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SHORT COMMUNICATION

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(Don't fear) the factors: An item-level meta-analysis of the fear of COVID-19 Scale's factor structure and measurement invariance

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Abstract

The global COVID-19 pandemic saw marked research and clinical interest in evaluating pandemic-related distress, namely fear and anxiety regarding infection and death. The most widely used and earliest developed measure of COVID-19 distress is Ahorsu et al. (2022) seven-item Fear of COVID-19 Scale (FCV-19S). To investigate the factor structure and measurement equivalence of the FCV-19S, we conducted an item-level meta-analysis synthesizing 1155 effect sizes across $k = 55$ independent samples comprising $N = 71{,}161$ individuals. We found that a two-factor measurement model comprising a four-item Emotional factor and a three-item Psychosomatic factor exhibits better fit than the originally proposed single-factor measurement model. Moreover, the bidimensional FCV-19S exhibits partial scalar/strong invariance across the general population, healthcare workers, schoolteachers, and university students as well as partial metric/weak invariance across samples from Bangladesh, China, Japan, Pakistan, Poland, and Portugal. Despite the theoretical and practical implications of these findings, more primary research across a wider range of sample types and countries is undoubtedly needed for further evaluation of the FCV-19S's psychometric properties and generalizability.

KEYWORDS

fear of COVID-19, measurement equivalence, measurement invariance, meta-analysis, psychometrics

1 | INTRODUCTION

On 11 March 2020, the World Health Organization (WHO) announced that the COVID-19 outbreak had developed into a full-blown global pandemic (WHO, 2020). A little over two weeks later, an advance online publication of the Fear of COVID-19 Scale (FCV-19S; see Table S1), authored by Ahorsu et al. (2022), appeared. Since then, the FCV-19S has gained substantial international research traction. The measure has been translated to many languages (see Lin et al., 2021) and has been cited thousands of times on Google Scholar (over 5000 at the time of writing). Moreover, the FCV-19S is the most widely used measure of COVID-19 distress in occupational

An earlier version of this meta-analysis was presented in Washington, D.C. at APA 2023, the 131st Annual Convention of the American Psychological Association.

health research (Jimenez et al., 2023). Although the WHO (2023) no longer considers the COVID-19 pandemic a public health emergency of international concern, it will be crucial to take stock of and meaningfully synthesize the body of FCV-19S research that has accumulated. Insights gleaned from such an endeavour would greatly benefit researchers and practitioners tasked with studying and addressing psychological strain during not only this pandemic, but also future disease outbreaks.

Although the FCV-19S developers contended that the measure is unidimensional, other researchers have found evidence of bidimensionality (see, e.g., Cahapay et al., 2022; Pretorius et al., 2021). Furthermore, despite there being many translations, there is preliminary evidence suggesting that when conceptualized unidimensionally, the FCV-19S exhibits some measurement nonequivalence across several countries (see Lin et al., 2021). In addition, it is largely unknown as to whether fear of COVID-19 is experienced similarly across groups of people (Jimenez et al., 2023). Recently, experts in psychological assessment acknowledged meta-analysis as an especially important tool for appraising the psychometric quality and generalizability of popular measures (see Iliescu et al., 2022). Applying meta-analytic methods in this context is a useful means for scale refinement more robust than what is possible with any single study; in a sense, meta-analysis helps, in part, address the replication crisis (see Sharpe & Poets, 2020). Of particular interest, meta-analytic methods can be applied to examining the factor structure of constructs across different groups of individuals and measure variants. For example, Yılmaz Koğar and Koğar (2024) meta-analytically demonstrated that a two-dimensional model with positive and negative factors for both the 10-item and 14-item perceived stress scale (PSS) holds across clinical status and age groups. In other words, the PSS demonstrates some degree of measurement equivalence, which means that the measure is tapping the same construct in a consistent manner across different groups of individuals.

We were motivated to address the above concerns and answer the following empirical questions via item-level meta-analysis (see N. C. Carpenter et al., 2016):

> *Research Question 1*: Is fear of COVID-19 better conceptualized as having one or two factors?
> *Research Question 2*: Does the FCV-19S exhibit measurement equivalence across different sample types and countries?

By addressing these questions, this study contributes to the understanding of pandemic-related fear and the FCV-19S by revealing the structure of such fear and the scale—challenging the initial perspectives regarding the dimensionality of this construct. The current examination can also serve as a basis for the understanding of fear in future disease outbreaks. Moreover, by testing the measurement equivalence of FCV-19S, the current study sheds light on the utility of the scale in research aimed at comparing different groups—encouraging researchers to make meaningful contrasts in the future.

