-19 and examines associated behaviors (*e.g.*, problematic use of the Internet, suicidal thoughts, bodily complaints, sleep-related difficulties, and psychological distress) [20]. Recent studies have confirmed the psychometric properties of FCV-19S with adequate results. However, inconsistent findings have been reported regarding the factor structure of the FCV-19S. The FCV-19S is assumed to present a unidimensional structure and its one-factor structure has been supported by research on several translated versions of the scale [21 - 24]. However, Iversen *et al.* proposed a two-factor structure in Norwegian samples to further expand such research [25]. Yet, other scholars have shown with Israeli and Spanish samples that the bifactor structure represents physiological and emotional responses [3, 26].

The FCV-19S has thus far been scantly used in the Korean context. Han *et al.* translated and verified the reliability and validity of the Korean version of the FCV-19S (KF-COVID-19S) among adults [27]. A single-factor structure of the FCV-19S was confirmed by the exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Meanwhile, a survey of normal adults and psychiatric patients in Korea found that FCV-19S incorporates two dimensions: physical and emotional fear factors [28]. These differences in findings suggest the need for further exploration and verification of the factor structure of the FCV-19S. Heightened mental health concerns have been noted among university students during the pandemic. Moreover, the self-perceived mental health of Korean university students has worsened over the last decades, and this situation was exacerbated during the pandemic [7]. Students sensing relatively high levels of anxiety and fear regarding infectious diseases such as COVID-19 tend to be less capable of coping with psychological distress and managing their daily lives [27]. From this perspective, an instrument such as the FCV-19S is essential for university counseling or medical services. Such a measure could help identify students with high levels of COVID-19-associated fear and lockdown anxiety early. Appropriate psychological interventions could accordingly be applied to foster their well-being [29]. The current study aimed to respond to this need by establishing the factor structure, reliability, and validity of the KF-COVID-19S in the context of Korean universities. To identify the factor structure of the KF-COVID-19S, it is necessary to use both EFA and CFA with independent datasets. Before analyses, the data were randomly split into two subsets (A and B). Exploratory factor analysis was performed on Subset A and a series of confirmatory factor analyses were performed on Subset B to test how well the model suggested by theory and the EFA fit the empirical data.

2. METHODS

2.1. Participants

An aggregate of 402 undergraduate students (110 male and 292 female) was recruited from a private university *via* convenience sampling. Students who met the following inclusion criteria were invited to participate. Inclusion criteria required Korean university students to: (a) be born in the Republic of Korea, (b) be currently enrolled in 4-year undergraduate study programmes, and (c) be willing to participate. There was no age restriction. The participating students were enrolled in courses that included arts (29%), cookery (10%), education (28%), social work (30%), and public health (3%). The participants were aged between 19 and 50 and their mean age was 21.9 (SD = 2.71). The majority (92%) of the respondents were grouped in the age range of 19–24. The remainder (8%) were aged between 25 and 50: three students in this group were aged 40, 48, and 50 years, respectively. The mean age for male students was 22.7 (SD = 2.05), while the mean age for female students was 21.5, (SD = 2.86).

2.2. Procedures

Data were collected through an online survey administered between January 8 and March 8, 2022. Participants received an e-mail invitation to take an online survey. This invitation was sent to all students through the university's online system because of the campus lockdown and university closure. The survey was developed using the Google Forms platform, and interested participants were directed to the website on which the study questionnaire was posted. The emailed messages described the study objectives, outlined the voluntary and confidential nature of the study, and offered instructions and guidelines to complete the survey. The participants could proceed to the survey only after tendering their consent by clicking an option that read, "I agree to participate." They were redirected to the actual survey after their consent was registered. The protocol for the study was approved by the Ethical Committee of Psychological Research of the university at which the study was conducted (protocol number: 1041549-220111-SB-135).

2.3. Instrument

The seven-item FCV-19S assesses fear toward COVID-19 on a 5-point Likert-like scale ranging from 1 (strongly disagree) to 5 (strongly agree). The cumulative scores ranged from 7 to 35, and higher scores indicated greater fear of contracting COVID-19. Ahorsu *et al.'s* study of an Iranian sample reported the reliability of the FCV-19S at.82, indicating good internal consistency [18]. This study used the KF-COVID-19S, which has exhibited sound psychometric properties in Korean adults [28].

