The fear of COVID-19 and its role in preventive behaviors

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Abstract
The economic and psychosocial consequences of the COVID-19 pandemic have been far-reaching and unprecedented around the world. These circumstances appear to have had profound psychological effects on all individuals worldwide. One psychological aspect of the COVID-19 pandemic is fear. This brief paper argues that assessing fear is important and is the key reason we co-developed the 'Fear of COVID-19 Scale' (FCV-19S). It is argued that without knowing the level of fear about COVID-19 among different groups by specific socio-demographic variables (e.g., gender, age, education, ethnicity, religiosity, etc.) and/or different psychological factors (e.g., personality type) it is difficult to know whether education and prevention programs are needed, and if they are needed which groups to target and where. The collation and application of such data could be used to devise targeted education and/or prevention programs to help overcome fear of COVID-19 and help such individuals to engage in preventative behaviors.

Keywords: COVID-19; coronavirus 2019; fear; Fear of COVID-19 Scale; psychology of fear; fear prevention

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The novel coronavirus disease 2019 (COVID-19) pandemic has infected over one million individuals with almost 50,000 deaths worldwide at the time of writing (European Centre for Disease Prevention and Control, 2020). COVID-19 has extraordinary spreading properties and is causing high rates of both morbidity and mortality (Lipsitch, et al., 2020). To respond to this situation, governments around the world have started to issue unprecedented public policies such as social distancing, isolation, and self-quarantine (Anderson, et al., 2020). The economic and psychosocial consequences of

the COVID-19 pandemic have been far-reaching and unprecedented around the world. Millions of individuals all around the world have been told to remain in their houses (i.e., so-called 'lockdowns') and many have not been able to work (and earn money) because they are unable to do their job from home.

Consequently, many people have started to be worried about their jobs and not just in lower-income and middle-income countries. Media coverage is (at the time of writing) still very heavy across all types of media (television, radio, print, and social media) and the lead stories typically focus on the number of infected individuals and deaths arising from COVID-19. These circumstances appear to have had profound psychological effects on all individuals worldwide. For example, in a recent Canadian study among 1354 adults reported that one-third of participants were worried about COVID-19 (Angus Reid Institute, 2020). Another study from Germany similarly reported that individuals (n=1242) were highly worried about COVID-19 (Gerhold, 2020). In an online poll of 808 U.S. adults, it was reported that 56% of participants were concerned or very concerned about the spread of COVID-19 in the U.S. (Aubrey, 2020). Another U.S. study reported that participants were also more concerned about the COVID-19 than seasonal influenza (37% vs. 27 very concerned) (Morning Consult, 2020).

One psychological aspect of the COVID-19 pandemic is fear. Fear is defined as an unpleasant emotional state that is triggered by the perception of threatening stimuli (de Hoog, et al., 2008). Extraordinary situations such as disease outbreaks and epidemics can induce fear among many people. Such fear has led to individuals committing suicide because they thought they had COVID-19 even though the autopsies showed that they did not (Goyal et al., 2020; Mamun & Griffiths, 2020). Fear is a much researched psychological construct and this has led to the development of dozens of psychometric 'fear scales' assessing individuals' fear of many different things. There are those that assess the fear of being diagnosed with specific health conditions (e.g., fear of breast cancer [Champion et al., 2004], dementia [Lee & Jung, 2020], Alzheimer's disease [French et al., 2012], hypoglycemia [Anarte Ortiz et al., 2012]), fear of medical and paramedical-related situations (e.g., fear of pain [Simons et al., 2011], surgery [Theunissen et al., 2014], going to the dentist [Kleinknecht et al., 1984]), fear among specific vulnerable groups (e.g., fear of activity for those with heart problems [Ozyemisci-Taskiran et al., 2020], fear of falling for those with Parkinson's disease [Terroba-Chambi et al., 2019], fear of cancer recurrence among cancer patients [Simard & Savard, 2009], fear of childbirth among pregnant women [Slade et al., 2019]), and fears of very specific things concerning individual phobias (e.g., arachnophobia [spiders; Granado et al., 2005], ophidiophobia [snakes; Klorman et al., 1974], agoraphobia [outside spaces; Bandelow, 1995], aerophobia [flying; Faraci et al., 2011], and nomophobia [no mobile phone; Yildirim & Correia, 2015]), as well as more general fears such as the fear of missing out in social media (Przybylski et al., 2013), fear of public speaking (Poeschl & Doering, 2015), and the fear of crime (Ferraro & LaGrange, 1987).

Assessing fears is important. Without knowing the levels of fear about specific things among different groups by specific socio-demographic variables (e.g., gender, age, education, ethnicity, religiosity, etc.) it is difficult to know whether education and prevention programs are needed, and if they are needed which groups to target and where.

This is the underlying reason we were part of a team that developed the 'Fear of COVID-19 Scale' (FCV-19S; Ahorsu et al., 2020) to help researchers to assess the level of fear among populations during the COVID-19 pandemic. We developed the FCV-19S based on McCoach et al.'s recommendations on instrument development in the affective domain (McCoach et al., 2012) and based the items on those contained within 30 different published 'fear scales' (a full list of all the scales we used is available by contacting the present authors).

We concluded that preliminarily psychometric properties of the FCV-19S were robust in terms of both validity and reliability among a sample of the Iranian adult population. However, there are further considerations that need addressing in future studies. Scores on the FCV-19S were significantly and positively correlated with instruments assessing depression and anxiety. However, it is not clear if scale scores would be correlated with individuals carrying out preventive COVID-19 behaviors (e.g., handwashing, social distancing, respiratory hygiene, etc.). However, the association between fear and health-related behaviors is complex.

A possible explanation could be arousing fear in health communication (i.e., fear could be generated by messages that are perceived as threatening, so called 'fear appeals'). Fear appeals have been much used to change people's attitude and behavior on wide variety of topics (e.g., cigarette smoking, breast self-examination, sunscreen usage, and medication adherence) (Tannenbaum, et al., 2015). Rogers' (1983) protection motivation theory (PMT) assumes that individuals engage in health behaviors when their perceived susceptibility and severity are high and perceived rewards of maladaptive behaviors are relatively low. However, perceived susceptibility could have both cognitive (risk perception) and emotive elements (fear and worry) (Moser et al., 2007).

A recent study (Harper, et al., 2020) using our newly developed scale reported that FCV-19S score was associated positively with a behavior change assessing COVID preventive behaviors. It appears that individuals engage more in preventive behaviors when they perceive the threat as severe. In the case of COVID-19, perceived threat could act as a motivational factor to perform a behavior that facilitates COVID-19 prevention.

When we publicized our new scale on social media, a few academics did not appear to grasp why we had developed a scale to assess COVID-19 fear. Our ultimate aim is the prevention of fear surrounding COVID-19. At present we do not know (empirically) the type of person who is overly fearful of COVID-19. As aforementioned, carrying out research using our new scale will hopefully help health practitioners to determine whether there are risk groups based on gender, age, education, ethnicity and/or religiosity. Psychologists could use the scale to see if COVID-19 fear is associated with specific personality traits. The collation and application of such data can then be used to devise targeted education and/or prevention programs to help overcome fear of COVID-19 and help such individuals to engage in preventative behaviors.

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