2 | METHOD

2.1 | Literature search

Multiple strategies were used to comprehensively identify meta-analyzable FCV-19S studies. Searches were conducted in late December 2022 and early January 2023 in the following databases: PubMed, Web of Science, and PsycINFO. We searched for literature that included the term 'Fear of COVID-19 Scale' anywhere in the report. On Google Scholar, we conducted a forward search for relevant studies that cited Ahorsu et al. (2022) with search terms 'item correlations' OR 'correlations between items' OR 'inter-item correlations' OR 'interitem correlations'. We also used Google Scholar to identify relevant review papers—yielding 14 articles that we backward searched. Our literature search yielded 1657 records. Removal of duplicate records resulted in 1117 records for review. The authors reviewed each of these records to determine whether observed correlations among FCV-19S items and item means and standard deviations (or data that could be used to compute correlations and descriptive statistics; e.g., data files, frequency tables) were available. This screening resulted in 62 reports that we further reviewed.[1] After carefully scrutinizing these reports, seven were excluded for one of the following reasons: means and standard deviations were not reported, FCV-19S response options did not range from one to five response options, polychoric correlations were reported, or the FCV-19S was presented after experimental manipulation. Our final database included 1155 effect sizes from $k = 55$ independent samples (from 53 reports) comprising $N = 71{,}161$ participants spanning 51 countries (see Table S9). See Supplemental Materials for the PRISMA flow diagram (Figure S1) and references of the 62 scrutinized study reports.

2.2 | Coding and meta-analytic procedures

For the samples included in the initial article submission ($k = 41$), the second and third authors coded sample size, observed interitem correlations, item means and standard deviations, country, and sample type. Interrater agreement for numeric data was 92.81%. The first author addressed all coding discrepancies and coded additional samples included in the updated database during article revision ($k = 14$). We followed Schmidt and Hunter's (2015) guidance and conducted random-effects barebones (i.e., effect sizes weighted by sample size) meta-analyses—using R package psychmeta by Dahlke and Wiernik (2019)—of each bivariate interitem correlation across samples and for different sample types (viz., general population, healthcare workers, schoolteachers, university students) and countries (viz., Bangladesh, China, Japan, Pakistan, Poland, Portugal, Saudi Arabia). These specific groups were specified due to there being a sufficient number of independent samples to form them: $k \geq 3$ per group. For more information on countries and sample types, see Tables S2–S3. To conduct meta-analytic confirmatory factor analysis (CFA), we followed N. C. Carpenter et al. (2016) and converted the psychmeta-derived correlation matrices to pooled variance–covariance matrices, which—along with corresponding sample sizes and pooled sample-size-weighted item means—served as input for R package lavaan (Rosseel, 2012). Multigroup CFAs were specified with lavaan::cfa()—with progressively higher levels of measurement equivalence being assessed with lavaan::anova(). Specifically, models assessing configural equivalence (i.e., similar factor structure), metric equivalence (i.e., similar factor loadings), and scalar equivalence (i.e., similar item intercepts) were compared across groups in that order. The freeing of parameters while iteratively assessing measurement equivalence was guided by the function lavaan::lavTestScore().

3 | RESULTS

See Tables S4–S8 for all meta-analytically pooled interitem correlations, means, and standard deviations. Meta-analytic CFA results for competing models are presented in Table 1. We evaluated the originally proposed one-factor measurement model with all database samples. We also evaluated a two-factor measurement model with all database samples as well as across the selected sample types and countries. This model is specified as follows: Items 1, 2, 4, and 5 as indicators of a factor labelled *Emotional* and Items 3, 6, and 7 as indicators of a factor labelled *Psychosomatic*. As shown in Table 1,[2] the originally proposed unidimensional model poorly fits the data across all indices except for standardized root mean squared residual (SRMR): χ^2 (14, 71,160) = 22,960.29; comparative fit index (CFI) = 0.90; Tucker–Lewis index (TLI) = 0.85; root mean squared error of approximation (RMSEA) = 0.15; SRMR = 0.05. Modification indices suggested that Items 1 and 6 are particularly problematic and that specifying correlated errors between these two indicators and others would improve fit.

