A Mindfulness Mobile App for Traumatized COVID-19 Healthcare Workers and Recovered Patients: A Response to “The Use of Digital Applications and COVID-19”

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We are grateful to Alexopoulos et al. (2020) for their timely recommendation to repurpose our previously developed, refined, and tested mindfulness- and acceptance-based mobile app intervention for military veterans with posttraumatic stress disorder (PTSD; Reyes et al. 2020b). Alexopoulos et al.’s (2020) insightful suggestions provide a foundational context for further investigative trajectories of mental health smartphone apps for the treatment and mitigation of PTSD. Their article calls upon expanding the target population of mental health online and app-based interventions to include cohorts suffering from the consequences of global crises, such as the current COVID-19 pandemic.

Alexopoulos et al. (2020) have argued that the unprecedented escalation of the COVID-19 crisis, which has had a pervasive negative impact on the mental health of healthcare providers and recovering COVID-19 patients, and the scarcity of mental health resources to manage the consequences of this pandemic necessitate a strategic delivery of mental health and wellbeing services. Accordingly, Alexopoulos et al. (2020) have highlighted the urgent need to increase access to mental wellbeing apps for all population groups that have been traumatized by the COVID-19 outbreak, with a particular focus on healthcare workers and patients recovering from COVID-19. In this context, we unequivocally support Alexopoulos et al.’s (2020) invitation and wholeheartedly welcome this opportunity to expand the target population of our mobile app intervention, previously developed for military veterans with PTSD, to include to COVID-19

healthcare providers and patients who recovered from the disease.

Since the identification of the initial cluster of COVID-19 infections in Wuhan, Hubei Province, China, in December 2019 (Nishiura et al. 2020), a series of studies have sought to investigate the psychological consequences of the COVID-19 pandemic—including, among others, also PTSD symptoms. The fear of contracting the virus, uncertainty about the course of the pandemic, as well as the unprecedented aftermath of the extreme curbing measures implemented to stop the outbreak have overwhelmed many individuals, leading them to feel helpless, frustrated, and desperate in the face of these new difficult and threatening experiences.

Prevalence rates of PTSD related to the psychological impact of COVID-19 outbreak have dramatically increased, particularly among individuals from the most affected nations. According to recent estimates, COVID-related PTSD prevalence rates amounted to 79.6% among Chinese adults across 31 provinces (Guo et al. 2020), 31.8% among U.S. young adults (Liu et al. 2020a), 27.5% among Italian adults (Forte et al. 2020), 15.8% among Spanish adults (González-Sanguino et al. 2020), 7% among Wuhan residents (Liu et al. 2020b), and 2.7% among Chinese university students (Tang et al. 2020). Additionally, PTSD symptoms were observed in 3.8–7.4% of healthcare providers caring for COVID-19 patients (Chew et al. 2020; Yin et al. 2020). Taken together, this recent evidence suggests that the psychological impact of COVID-19 has been pervasive among different population groups and, therefore, requires more accessible and non-stigmatizing mental health care and services. In this context, the increasing acceptance of mindfulness as a non-stigmatizing approach to ameliorating PTSD symptoms and the ubiquity of smartphone use (e.g., 81% of the U.S. population own a smartphone, Pew Research Center 2019) suggest that our mindfulness- and acceptance-based mobile app intervention for college student veterans with PTSD (Reyes et al. 2020b) could also be highly relevant to

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individuals psychologically impacted by the effects of the COVID-19 pandemic.

Concurring with Alexopoulos et al.'s (2020) proposal to repurpose our mobile app intervention, we are now considering expanding the trajectory of our research to explore the effectiveness of our mobile app intervention for healthcare workers and patients adversely impacted by the COVID-19 pandemic. First, since our intervention promotes enhancing mindfulness and developing non-judgmental acceptance of difficult traumatic experiences, we will use a qualitative methodology to explore healthcare workers and recovered patients' thoughts and emotions related to the impact of the COVID-19 pandemic. Second, considering Alexopoulos et al.'s (2020) preliminary findings about the barriers to participants' sharing of personal data on mental wellbeing apps, we will investigate the influence of stigma and concerns about data privacy on adherence to the intervention and study retention rates. The envisaged exploratory investigation will enable us to refine the content and structure of our mobile app intervention to increase the use of the intervention. Finally, Alexopoulos et al.'s (2020) suggestion of exploring the effectiveness of the mobile app intervention among COVID-19 healthcare workers and former COVID-19 patients contextualizes the key scientific premise of the intervention—namely, that mindfulness can promote resilience to trauma, and that this trauma resilience could consequently reduce the severity of PTSD symptoms (Thompson et al. 2011). Our preliminary results on the efficacy of the mobile app intervention have already yielded promising outcomes on mindfulness, resilience, PTSD, and intervention acceptability among college student veterans (Reyes et al. 2020a). Based on this evidence, we hope to find similarly promising results in applying the mobile app intervention among healthcare workers and former COVID-19 patients who have been adversely affected by the current pandemic.

Compliance with Ethical Standards

Conflict of interest No conflict of interest has been declared by the author.

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