2.4. Statistical Analyses

The statistical analyses for this study were performed using IBM SPSS Statistics for Windows, Version 27.0 (IBM Corp. Armonk, NY, USA) and AMOS 27.0 software (Armonk, NY: IBM Corp.) for CFA. Before conducting the analyses, all items were screened for missing values using the expectation-maximization (EM) algorithm and were tested for distribution normality by calculating skewness and kurtosis. The amount of missing data was minimal in this study, less than one percent (four people) of the total number of cases in the data set. The univariate skewness and kurtosis for each of the seven items of the scale were well within –1.5–1.5, indicating that the items were normally distributed. The appropriate sample size for CFA is a complex issue, as it is generally considered for large sample methods due to the large number of parameters being evaluated. Although there is no clear consensus regarding the rules of thumb recommended in this instance, one suggested guideline is to have 5 or 10 participants per estimated parameter [30]. On the other hand, others have indicated that 300 is a good sample size for a CFA [31]. The sample size of 402 participants in our study meets the statistical requirement.

The total sample (N = 402) was randomly split into two equal-sized groups (n_{EFA} = 201; n_{CFA} = 201). The subsamples did not differ significantly in terms of age, gender, study discipline, or FCV-19S item scores. EFA was performed with the first half-sample using the principal components analysis method to determine the ideal number of factors. The criteria for selecting the number of factors were set as (1) minimum factor eigenvalues of 1, (2) exclusion of items with factor loadings less than .30, and (3) exclusion of items with loadings equal to or greater than.40 on more than one factor. An oblique rotation method was applied because it was assumed that rotated factors are correlated.

Next, CFA with covariance matrices and the maximum likelihood method was used to test.

Three-factor structure models: (1) One-factor; (2) Two factor, and (3) Bifactor. Model 1 is the one-factor model postulated by Ahorsu *et al.* with all seven FCV-19S items loaded onto a single-factor [18]. Model 2 is the two-factor model proposed by Hwang *et al.* with three items loading on the somatic symptoms factor and four items loading on the emotional fear factor [28]. Model 3 is the bifactor model as suggested by Bitan *et al.*, where all seven items of the FCV-19S were configured to load onto the factor of general fear and two additional group factors with somatic symptoms (items 1, 2, 4, and 5) and emotional fear (items 3, 6, and 7) [3]. Model fit was assessed using robust versions of the chi-square test divided by the degrees of freedom (χ^2 /df), the comparative fit index (CFI), the goodness of fit indices (GFI), the root mean square error of approximation (RMSEA), and standard root mean residual (SRMR) (*i.e.*, χ^2 /df < 5; CFI and GFI ≥ .95; RMSEA < .06; and SRMR < .08) [32 - 35]. Internal consistency was evaluated through Cronbach's alpha coefficient (*a*).

3. RESULTS

3.1. Descriptive Statistics

Table **1** presents the mean and standard deviations for each item of the KF-COVID-19S. Notably, the FCV-19S scores are traditionally calculated by totaling the responses to all seven items on the scale. This procedure generated a mean mean score of 17.0 (SD = 5.68). More than 60% of the respondents either agreed or strongly agreed with most of the KF-COVID-19S items. This result indicated a generally high level of fear of COVID-19 in this population.

Table 1. Descriptive statistics for KF-COVID-19S items.

KF-COVID-19S Items	M	SD
1. I am most afraid of the coronavirus	3.13	1.09
2. It makes me uncomfortable to think about the coronavirus	3.56	1.11
3. My hands become clammy when I think about the coronavirus	1.98	1.01
4. I am afraid of losing my life because of the coronavirus	2.08	.83
5. When watching news and stories about the coronavirus on social media, I become nervous or anxious	2.81	1.16
6. I cannot sleep because I'm worrying about getting the coronavirus	1.57	1.20
7. My heart races or palpitates when I think about getting the coronavirus	1.84	1.47
Total score	17.0	5.68