In contrast, the two-factor model exhibits acceptable fit across all indices except for RMSEA: χ^2 (13, 71,160) = 6182.20; CFI = 0.97; TLI = 0.96; RMSEA = 0.08; SRMR = 0.03. This measurement model adequately fits the data for individual sample types and countries except for Saudi Arabia; thus, we assessed measurement equivalence with this model (excluding the aforementioned country).[3] Across sample types, the highest level of measurement equivalence achieved was partial scalar (i.e., partial strong) invariance (with the intercept of Item 4 freely estimated; see Table 1). Across countries, the highest level of measurement equivalence achieved was partial metric (i.e., partial weak) invariance (with the loading of Item 7 freely estimated; all indices except RMSEA at 0.09 were acceptable; see Table 1). See Tables 2 and 3 for the meta-analytic factor loadings (both unstandardized and standardized with the latter from the completely standardized solution in lavaan [i.e., 'Std.all']), intercepts, and correlations between the two factors across all database samples as well as for each sample type and country.

4 | DISCUSSION

In the present study, we meta-analytically investigated the factor structure of the FCV-19S. We demonstrated that a measurement model comprising distinct Emotional and Psychosomatic factors best characterizes the scale—thus challenging the contention that fear of COVID-19 is a unidimensional construct. The two-factor structure of the FCV-19S is consistent with the perspective that fear is a multifaceted phenomenon. Specifically, the Emotional and Psychosomatic factors reflect the verbal–cognitive and physiological response systems, respectively, implicated in fear; however, fear involves not only these two response systems, but also overt behaviour (Cisler et al., 2009). Indeed, Taylor (2022) remarked that 'fear of infection [is] part of a broader constellation of symptoms' (p. 592)—including obsessive-compulsive behaviours vis-à-vis contamination (e.g., compulsively monitoring one's body for signs of infection). Thus, we recommend that researchers and practitioners interested in taking a more nuanced approach to assessing fear of COVID-19 or pandemic-related distress more broadly consider reviewing the several multidimensional measures that have emerged over the past few years (see, e.g., Muller et al., 2021).

Nevertheless, that there are two FCV-19S factors highlights multiple avenues of treatment for fear of COVID-19. To treat the emotional distress characteristic of fear of COVID-19, mental health professionals can consider administering cognitive-behavioural therapy (CBT), which has long been acknowledged as a robustly effective treatment for anxiety-related disorders (see J. K. Carpenter et al., 2018). Specific examples of CBT techniques applied to fear of COVID-19 include identifying and cognitively challenging maladaptive thoughts regarding contamination and death as well as recounting and revisiting experienced pandemic-related traumatic events and hypothetical worst-case scenarios while in a safe therapeutic environment (i.e., imaginal exposure and worry exposure; see Moses & Wootton, 2021). In addition, equipping clients with techniques to identify and behaviourally address the psychosomatic symptoms associated with fear of COVID-19 may be particularly impactful. For example, progressive muscle relaxation is effective for treating stress and anxiety (Muhammad Khir et al., 2024). Relatedly, biofeedback techniques and slow breathing are effective for improving physiological outcomes (Lehrer et al., 2020). Recent studies suggest that such techniques can address fear of COVID-19 and improve sleep quality (see, e.g., Gündoğan & Kaplan Serin, 2022; Kepenek-Varol et al., 2022). Overall, we recommend that mental health professionals consider how fear of COVID-19 manifests uniquely for each client/patient and tailor treatment plans accordingly.

We also found that the FCV-19S exhibited limited measurement equivalence across different types of sample and countries. Specifically, there was partial scalar invariance across the general population, healthcare workers, schoolteachers, and university students. Thus, in general, fear of COVID-19 presents similarly across a variety

TABLE 1 Measurement models for the fear of COVID-19 scale (harmonic-mean Ns in table note).

