Literature Review on the Depression and Anxiety During the COVID-19 Quarantine Period

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Abstract. Covid-19 has been spreading throughout the world, having a significant impact on people's lives. Many countries have used quarantine policies to effectively limit the spread of disease. However, each coin has two sides. This policy is expected to have an adverse effect on people's psychological health because it isolates them at home. This paper aims to review studies on how this policy has caused depression and anxiety in various countries. Most countries conduct surveys to assess participants' mental health. The findings show that depression and anxiety are positively related to COVID-19 and different demographic groups feel negative emotions to a varying degree during the quarantine period. At last, it is important to take into account how proper governmental actions, social assistance, and self-help techniques can assist people to cope with unpleasant feelings.

Keywords: COVID-19; Quarantine period; Depression; Anxiety.

1. Introduction

Since the discovery of COVID-19, it has quickly spread and turned into a worldwide pandemic and has drawn the attention of many countries as a public health emergency. By the end of July 2022, about 570 million cases have been confirmed and approximately 6 million people died from COVID-19 [1]. COVID-19 should not be spread, many countries and regions have implemented stay-at-home orders, promoted social distancing, and restricted some public events and private gatherings. The UK government imposed a lockdown on March 23, 2020. People are required to remain at home and maintain social distancing [2]. In China, the government closed some non-essential establishments and restricted public transportation [3]. Germany implemented quarantine measures, social distancing measures, and contact restrictions from March 2020 [4]. The South Korean government has also imposed epidemic prevention policies including home quarantine orders, keeping social distancing, and the closing of some public facilities [5].

People need to follow the rules of quarantine and have to stay at home. Therefore, social activities and social contact have been greatly influenced. During the lockdown, online work and studying replaced face-to-face communication so many productive activities are carried out on the Internet. Some gatherings and social activities are restricted or banned, which downsizes the social networks. People are isolated at home and their contact with society is reduced. In terms of society, the quarantine orders have had varying degrees of impact on the economy, transportation, production, and many other aspects. These changes are likely to cause worse mental health status in public such as depression and anxiety.

During COVID-19, numerous variables can lead to depression. The main one among them is the worry about getting COVID-19. The constant mutation of the virus and the spread of more information about COVID-19 have heightened fears of the outbreak [6]. For student groups, their courses have changed from traditional face-to-face to online teaching. As they adjust to the change, they worry about whether their academic record might be affected and consider the uncertainty of the future [7]. As for people who have a job, financial stress due to income instability is a major risk factor. The data shows that during the epidemic, the income of North American countries decreases

by 10.3%, and that of Asian countries reduce by 6.6% [8]. Loneliness is also positively associated with depressive symptoms in the youth. Relevant evidence shows that young people are experiencing a lot of loneliness while COVID-19 was in the air [9]. It means that increasing loneliness during lockdown is an important risk factor for increased levels of depression in the young generation.

Anxiety is more of a biological instinct. The emotional regulation system model can explain part of the reasons for people's anxiety in COVID-19 [10]. There are three emotion groups in the emotion regulation system: drive system (source seeking and motivation), threat system (protection), and soothing system (safety and calmness). Anxiety is an emotion that is highly correlated with the threat system. The function of the threat system is to help people detect and respond to danger and harm so it is a form of self-defense. That is to say, when people are facing the outbreak of COVID-19, they automatically generate some emotions to warn of danger, for instance, worrying about the health of themselves and their relatives, anxiety about possible unemployment, and feeling uneasy about being isolated from society. Unfortunately, threat systems often overestimate the consequences of danger, which can lead to some overreactions such as anxiety disorder and phobia. In the face of the outbreak of COVID-19, there is a strong tendency for people to overestimate the threat, namely the consequence of the epidemic. Therefore, anxiety is one of the emotional issues that arise when the public is over-defensive against COVID-19.

