LETTER TO THE EDITOR



Fear During COVID-19 pandemic: Fear of COVID-19 Scale Measurement Properties

Irfan Ullah, et al. [full author details at the end of the article]

Accepted: 13 March 2021/Published online: 03 September 2021

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2021

Dear Editor,

The emergence and development of the COVID-19 pandemic is having a toll on the mental health of the general population, and healthcare workers around the world, often manifested in depression, fear, stress, trauma, and anxiety (Ahorsu et al. 2020; Mamun and Ullah 2020; Lee et al, 2020). Various scales have been developed during the pandemic to measure these effects (Ransing et al. 2020). Fear during the COVID-19 pandemic has been associated with serious mental health consequences, such as passive suicidal ideation, alcohol and substance use, and extreme hopelessness (Mamun and Ullah 2020). Hence, a timely and accurate assessment of COVID-19-related fear is relevant for clinicians.

The Fear of COVID-19 Scale (FCV-19S) is a 7-item scale that assesses the severity of COVID-19-related fear (Ahorsu et al. 2020). Each item is rated on a 5-point Likert scale: 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating a greater fear of COVID-19 (Ahorsu et al. 2020). The tool was developed in Persian language, and its initial validation was conducted in a sample of Iranian adults drawn from the general population. Following the initial validation, several studies have examined the psychometric properties of the scale across different populations and in different languages (Ransing et al. 2020). In this letter, we provide an overview of the available literature on the utility and psychometric properties of the FCV-19S.

We searched PubMed using the keywords "COVID-19" or "SARS-CoV-2" or "Coronavirus disease" and "Fear Scale" or "FCV-19S" or "Fear of COVID-19 Scale" till 30 August 2020. We found 19 studies assessing the reliability and/or validity of the FCV-19S. The full texts for each article were retrieved and data extracted regarding sample size, mean age, language, country, and scale reliability and validity. A summary of the included studies is presented in Table 1.

The FCV-19S has been translated into 14 languages and validated across 20 different countries (Pakpour et al, 2020). Three studies, including the initial validation study, were conducted in the Middle East, six in Asia, six in Europe, and one each in the USA, New Zealand, Cuba, and Peru. Most of the studies (n = 18) validated the FCV-19S with adult populations, with one study being conducted among adolescents. The Cronbach's alpha values across the different studies ranged from 0.81 to 0.93 indicating high reliability of the FCV-19S.

Twelve studies investigated the criterion validity (either discriminant or convergent) of the FCV-19S. Similarly to the original validation (Ahorsu et al. 2020), Soraci et al. and Alyami et al. examined the validity of the FCV-19S against the HADS among Italian and Saudi Arabian adults,



- Winter, T., Riordan, B. C., Pakpour, A. H., Griffiths, M. D., Mason, A., Poulgrain, J. W., & Scarf, D. (2020). Evaluation of the english version of the fear of COVID-19 scale and its relationship with behavior change and political beliefs. *International Journal of Mental Health and Addiction*, 1–11. Advance online publication. https://doi.org/10.1007/s11469-020-00342-9
- Sakib, N., Bhuiyan, A.K.M.I., Hossain, S., al Mamun F., Hosen I., Abdullah A.H., Sarker M.A., Mohiuddin M.S., Rayhan I., Hossain M., Sikder M.T., Gozal D., Muhit M., Islam S.M.S., Griffiths M.D., Pakpour A.H., Mamun M.A. Psychometric validation of the Bangla Fear of COVID-19 Scale: Confirmatory factor analysis and Rasch analysis. *Int J Ment Health Addiction* (2020). https://doi.org/10.1007/s11469-020-00289-x
- Satici, B., Gocet-Tekin, E., Deniz, M.E., Satici S.A. Adaptation of the Fear of COVID-19 Scale: Its association with psychological distress and life satisfaction in Turkey. Int J Ment Health Addiction (2020). https://doi. org/10.1007/s11469-020-00294-0
- Soraci, P., Ferrari, A., Abbiati, F.A., del Fante E., de Pace R., Urso A., Griffiths M.D. Validation and psychometric evaluation of the Italian version of the Fear of COVID-19 Scale. *Int J Ment Health Addiction* (2020). https://doi.org/10.1007/s11469-020-00277-1
- Tsipropoulou, V., Nikopoulou, V. A., Holeva, V., Nasika, Z., Diakogiannis, I., Sakka, S., Kostikidou, S., Varvara, C., Spyridopoulou, E., & Parlapani, E. (2020). Psychometric properties of the Greek version of FCV-19S. *International Journal of Mental Health and Addiction*, 1–10. Advance online publication. https://doi.org/10.1007/s11469-020-00319-8.
- Tzur Bitan, D., Grossman-Giron, A., Bloch, Y., Mayer, Y., Shiffman, N., & Mendlovic, S. (2020). Fear of COVID-19 scale: Psychometric characteristics, reliability and validity in the Israeli population. *Psychiatry Research*, 289, 113100. https://doi.org/10.1016/j.psychres.2020.113100.
- Winter, T., Riordan, B.C., Pakpour, A.H., Griffiths M.D., Mason A., Poulgrain J.W., Scarf D. Evaluation of the English version of the Fear of COVID-19 Scale and its relationship with behavior change and political beliefs. *Int J Ment Health Addiction* (2020). https://doi.org/10.1007/s11469-020-00342-9