Model[a]	χ^2 (*df*)	CFI[b]	TLI	RMSEA	SRMR
1. One factor (all samples)	22,960.29 (14)	0.90	0.85	0.15	0.05
2. Two factors (all samples)	6182.20 (13)	0.97	0.96	0.08	0.03
3. Group: General population	3489.70 (13)	0.97	0.95	0.08	0.03
4. Group: Healthcare workers	264.44 (13)	0.98	0.96	0.08	0.03
5. Group: Schoolteachers	1968.63 (13)	0.96	0.94	0.11	0.04
6. Group: University students	409.64 (13)	0.98	0.96	0.08	0.02
7. Country: Bangladesh	1148.37 (13)	0.96	0.94	0.09	0.03
8. Country: China	2334.05 (13)	0.97	0.95	0.10	0.03
9. Country: Japan	1166.40 (13)	0.96	0.93	0.10	0.04
10. Country: Pakistan	546.13 (13)	0.95	0.92	0.12	0.04
11. Country: Poland	231.13 (13)	0.95	0.93	0.10	0.04
12. Country: Portugal	237.54 (13)	0.97	0.95	0.09	0.03
13. Country: Saudi Arabia	966.87 (13)	0.93	0.89	0.12	0.05
14. Configural (sample type)	6132.41 (52)	0.97	0.95	0.09	0.03
15. Metric (sample type)	6274.16 (67)	0.97	0.96	0.08	0.03
16. Scalar (sample type)	8846.54 (82)	0.96	0.95	0.08	0.04
17. Partial scalar (sample type)[c]	6761.46 (79)	0.97	0.96	0.07	0.03
18. Configural (country)[d]	5663.61 (78)	0.96	0.94	0.10	0.03
19. Metric (country)[d]	5432.60 (103)	0.96	0.95	0.09	0.04
20. Partial metric (country)[d,e]	6089.39 (98)	0.96	0.95	0.09	0.04
Model 1 versus Model 2	Δ = 16,778.09 (1)	Δ = 0.072	Δ = 0.11	Δ = 0.07	Δ = 0.02
Model 14 versus Model 15	Δ = 141.75 (15)	Δ = 0.001	Δ = 0.01	Δ = 0.01	Δ = 0.00
Model 15 versus Model 16	Δ = 2572.38 (15)	Δ = 0.013	Δ = 0.01	Δ = 0.00	Δ = 0.01
Model 15 versus Model 17	Δ = 487.30 (3)	Δ = 0.002	Δ = 0.00	Δ = 0.01	Δ = 0.00
Model 18 versus Model 19	Δ = 231.01 (15)	Δ = 0.004	Δ = 0.01	Δ = 0.01	Δ = 0.01
Model 18 versus Model 20	Δ = 425.78 (20)	Δ = 0.002	Δ = 0.01	Δ = 0.01	Δ = 0.01

Note: See Footnote 2 for definitions of abbreviations used as column headings. Models: 1–2 N = 71,160; k = 55. Model 3: N = 40,667; k = 26. Model 4: N = 2831; k = 6. Model 5: N = 12,553; k = 4. Model 6: N = 5255; k = 9. Model 7: N = 11,077; k = 3. Model 8: N = 18,879; k = 6. Model 9: N = 9606; k = 8. Model 10: N = 3114; k = 3. Model 11: N = 1537; k = 3. Model 12: N = 2283; k = 3. Model 13: N = 5217; k = 4.

Abbreviations: CFI, comparative fit index; RMSEA, root mean squared error of approximation; SRMR, standardized root mean squared residual; TLI, Tucker–Lewis index.

[a]Models 3–20 reflect the two-factor measurement model specified for Model 2 (see Table S1).

[b]ΔCFI is expanded to three decimals.

[c]Items 4's intercept is freely estimated.

[d]Excludes Saudi Arabia due to poor fit.

[e]Items 7's loading is freely estimated.

of samples (although more work is needed to identify sample-related boundary conditions of this construct's relationships with other constructs in its nomological network; Jimenez et al., 2023), and comparisons of these different samples' scores on the two FCV-19S dimensions are justifiable. In comparison, there was partial metric invariance across samples from Bangladesh, China, Japan, Pakistan, Poland, and Portugal. In other words, the items load on their corresponding factors in a roughly similar manner across these countries; however, because lack of full metric invariance precludes scalar invariance, cross-cultural mean comparisons of FCV-19S scores are inadvisable. It would be prudent of researchers and mental health professionals to account for such nonequivalence when establishing cutoff scores. Examples of recent research in which different FCV-19S cutoff scores have been established include

TABLE 2 Meta-analytic factor loadings and intercepts for the emotional (emo.) factor (items 1, 2, 4, 5) and psychosomatic (psych.) factor (items 3, 6, 7) of the fear of COVID-19 scale across all samples and for each sample type.