Mental health issues are gradually becoming a global trend due to quarantine policies in most countries and regions. This article will mainly discuss the incidence of anxiety and depression in various countries. It will compare data from different areas and over time to summarize and find some common psychological health trends in the whole population.

2. Depression

Due to the worldwide COVID-19 epidemic, many countries have implemented quarantine policies to stop the spread of the disease. As a result of the negative emotions that occurred during the quarantine period, people became more aware of the importance of self-help and mental health, particularly depression and anxiety.

When COVID-19 was widespread, Wang et al. experimented to investigate the impact of quarantine on China's general population's mental health [11]. They discovered that people's psychological status has an association with COVID-19, and vulnerable groups, such as chronic disease carriers, border workers, and those who live in the affected district, are more likely to be affected and are typically not in good financial condition. Researchers look into the psychological effects of COVID-19 on Chinese quarantine, but this study focuses on hotel employees [12]. The research reveals that moderate to severe depression symptoms affect 43.5% of those who participated, 68.2% of people suffer from moderate to serious anxiety symptoms, and 8.2% of people suffer from moderate to serious stress symptoms. It also discovers that employees with higher levels of education and income are less likely to suffer from depression.

At Patras University in Greece, Konstantopoulou investigates how quarantine increases clinical depression [13]. Patras University students completed a questionnaire sent electronically that included demographic information, as well as the depression severity, is measured by the BECK (BDI) scale. According to the findings, a large proportion of participants at the University of Patras experienced increased depressive symptoms. When social constraints occur and call for attention and support, it seems that students' mental health suffers dramatically.

A nationwide representative sample of 2240 individuals in the UK who were 18 years of age or older was surveyed online as part of a cross-sectional study on May 6-7, 2020. The results demonstrate that 24% of respondents indicated they may be depressed; according to normative data, these rates typically range between 5% and 7%. Additionally, it was more likely that more anxiety and unhappiness would be experienced by women and younger people. Researchers have also found links between depression and characteristics such as higher financial difficulty, worse community relationships, increased conflict in the home and neighborhood, and being a woman and being

younger. As mentioned in research experimented in China, vulnerable groups such as younger people, women with lower incomes, and those staying in affected areas may suffer more depression emotions.

Researchers in Germany have discovered a link between adult German depression and quarantine. Between March 27 and April 6, 6,509 persons in Germany responded to an online survey. The questionnaire was used to evaluate demographic information, emotional stress, depression and anxiety symptoms, risk and protective variables, and more. The findings indicate that more than 50% of respondents said they experienced anxiety and psychological anguish. Large parts of the general public do experience psychological anguish, anxiety, and despair as a result of quarantine.However, the results do not show that depression is a significantly negative emotion caused by Quarantine, it indicates that overall negative emotions are associated with a more psychological burden. Compared to Konstantopoulou's survey, the two pieces of research findings are similar in that large proportions of participants reported increased depressive symptoms, and both participants shared similar demographic situations in Greece and Germany.

According to Saccone, there is little information available on pregnant women's mental health during the COVID-19 epidemic. [14]. In order to gauge the psychological effects of the COVID-19 epidemic, a questionnaire of expectant mothers was undertaken from March 15 – April 1, 2020, at the University of Naples Federico II in Italy. 100 women with singleton pregnancies were allowed to take part in the research, regardless of gestational age. The survey is the updated Italian translation of the Impact of Event Scale (IES-R). The effect on the mind was rated as severe by 53% of the participants, according to the findings. However, we couldn't conclude from the findings that pregnant women are predisposed to depression. Overall, it has a link between pregnant women and negative emotions such as depression and anxiety.

According to the studies discussed above, it is reasonable to conclude that depression is related to the COVID-19 outbreak and has a favorable effect on people's psychological well-being. According to the findings, women, younger people, and pregnant women have stronger associations with negative emotions during COVID-19 than general adults in everyday life. However, it is unclear whether depression is increased in a few studies; they only mentioned participants experiencing psychological burdens but did not specify whether depression symptoms are included. Furthermore, income, family or friend support, and government measures all play a role in influencing participants' emotions. More attention could be paid to these perspectives in future research.

