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Letter to the editor

**Russia-Ukraine War: Jeopardizing the mental health gains already been obtained globally**

Admittedly, COVID-19 has inflicted a lot of stress on the public, healthcare professionals, patients with preexisting psychiatric disorders, and COVID-19 patients (Kalaitzaki et al., 2021; accepted). In the first year of the pandemic, WHO announced a 25% increase in anxiety and depression globally (<https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide>) not to mention other enduring adverse psychological effects such as post-traumatic stress symptoms and symptoms of long COVID-19 (Kawakami et al., 2022). Due to the ongoing increase of confirmed cases worldwide (<https://covid19.who.int/>), the WHO director recently announced that the pandemic is 'far from over' (<https://economictimes.indiatimes.com/news/international/world-news/who-covid-19-cases-rise-for-the-5th-week-deaths-stable/articleshow/92877077.cms>). Undoubtedly, the pandemic surge and spread of new variants will further strain the already overwhelmed professionals and healthcare systems globally.

In the background of COVID-19, the Russia-Ukraine war emerged as a new global crisis. How might this double crisis impact mental health in the foreseeable future? Without underestimating the immediate health costs on human lives and livelihood, the psychological costs can be huge with post-war long-lasting mental health ramifications such as acute and posttraumatic stress disorder (PTSD), dissociative disorders (Shoib, Arif et al., 2022), anxiety and depression, behavioral disorders (e.g., aggression), substance abuse, and potentially complex posttraumatic stress disorder and prolonged grief disorder (Kalaitzaki, 2022, accepted). Kurapov et al. (2022) have already shown alarming findings with 97.8% of Ukrainians presently reporting mental health deterioration. Results from studies that have investigated mental health due to other armed conflicts amid COVID-19 are alarming. Mohsen et al. (2021) found 83.4% and 69.6% prevalence of depressive and anxiety symptoms among Syrians, whereas the Armenia-Azerbaijan Nagorno-Karabakh conflict has resulted in symptoms of depression, anxiety, acute stress disorder, and dissociative disorder (Shoib, Arif et al., 2022). Taking into consideration the aforementioned research evidence and the already vulnerable mental health of Ukrainians because of the conflicts since 2014 and the COVID-19 pandemic, it could be predicted that the war will have an accumulating impact that could be devastating and potentially last for generations (Kalaitzaki, 2022, accepted).

Although research has disproportionately, and rightfully, investigated the detrimental mental health effects of highly traumatic events, studies have also shown that a proportion of people can experience positive changes or what has been called 'posttraumatic growth' (PTG). PTG can be defined as the positive changes that one may experience in oneself, others, and the world from struggling with life adversities (e.g., death, war combat, disasters, life-threatening diseases) and can be observed in five domains: valuing interpersonal relationships, greater spiritual gains, greater appreciation of life, and discovering new

possibilities and personal strength (Tedeschi and Calhoun, 1996). PTG can co-exist with posttraumatic stress symptoms (Kalaitzaki et al., 2021). Research evidence has shown moderate-to-high PTG among people who have experienced traumatic events, with rates ranging across studies from 10% to 77.3% (Wu et al., 2019).

Concerning the war-related PTG, a systematic review of studies published between 2001 and 2017 found moderate growth among (ex-) military personnel (Mark et al., 2018). Interestingly, PTG has also been observed in soldiers fighting in Eastern Ukraine (Kondratyuk and Puchalska-Wasył, 2019). COVID-19-related literature has suggested that as long as the pandemic is perceived as a traumatic, and life-threatening event, a significant proportion of people (around 40–90%) achieve PTG (Kalaitzaki et al., 2021). Although inconclusive about the exact time that PTG needs to occur, studies agree that PTG develops across time ranging from a few weeks after trauma to longer periods (Kalaitzaki et al., 2021). Unarguably, people worldwide timidly started to become more resilient and implement appropriate coping strategies to overcome the COVID-19 crisis and gain PTG (Kalaitzaki et al., 2021) with more PTG being expected in the near future.

However, the Russia-Ukraine war will probably jeopardize severely the gains obtained so far. Unquestionably, combatants are at the highest risk of all, followed by refugees (Shoib, Zharkova et al., 2022). Civilians and people around the globe watching news coverage from afar could equally be traumatized and lose any PTG gains. Consuming the brutality of war through daily exposure to real-time disturbing and horrific footage and videos of unimaginable atrocities may have catastrophic mental health ramifications worldwide. Abounded and unbridled spreading of disinformation may cause phobias, depression, and anxiety (Poli, 2021).

The aforementioned findings portend what is to come, potentially on an exaggerated scale. The immeasurable adverse consequences of the Russia-Ukraine war, in the background of high rates of COVID-19 transmission, morbidity, and mortality, will make people particularly susceptible and will severely compromise global mental health in the years to come. Mental health needs should be a priority in the short and long terms might we minimize the mental health costs and maintain any gains.

CRedit authorship contribution statement

A.K. contributed to the conception and design of the manuscript, literature search, writing of the manuscript and approval of the final version; A.T. contributed to the literature search, drafted, and approved the final manuscript.

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