	All	Sample type[a]			
		Gen.	HW	ST	Uni.
λ (unst.)					
Item 1	1.00	1.00	1.00	1.00	1.00
Item 2	1.01	1.00	1.00	1.00	1.00
Item 3	1.00	1.00	1.00	1.00	1.00
Item 4	1.07	1.08	1.08	1.08	1.08
Item 5	1.06	1.05	1.05	1.05	1.05
Item 6	1.08	1.09	1.09	1.09	1.09
Item 7	1.20	1.22	1.22	1.22	1.22
λ (st.)					
Item 1	0.73	0.73	0.76	0.73	0.76
Item 2	0.73	0.70	0.75	0.77	0.73
Item 3	0.76	0.74	0.76	0.77	0.74
Item 4	0.74	0.72	0.74	0.79	0.75
Item 5	0.76	0.73	0.77	0.80	0.74
Item 6	0.81	0.80	0.83	0.84	0.81
Item 7	0.82	0.81	0.85	0.85	0.82
ν					
Item 1	3.18	3.20	3.20	3.20	3.20
Item 2	3.11	3.14	3.14	3.14	3.14
Item 3	2.01	1.90	1.90	1.90	1.90
Item 4[a]	2.75	2.62	2.78	2.99	2.89
Item 5	2.92	2.92	2.92	2.92	2.92
Item 6	1.99	1.87	1.87	1.87	1.87
Item 7	2.20	2.06	2.06	2.06	2.06
Emo.	0.00	0.00	0.16	−0.02	−0.31
Psych.	0.00	0.00	0.23	0.39	−0.17
ψ	0.79	0.78	0.82	0.81	0.79

Abbreviations: λ, factor loading (unst., unstandardized; st., standardized); *ν*, intercept; *ψ*, factor correlation; Gen., general population; HW, healthcare workers; ST, schoolteachers; Uni., university students.

[a]Partial scalar invariance model (intercept freely estimated for Item 4).

TABLE 3 Meta-analytic factor loadings and intercepts for the emotional (emo.) factor (items 1, 2, 4, 5) and psychosomatic (psych.) factor (items 3, 6, 7) of the fear of COVID-19 scale for each country.

	Country[a]					
	BD	CN	JP	PK	PL	PT
λ (unst.)						
Item 1	1.00	1.00	1.00	1.00	1.00	1.00
Item 2	1.00	1.00	1.00	1.00	1.00	1.00
Item 3	1.00	1.00	1.00	1.00	1.00	1.00
Item 4	1.09	1.09	1.09	1.09	1.09	1.09
Item 5	1.04	1.04	1.04	1.04	1.04	1.04
Item 6	1.07	1.07	1.07	1.07	1.07	1.07
Item 7[a]	1.04	1.14	1.32	1.31	1.15	1.47
λ (st.)						
Item 1	0.72	0.74	0.72	0.73	0.75	0.77
Item 2	0.69	0.78	0.68	0.73	0.70	0.75
Item 3	0.74	0.80	0.74	0.75	0.77	0.74
Item 4	0.71	0.80	0.68	0.74	0.77	0.72
Item 5	0.73	0.80	0.70	0.70	0.67	0.74
Item 6	0.77	0.85	0.80	0.80	0.79	0.82
Item 7[a]	0.69	0.84	0.86	0.85	0.81	0.85
ν						
Item 1	3.55	3.15	3.44	3.06	2.54	2.95
Item 2	3.40	3.00	3.21	3.15	2.62	2.88
Item 3	2.40	2.32	1.56	1.99	1.46	1.54
Item 4	2.95	2.91	2.96	2.50	2.02	2.48
Item 5	3.43	2.88	2.89	3.38	2.54	2.77
Item 6	2.35	2.32	1.59	1.93	1.48	1.56
Item 7	2.71	2.54	1.69	2.22	1.50	1.84
Emo.	0.00	0.00	0.00	0.00	0.00	0.00
Psych.	0.00	0.00	0.00	0.00	0.00	0.00
ψ	0.82	0.84	0.65	0.80	0.75	0.73

Abbreviations: λ, factor loading (unst., unstandardized; st., standardized); *ν*, intercept; *ψ*, factor correlation; BD, Bangladesh; CN, China; JP, Japan; PK, Pakistan; PL, Poland; PT, Portugal.

[a]Partial metric invariance model (factor loading freely estimated for Item 7).

Nikopoulou et al.'s (2022) study with individuals in Greece (proposed cutoff = 16.50) and Mohsen et al.'s (2022) study with individuals in Syria (proposed cutoff = 17.50).