Note: n = 402

3.2. Exploratory Factor Analyses (EFA)

EFA was executed using principal components analysis

(PCA) with direct oblimin rotation to investigate the underlying dimensional structure of the KF-COVID-19S. The assessment of factorability evinced the Kaiser–Meyer–Olkin (KMO) measure of .82, evidencing that the sample size used in the study was adequate for EFA. Bartlett's test of sphericity was significant (χ^2 = 1162.9, df = 21, p <.001), indicating that the data were suitable for the factor analysis. PCA suggested a two-factorial solution with eigenvalues greater than 1, explaining a total of 67.8% of the variance from the total of 7 items. The inspection of the scree plot also supported a two-factor solution. The first extracted factor accounted for 28.4% of the variance and was composed of three items (item 3, 6, 7), with factor loadings ranging from.43 to.74. This factor was labeled "somatic symptoms ." The second extracted factor accounted for 39.4% of the variance (eigenvalue = 1.36) and revealed high loadings on four items (1, 2, 4, 5), ranging from 50. to .83. This factor was named "emotional fear." Table **2** reports the factor loadings and shows that no cross-loading items were found.

Table 2. Factor loading of the two-factor model for the KF-COVID-19S (EFA).

Items	Factor 1	Factor 2
Factor 1: Somatic Symptoms	-	-
3. My hands become clammy when I think about the coronavirus	.43	-
4. I cannot sleep because I'm worrying about getting the coronavirus	.72	-
5. My heart races or palpitates when I think about getting the coronavirus	.74	-
Factor 2: Emotional Fear	-	-
1. I am most afraid of the coronavirus	-	.50
2. It makes me uncomfortable to think about the coronavirus	-	.67
4. I am afraid of losing my life because of the coronavirus	-	.80
5. When watching news and stories about the coronavirus on social media, I become nervous or anxious	-	.83

Note: **p*<.01. KF-COVID-19S: Korean version of the fear of COVID-19 Scale.
n = 201

3.3. Confirmatory Factor Analyses (CFA)

The factorial reliability and validity of the two-factor model obtained by the EFA were tested through CFA using the data from the second randomly selected second half-sample (N = 201). The results demonstrated that the two-factor structure was acceptable for the actual data and that it demonstrated a good fit for all indices (χ^2 = 30.0, df = 7; χ^2 /df = 4.3; CFI = .98; GFI = .99; RMSEA = .076 (90% CI = .059–.088); SRMR = .040). The estimated correlation between the factors of this model was .73. All loadings associated with the factors of physical and emotional fear were significant at p <.05 and displayed a satisfactory size (>.40). The current study further attempted to test competing models on the FCV-19S suggested by the extant literature to determine the structural model offering the most parsimonious fit to the data. The fit statistics for all models are shown in Table **3**, which elucidates that the one-factor model yielded an unsatisfactory fit to the data. The GFI was good, but values for CFI, RMSEA and SRMR were outside the recommended cut-offs (χ^2 = 129.4, df = 8; χ^2 /df = 16.2; CFI =.89; GFI =.92; RMSEA =.195 (90% CI =.166–.225); SRMR =.083). Conversely, the bifactor model was found to better fit the data with respect to the CFI, GFI, and SRMR statistics, even though the value for RMSEA was above the recommended criterion, indicating a good fit (χ^2 = 40.0, df = 7; χ^2 /df = 5.7; CFI =.91; GFI =.98; RMSEA =.108 (90% CI =.077–.142); SRMR =.062). Hence, the two-factor model offered the best fit for the data obtained in the current study.

Table 3. Goodness-of-fit indices of models for the KF-COVID-19S (CFA).

Model	*k*	χ^2	df	χ^2 /df	CFI	GFI	RMSEA (90% CI)	SRMR
Model 1	7	129.4	8	16.2	.89	.92	.195 (.166-.225)	.083
Model 2	7	30.0	7	4.3	.98	.99	.076 (.059-.088)	.040
Model 3	7	40.0	7	5.7	.91	.98	.108 (.077-.142)	.062

Notes: *k*=number of items; *df*=degrees of freedom; CFI=comparative fit index; GFI=goodness of fit index; RMSEA=root mean square error of approximation; SRMR=standardized root mean residual.
Model 1: One-factor model
Model 2: Two-factor model
Model 3: Bifactor model
**p* < .01.
N = 201

3.4. Reliability and Item Analysis

Item properties were analyzed using corrected-item-total correlations and coefficients. Variations were assessed in Cronbach's alpha coefficients if items were deleted. The Cronbach's alpha was calculated at.84 for the analysis of the entire KF-COVID-19S. It was calculated at.78 and. 78, respectively, for the somatic symptoms and emotional fear subscales, indicating good reliability for the entire scale, but insufficient consistency for the subscales. The corrected item-total correlation was rather low for item four in the somatic symptoms subscale (.33). However, the correlations with the overall scale for the rest of the items ranged between .58 and .72. Cronbach's alpha did not change severely when the corresponding item was deleted; signifying the unified nature of the reliability of items classified into the physical and emotional fear subscales.