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Affiliations

Irfan Ullah¹ • Florence Jaguga² • Ramdas Ransing³ • Victor Pereira-Sanchez⁴ • Laura Orsolini⁵ • Dorottya Ori⁶ • Renato de Filippis⁷ • Amir H Pakpour^{8,28} • Frances Adiukwu⁹ • Ozge Kilic¹⁰ • Nafisatu Hayatudeen¹¹ • Sheikh Shoib¹² • Margaret Isioma Ojeahere¹³ • Sachin Nagendrappa¹⁴ • Jibril I.M Handuleh¹⁵ • Elona Dashi¹⁶ • Umar Baba Musami¹⁷ • Bita Vahdani¹⁸ • Agaah Ashrafi¹⁹ • Chonnakarn Jatchavala²⁰ • Zargham Abbass²¹ • Sarah El Halabi²² • Oluseun Peter OGUNNUBI²³ • Mariana Pinto da Costa^{24,25,26} • Rodrigo Ramalho²⁷

Florence Jaguga flokemboi@gmail.com

Ramdas Ransing ramdas ransing123@yahoo.co.in

Victor Pereira-Sanchez vpereira@alumni.unav.es

Laura Orsolini laura.orsolini01@gmail.com



- Department of Child and Adolescent Psychiatry, NYU Grossman School of Medicine, New York, USA
- Unit of Clinical Psychiatry, Department of Neurosciences/DIMSC, School of Medicine, Polytechnic University of Marche, 60126 Ancona, Italy
- Department of Mental Health, Heim Pal National Pediatric Institute, Budapest, Hungary
- Psychiatric Unit, Department of Health Sciences, University Magna Graecia of Catanzaro, 88100 Catanzaro, Italy
- Social Determinants of Health Research Center, Research Institute for Prevention of Non-Communicable Diseases, Qazvin University of Medical Sciences, Shahid Bahounar BLV, Qazvin 3419759811, Iran
- Department of Mental Health, University of Port Harcourt, Port Harcourt, Rivers state, Nigeria
- Department of Psychiatry, Bezmialem Vakif University, Faculty of Medicine, Istanbul, Turkey
- Federal Neuropsychiatric Hospital, Kaduna, Nigeria
- Independent Public Health and Clinical Researcher, Mind Wellness Center, Nawab bazar, Srinagar, Kashmir, India
- Department of Psychiatry, Jos University Teaching Hospital, Jos, Plateau State, Nigeria
- National Institute of Mental Health and Neurosciences, Bengaluru, India
- Saint Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia
- Department of Neuroscience, University Hospital Center "Mother Theresa", Tirana, Albania
- University of Maiduguri /Federal Neuropsychiatric Hospital Maiduguri, Maiduguri, Nigeria
- 18 Clinical Research Development Unit, 22 Bahman Hospital, Qazvin University of Medical Sciences, Qazvin, Iran
- Psychiatry Department, Tehran University of Medical Sciences, Roozbeh Hospital, Tehran, Iran
- Department of Psychiatry, Faculty of Medicine, Prince of Songkla University, Songkhla, Thailand
- University of Missouri-Kansas City, Kansas City, USA
- Psychiatry Department, Westchester Medical Center, Valhalla, New York, USA
- ²³ College of Medicine, University of Lagos, Lagos, Nigeria
- Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, UK
- Institute of Biomedical Sciences Abel Salazar, University of Porto, Porto, Portugal
- South London and Maudsley NHS Foundation Trust, London, UK
- Department of Social and Community Health, School of Population Health, University of Auckland, Auckland, New Zealand
- Department of Nursing, School of Health and Welfare, Jönköping University, Jönköping, Sweden