Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Journal of Anxiety Disorders 72 (2020) 102231

Contents lists available at ScienceDirect

Journal of Anxiety Disorders

journal homepage: www.elsevier.com/locate/janxdis

Editorial

Life in a post-pandemic world: What to expect of anxiety-related conditions and their treatment

When the current pandemic comes to an end, as it eventually will, many people will have lived through all kinds of stresses and losses, including the loss of friends and loved ones due to the novel coronavirus, the loss of jobs, the bankruptcy of businesses, and foreclosures on homes. For some people, marriages and other relationships will have crumbled under the stress of self-isolation and mounting financial hardships. If the research on natural disasters serves as a guide, as a result of the current pandemic an estimated 10 % of people will develop severe psychological problems, such as mood disorders, anxiety disorders, or posttraumatic stress disorder (PTSD) (Galatzer-Levy, Huang, & Bonanno, 2018). But the percentage could be much higher. In the wake of the SARS outbreak in 2003, a number of people developed PTSD. A four-year follow-up study of 70 survivors of SARS, for example, found that 44 % developed PTSD. Even after recovering from SARS, PTSD persisted for years in almost all (82 %) of these sufferers. PTSD symptoms tended to be more severe in people who had a high perceived life threat, low social support, and more close relatives who suffered from, or died, from SARS (Hong et al., 2009). Other studies of SARS have reported similar findings (Gardner & Moallef, 2015). It is likely that the current coronavirus will also lead to cases of PTSD. Isolation and confinement, even if only for a few weeks, can cause lasting psychological problems (Brooks et al., 2020). People quarantined for prolonged periods in cramped accommodation, sharing a bedroom with multiple occupants, or trapped at home in an abusive or coercive relationship, may be especially vulnerable to developing PTSD symptoms (Hong et al., 2009) during and after the outbreak (Taylor, 2019, Taylor, 2017). Emerging evidence also suggests it is likely that many medical and non-medical health care workers will develop PTSD (Tan et al., 2020).

Our research suggests that, during the current pandemic, some people have developed a COVID Stress Syndrome, characterized by fear of infection, fear of touching surfaces or objects that might be contaminated with the novel coronavirus, xenophobia (i.e., fear that foreigners might be infected with the virus), COVID-related checking and reassurance seeking, and COVID-related traumatic stress symptoms (e.g., COVID-related intrusive thoughts and nightmares). The COVID Stress Scales, a set of measures developed to better understand and assess COVID-19-related distress, are introduced in this volume in the article by Taylor et al. (2020). It appears that people who develop COVID Stress Syndrome have pre-existing psychopathology, particularly pre-existing high levels of health anxiety and obsessive-compulsive checking and contamination symptoms. It remains to be seen whether the COVID Stress Syndrome is simply an adjustment disorder, abating once the pandemic is over, or whether it will become chronic for some individuals.

As a result of the current pandemic there may also be an increase in hikikomori, a syndrome that superficially resembles agoraphobia in which people become recluses, reluctant to leave their living quarters. Hikikomori, defined as severe social withdrawal lasting 6 months or longer (Teo, 2010), was once regarded as a syndrome limited to Japan but has become increasingly recognized in other countries (Bowker, Bowker et al., 2019). COVID-19 is likely to increase the prevalence of hikikomori, as health-anxious people retreat from a coronavirus contaminated outside world into the safety of their apartments or homes. Advances in technology have made it increasingly easier for people to withdraw into their homes. There are trends—even before COVID-19—for people to increasingly work from home (U.S. Census Bureau, 2013), to watch movies at home instead of going to the cinema (Plaugic, 2018), to shop online instead of going to stores (U.S. Census Bureau, 2014), and to use home delivery food services instead of going to restaurants (Singh, 2019). These trends will likely be accentuated in the era of COVID-19, where homes have increasingly become havens of safety from a pathogen infested outside world.

In the wake of the current pandemic, even people who do not become housebound may become fastidious germaphobes, striving to avoid touching “contaminated” surfaces or hugging people or shaking hands. Germ phobias, which are typically features of obsessive-compulsive disorder, arise from a combination of genetic and environmental factors (Lopez-Sola et al., 2016). These factors interact with one another (Taylor, 2011). In other words, when a person with a particular genetic makeup has a traumatic experience involving the threat of infection, a germ phobia may develop. Such phobias are typically chronic (Visser, van Oppen, van Megen, Eikelenboom, & van Balkom, 2014), although milder phobias may be short-lived. All this suggests that some people will become germaphobes as a result of COVID-19. At this point, it is not possible to say how many people will become germaphobes.

There may be other, subtle, after-effects of COVID-19. Just like survivors of the Great Depression in the 1930s (McManus, 2010), some survivors of the current pandemic may become more frugal and self-sufficient, making sure to have a back-up supply of non-perishable foods and other supplies. There is also the question concerning the neuropsychiatric sequelae of COVID-19. Anecdotal evidence suggests that in the aftermath of COVID-19 infection, some people have persistence chronic fatigue and other neuropsychiatric problems (Troyer, Kohn, & Hong, 2020). The prevalence, severity, and chronicity of such problems as well as their association with anxiety-related conditions remains to be determined.

But the news is not all bad. Research on resilience (Galatzer-Levy et al., 2018) suggests that two-thirds of people will be resilient to the stresses of COVID-19. Some of these people will experience renewed purpose and meaning in their lives, through helping others during the pandemic. But, despite this good news, there is concern that there may be insufficient mental health resources to treat the many people left suffering in the wake of the pandemic, whether they be those who had

https://doi.org/10.1016/j.janxdis.2020.102231

Available online 03 May 2020

pre-existing anxiety-related disorders, those who had other pre-existing mental health conditions, or those who developed COVID Stress Syndrome or related conditions as a result of COVID-19. Online mental health resources have proliferated in the past few months, primarily out of the necessity for delivering mental health services in the context of physical distancing. While it is defensible to suggest that the current pandemic may be a turning point in the wider application of e-mental health (Wind, Rijkeboer, Andersson, & Riper, 2020), it remains to be determined whether the application of online interventions targeting general anxiety symptoms and management strategies will be sufficient to alleviate the effects of anxiety-related conditions arising as a result of COVID-19. Specifically targeted interventions delivered in a stepped- or blended-care approach may be necessary for those with more severe presentations, both now and in the context of future pandemics.

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