4. DISCUSSION

The current study purposed to evaluate the factor structure of the KF-COVID-19S in the Korean context, using a university's student population. The findings of this study contribute significantly to the evidence base pertaining to the underlying factor structure of the recently developed FCV-19S. The EFA and CFA revealed two correlated factors that corresponded reasonably to the dimensions of somatic symptoms and emotional fear when the KF-COVID-19S was examined using a student population. The instrument was originally developed as a unidimensional structure; however, evidence is accumulating *vis-à-vis* different structures that have been proposed and its dimensionality consensus is compromised. Nevertheless, the discrepancies in results reported in the literature are partially attributed to the use of (1) individuals with different cultural backgrounds and translated languages, (2) sample heterogeneity (*e.g.*, children as

compared with older adults) [2, 26], (3) different statistical techniques (*e.g.*, EFA *vs.* CFA), or (4) sample size. The current study's findings of a model with two correlated factors and an estimated between-factor association of.65 corroborate the outcomes of investigations with similar samples (*i.e.*, general adults in a community) [25, 28].

Factor 1 assessed the physical or physiological symptoms of insomnia, palpitation, and sweating, and was labeled "somatic symptoms ".Individuals may experience these physical and physiological symptoms when they sense severe concerns about contracting COVID-19 [28]. A recent study reported that panic attacks and generalized anxiety disorders triggering physical symptoms could be experienced when conditions became extremely severe during the COVID-19 pandemic [36]. Factor 2 was characterized as "emotional fear" to encompass other expressions of fear through adjectives such as "afraid," "uncomfortable," "nervous," and "anxious" [28]. An online survey conducted in Korea during the COVID-19 pandemic classified 31% of the respondents as at risk for depression and categorized 23% of the participants as at risk of anxiety [37]. This result signifies that COVID-19 could cause significant psychological symptoms related to mental health. University students are particularly vulnerable to mental health problems. Campus closures, academic disruptions, and movement restrictions during the COVID-19 pandemic have caused heightened future-related anxiety and concerns in these young adults. Hence, this population requires further attention and support for its wellbeing during the COVID-19 pandemic.

COVID-19 will probably remain a significant worldwide public health problem for some time. Certainly, the development of infection-preventing measures, medical treatments, and vaccines must be prioritized. Nonetheless, the impact of COVID-19 on the mental health of students must not be overlooked, and in turn, the mental health impact on society should not be disregarded or underestimated [28]. The screening of university students for mental health difficulties should be prioritized at university counseling or medical centers [38]. In such a context, KF-COVID-19S presents as a promising instrument for campus environments. It can promptly and efficiently determine the degrees of anxiety caused by COVID-19 in a timely manner [28]. The FCV-19S was not developed as a tool for the diagnosis of mental disorders and calculating an accurate cut-off score may not be clinically meaningful. However, the KF-COVID-19S could denote an ideal measure for the sustainable large-scale screening for the severity of COVID-19-related anxiety in college student populations.

Cronbach's alphas were computed at.78 for both somatic symptoms and emotional fear in congruence with Bitan *et al.'s* study [3]. An alpha value of >.70 indicates an acceptable level of reliability but some scholars contend that the recommended reliability value of the scales should be greater than.80 for some applied settings (*e.g.*, individual assessment purposes) [39]. Hence, our results suggest that the somatic symptoms and emotional fear scales concerning COVID-19 can be used in combined forms as measured by FCV-19S to contribute to the broader clinical assessment of such psychological responses. Discriminant validity was maintained through moderate correlations between the physical and emotional fear subscales. The mean score for the current study's sample was relatively high as can be expected because the survey was conducted during the peak of COVID-19 in Korea. At that juncture, the campus was shut down and the physical and social activities of students were restricted to a minimum. Hence, the results of the current study must be cautiously interpreted in light of the prevalence of COVID-19 in the country at the time of data collection.

