

# COVID-19 Pandemic and mental health concerns: What should we expect?

*COVID-19 Pandemisi ve psikiyatrik endişeler: Bundan sonraki süreçte ne beklemeliyiz?*

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## TO THE EDITOR

As third recent outbreak of coronaviruses following the severe acute respiratory syndrome (SARS)-CoV and the Middle East respiratory syndrome (MERS)-CoV, Coronavirus disease 2019 (COVID-19) pandemic with now more than 2.5 million confirmed cases and 170.000 mortality originated at Chinese town Wuhan in December 2019 (1,2). Most common presenting symptoms include cough, fatigue, fever and dyspnea while average incubation period is shown to be 4-5 days but may take up to 14 days (3,4). Most common causes of mortality in infected individuals include acute respiratory distress syndrome (ARDS) and fulminant myocarditis while clinical features including acute kidney injury and acute lung injury have commonly been reported (4). Earlier reports from Wuhan demonstrated 2.8% mortality rate with median age of deceased patients of 75, though, later reports indicate 5.6% mortality rate in China and 15.2% outside of China calculated via a model based on mean time period of 14 days between the onset of symptoms and death (5, 6). Despite growing number of clinical trials for pharmacological management of COVID-19 infection, no effective treatment options are yet to be identified (7). Its' higher transmission rate compared to Influenza and possible spread by asymptomatic carriers are the main factors limiting the control of disease and affecting psychosocial status of individuals along with quarantine measures (8). Psychiatric outcomes are commonly overlooked aspect of such pandemics despite being responsible from significant morbidity and work loss as observed in previous outbreaks. Incidence of psychiatric disorders assessed via Diagnostic and Statistical Manual-4 (DSM-4) at

post-SARS period is 58.9% in a study conducted with 90 SARS survivors while at least one fourth of the survivors suffered from post-traumatic stress disorder (PTSD) and 15.6% of the survivors experienced depressive symptoms (9,10). Similar psychiatric outcomes have also been observed in the Swine flu outbreak of 2009 (11).

Large scale researches on psychological impacts on COVID-19 pandemic on general population are limited in number, though, with high significance. One of the initial study regarding the psychiatric consequences of COVID-19 conducted in China with 1210 participants illustrated moderate to severe depressive symptoms (16.5%), moderate to severe anxiety symptoms (28.8%) and moderate to severe stress levels (8.1%) which are assessed via the Impact of Event Scale-Revised (IES-R) and the Depression, Anxiety and Stress Scale (DASS-21). Being female, having certain physical symptoms including myalgia and coryza and poor self-rated health status are shown to be statistically significant predictive factors for poorer psychiatric outcome while availability of accurate medical information and utilization of personal protective measures such as face masks appear to be protective variables (12). Another nationwide survey performed in China with 52.370 participants (64.73% females) demonstrated that approximately 35% of the population experience psychological distress assessed via the COVID-19 Peritraumatic Distress Index (CPDI) (mean score: 23.65) while female gender, age above 60 and ages between 18 and 30, higher educational status and certain occupations are associated with higher risk (13). Higher rates of depression and anxiety have been reported in few other cross-sectional studies along with poor sleep

quality for which anxiety and low social capital which describes low social participation and trust are potential aggravating factors (14,15). Interestingly, levels of depression and anxiety in general population during the course of pandemic do not appear to change in time (16). In addition to psychological responses of general population, patients with suspected COVID-19 symptoms are more likely to develop depression and low health-related quality of life score according to a large scale study involving 3947 patients in which health literacy has been indicated as a protective element (17). Analysis of posts from 17,865 (74.77% females, median age: 33) active Weibo users, a Chinese blogging site, revealed lower life satisfaction with elevated negative emotions including anxiety, depression and indignation (18).

In a comprehensive review study examining twenty-four studies about the psychological outcomes of quarantine restrictions, negative outcomes including PTSD, anger, depressive symptoms, emotional disturbance, irritability, insomnia, stress, fear and confusion are more commonly encountered in quarantined individuals. Furthermore, such adverse outcomes are less commonly observed in self-isolated people compared to people under obligatory quarantine restrictions. Longer duration, fear of being infected, inadequate basic life supplies, poor socioeconomic status and poor health information during quarantine period are strong predictors of worse psychological outcome. Therefore, psychological consequences of quarantine restrictions should not be underestimated and duration of quarantine should be kept as short as possible with no delay than announced dates unless in extreme cases (19).

Another crucial psychological aspect of COVID-19 pandemic that needs to be addressed is the psychosocial status of healthcare workers since more than 20% of the affected individuals in recent SARS outbreak in 2002 are healthcare workers (20). Similar to general population, studies conducted with 1257 healthcare workers (76.7% females) in China indicate significant symptoms of depression (50.4%), anxiety (44.6%), insomnia (34%) and stress (71.5%) while females, nurses, those working in Wuhan or in close contact in patients with COVID-19 are more prone to deve-

lop such symptoms (21). Additionally, physicians working in close contact with infected patients such as the ones working at infectious disease, intensive care, emergency or respiratory disease departments are two times more likely to experience anxiety and depression, 1.4 times more likely to feel fear compared to rest of the physicians and administrative staff of hospitals according to a study conducted with 2042 healthcare workers and 257 administrative employee (22). In contrast, another study including 214 participants from general population and 526 nurses (292 non-front-line and 234 front-line nurse) concluded that the vicarious traumatization scores of general population and non-front-line nurses are significantly higher than front-line nurses while no difference among non-front-line nurses and general population have been determined (23). In addition to being a highlighted topic, social support for healthcare workers have shown to reduce the level of anxiety and increase self-efficacy in medical staff (24).

Despite increased need for psychological support and interventions by mental healthcare workers, general population is reluctant to seek professional help primarily due to quarantine and concerns regarding the higher risk of getting infected at hospital setting. To address such need, few methods have been introduced recently including telehealth and structured letter therapy (25-28). Videoconferencing, smartphone applications, e-mail, online forums and texting are various proposed methods of telehealth (29-31). Earlier studies investigating the efficiency of telehealth in the management of depression, anxiety and post-traumatic stress disorder are promising, though, inconclusive so far (29,32,33). During the early course of COVID-19 pandemic China has initiated telehealth services through multiple channels with promising outcomes on early reports (28).

As a consequence of high media coverage of the epidemic with poor medical information, lengthening of quarantine restriction period and delay in the return to regular daily activities, increasing concerns and spread arising from social media, we believe psychiatrists and psychologist should expect a surge in cases with depression, anxiety disorder, specific phobia, adjustment disorder, acute stress disorder, PTSD, insomnia and other sleep disorder.

ders and attention deficit hyperactivity disorder. Increasing the availability and usage of telehealth methods as performed in China, regulations regarding misleading information on media, establishment of guidelines regarding the psychiatric management of patients with pandemic-related issues similar to recently announced World Health Organization, transparent enlightenment of community with the latest and accurate advancement regarding COVID-19 pandemic, preparation of necessary adjustments for post-pandemic period, continuation of social relationships through digital

platforms, taking self-protective measures including face-masks, providing financial supports and basic life supplies and keeping quarantine measures as short as possible without endangering any life are the possible ways to handle possible psychiatric consequences (34).

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