The historical context of COVID-19 and its dynamic nature may also have implications for the measurement and study of pandemic-related fear.[4] For example, from the start of the pandemic till now, individuals' perceptions of risk have been highly variable and heavily influenced by fear related to COVID-19. Researchers examining the risk of developing post-traumatic stress disorder, depression, and suicidal ideation as well as social media's influence on fear demonstrated that poorer mental health outcomes were evident in the initial stages of the outbreak (Ochnik et al., 2022; Tillman, 2020). Fear towards COVID-19 reduced as pandemic-related deaths declined. For example, Quigley et al. (2023) found that over a fourmonth time period in 2021, overall fear of COVID-19 decreased, but fear levels continued to predict intolerance to uncertainty, sleep difficulty, and levels of worry. Thus, although general pandemic-related fear may decrease over time, such mean-level change is unlikely to alter the psychometric properties of the FCV-19S (e.g., reliability, validity).

4.1 | Limitations and future directions

The present meta-analysis is not without limitations. Of particular concern is the possibility of second-order sampling error—that is, sampling error attributable to there being a limited number of samples constituting a meta-analysis (Schmidt & Hunter, 2015). Although, overall, this item-level meta-analysis is adequately large,[5] some of the matrices that we used as CFA input were based on relatively small sets of samples. Namely, the matrices for healthcare workers and samples from Bangladesh, Pakistan, and Saudi Arabia all had $k = 3$, which is the minimum number of samples for conducting psychometric meta-analysis with Schmidt and Hunter's (2015) 'corrected variance procedures' (p. 78). Relatedly, despite there being 51 different countries represented in the database, the aforementioned $k = 3$ minimum limited the number of country-specific measurement models available for comparison. Notably, Western, educated, industrialized, rich, and democratic (WEIRD) nations were under-represented when assessing measurement invariance—a departure from most meta-analyses (O'Boyle et al., 2023). In order to more firmly establish the generalizability (or lack thereof) of the FCV-19S, it will be important to further investigate the scale's measurement equivalence across a broader range of countries (and sample types).

In addition, although the multigroup-CFA approach we adopted follows N. C. Carpenter et al. (2016), the inspected fit indices (e.g., CFI, RMSEA, SRMR) do not provide insight into the degree/magnitude of measurement (non)equivalence at either the item or scale level; one such effect size is d_{MACS}, which is 'similar to Cohen's d' (Somaraju et al., 2022, p. 749). Although we initially intended to supplement our multigroup CFAs with this effect size, Dueber's (2023) dmacs R package does not currently support input in the form of the meta-analytic matrices used in the present study (D. Dueber, personal communication, 17 May 2023). In order to more precisely investigate measurement equivalence at the item level, researchers should consider conducting large-scale multigroup-CFA primary studies and inspecting d_{MACS}. Such an approach would provide more nuanced information on the generalizability of the FCV-19S across different walks of life and locales.

CONFLICT OF INTEREST STATEMENT

We have no conflicts of interest to disclose.

DATA AVAILABILITY STATEMENT

The data that supports the findings of this study are available in the supplementary material of this article.

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ENDNOTES

[1] The majority of studies that we excluded simply lacked information that could be subjected to this item-level meta-analysis. Although the FCV-19S was used in many of these studies, most authors did not report item-level correlations, means, and standard deviations—even in psychometric evaluations of the scale. Rather, the FCV-19S was but one of several measures included in a study. In addition, most study datasets were not readily available. Other reasons for why records were not further scrutinized include citation of Ahorsu et al. (2022) without actually using the FCV-19S (e.g., Sarı et al., 2023) and the record being an erratum/corrigendum with no information that could be meta-analyzed (e.g., Bellamkonda & Pattusamy, 2023).

[2] The following was considered indicative of acceptable fit: standardized root mean squared residual (SRMR) of $\leq$ 0.08 paired with either comparative fit index (CFI) $\geq$ 0.95 or Tucker–Lewis index (TLI) $\geq$ 0.95 or root mean squared error of approximation (RMSEA) $\leq$ 0.06 (see Hu & Bentler, 1999).

[3] We considered ΔCFI >0.002 indicative of measurement nonequivalence (see Somaraju et al., 2022).

[4] We thank a reviewer and our action editor for recommending that we reflect on the implications of change in fear of COVID-19 over time.

[5] For example, in comparison to N. C. Carpenter et al. (2016), who meta-analyzed $k = 27$ samples in their article introducing item-level meta-analysis, we meta-analyzed a total of $k = 55$ samples.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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