The FCV-19S may be an appropriate instrument for the assessment of fear toward COVID-19 in vulnerable populations such as university students because of the ongoing stressors and uncertainties linked to the pandemic. University students represent a special social group with active engagement in life habits based on relationships, physical and university-related activities, travel, and communal gatherings [40]. However, the global outbreak of COVID-19 has dramatically changed the lives and relationships of students [10, 11]. Fear about being infected during the COVID-19 pandemic has caused heightened future-related anxiety and concerns in these young adults [22 - 24]. Therefore, multidimensional measures of psychological reactions (*i.e.*, somatic symptoms and emotional fear toward COVID-19) experienced during the pandemic could be more apt for the Korean university context than tools offering a single-factor solution. In other words, we can use the two-dimensional factor model of the FCV-19S to assess symptoms or responses to the fear of COVID-19 in more detail.

However, a predominant issue that could derive from the one- or two-factor model dilemma is the uncertainty about the appropriate scoring procedure. Specifically, the use of two-factor scores may not be optimal in practice despite the two-factor model evincing a better fit to our data than the single-factor model. In the research context, such a difficulty would pose a serious multicollinearity problem since the factors were highly correlated [41]. Moreover, the reliability of the total scale was good; it was better than specific individual factor reliabilities. It is suggested taking all this into account, that using a single and total FCV-19S score would probably be advisable for research, practical, and clinical purposes. The utilization of the total score could help diagnose, evaluate, and monitor the severity of fear caused by COVID-19. Nonetheless, further research is needed in the future to compare the utility of the total and subscale scores in different clinical scenarios (*e.g.*, screening versus monitoring). Healthcare providers could use the available information on how an individual experiences the fear of COVID-19 to design and implement more appropriate programs to alleviate the fear [18]. Subsequently, such programs could reduce the stigma, anxieties, and stress attached to the fear of COVID-19.

The findings of this study should be contemplated with due acknowledgment of the limitations of the investigation. First, the potential of sampling bias cannot be ruled out because the subject pool comprised a self-selected sample of students enrolled in a single university. It is unclear whether the factorial structure would equally apply to other populations (*e.g.*, adolescents, older adults, or clinical populations). A follow-up, the re-verification study should be conducted with

randomly sampled participants to confirm the results obtained by the current study. Next, the survey was administered online, and this platform could have made the measure inaccessible for some individuals. This limitation may have influenced the results of the current study, but only to some extent, given the target population of university students and allowing for the quarantine and physical distancing requirements. Another limitation this study shares with other investigations is its reliance on participant self-reporting. Such self-reporting data and their findings may be subject to external bias caused by social desirability. Future research initiatives could include a broader range of data sources. Final limitation of the study entailed the non-inclusion of other forms of validity, such as multigroup invariance and known group validity. These facets could have strengthened our current findings. Future research initiatives should also seek larger samples and account for variables such as gender, socioeconomic status, and physical and mental health state.

CONCLUSION

To conclude, the results of the present study empirically uphold the correlated two-factor structure of the KF-COVID-19S in Korean student populations enrolled in universities. Although the two-factor model offered the best fit for our data, the high correlation between the two factors, the higher reliability of the total scale, and the low reliability of the subscales make it more appropriate to compute and use the single FCV-19S score for most practical purposes. However, it may be beneficial if prospective research endeavors explicitly test this assumption.

LIST OF ABBREVIATIONS

CAS	=	Coronavirus Anxiety Scale
OCS	=	Obsession with COVID-19 Scale
EFA	=	Exploratory Factor Analysis

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The protocol for the study was approved by the Ethical Committee of Psychological Research of the university at which the study was conducted (protocol number: 1041549-220111-SB-135).

HUMAN AND ANIMAL RIGHTS

No animals were used for studies that are the basis of this research. All the humans were used in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013 (http://ethics.iit.edu/ecodes/node/3931).

CONSENT FOR PUBLICATION

The participants could proceed to the survey only after tendering their consent by clicking an option that read, “I agree to participate.”

STANDARDS OF REPORTING

STROBE guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data shall be shared on request by the corresponding author [Y.E.K] upon reasonable request.

FUNDING

This research was supported by Woosong University (Grant No. WSB 2035-2912-01).

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared none.

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