3. Anxiety

During Covid-19, anxiety is also an important prevalent indicator of mental health. Many countries have implemented stay-at-home policies, which limit people's social activities and social distancing. This physical isolation also exacerbates the extent of psychological anxiety in many countries and regions.

Anxiety about COVID-19 among 1308 Finnish workers was examined, which shows that half of the participants (50.86%) endorse anxiety. In addition, the researchers find some demographic differences in the results. Women, young adults, and lower-income groups all showed higher levels of anxiety [15]. Most of these groups are people with low social support. The economic and social instability brought on by COVID-19 has had a larger effect on that public's mental health. Although it is only a survey of the Finnish worker group, it is still highly representative. Because the social welfare benefits of Finnish workers are better than other countries, which indicate that Finnish workers can get more social support [17]. Under such relatively better social conditions, the Finish workers are still at a high anxiety level, so the degree of anxiety in the working group in most other countries may not be very light.

Huang and Zhao, investigated Generalized Anxiety Disorder (GAD), sleep conditions, and signs of depression amid China's COVID-19 pandemic [17]. The researchers used online questionnaires and analyzed data from 7,236 participants. The online questionnaires were available from February 3 to February 17, 2020, when China was implementing strict quarantine orders. In the process of

collecting anxiety-related data, researchers chose the Generalized Anxiety Disorder-7 (GAD-7) scale to assess the level of participants' anxiety symptoms and the scale is Chinese version according to the language used by participants. The results show that the prevalence of GAD was 35.1%, which means that about 1/3 of the participants have anxiety symptoms. It reports the same demographic trends as in the Finnish worker research, female, low-income people, and participants in their twenties (<35 years) are more inclined to suffer from anxiety issues.

Half of the participants(N>6000) in research on mental health in Germany during the early stages of the COVID-19 outbreak expressed anxiety affected by the COVID-19 epidemic [18]. Concerns about anxiousness have centered on how COVID-19 will affect people's personal life and the well-being of their family members. Also in this study women show higher levels of anxiety than men. Another new finding in the study is that anxiety is not significantly correlated with personal COVID-19 experience. For example, people with anxiety symptoms who have recovered from COVID-19 may not ease. It may indicate that people's anxiety about COVID-19 is more related to social and psychological aspects than the virus itself. In addition, the researchers suggest that self-efficacy, social support, and resilience are all negatively associated with anxiety. It can help relevant government departments to establish measures to deal with the public's mental health problems, for instance, adjusting quarantine orders, guaranteeing individual freedom, or providing free psychological counseling services.

Shevlin et al. look into the incidence of COVID-19-related anxiety, depression, and trauma in the UK population during the early stages of the pandemic. [19]. The study uses quota sampling to recruit 2,000 participants to make the sample representative in gender and age. In testing anxiety-related data, the investigators chose the GAD-7 scale and electronic visual analogue scale to measure the level of anxiety among participants. According to the study's findings, anxiety levels rose during the COVID-19 pandemic, which is indeed higher than previous levels based on general population surveys, namely, the impact of the epidemic is positively correlated with the anxiety level of the masses. Demographically, the results of this study are highly consistent with previous reports. Women are substantially more likely than men to test positive for anxiety (25,1% vs. 17,9%), and there is also a great gender discrepancy in the prevalence of anxiety, 17.7% in males and 24.6% in females. Regarding the age difference in anxiety levels about COVID-19, the results show that the anxiety level appears to be higher in the 18-24 age range than that of the 35-64 age range, which is consistent with the previous surveys. The study also finds that people who live in cities and experienced health problems are more likely to have anxiety problems.

Based on the above surveys for different countries, it can conclude that COVID-19 is positively correlated with anxiety. There is a general trend that young people and women have a higher risk of anxiety. In terms of the high prevalence of anxiety in women, evidence proves that women are more likely than men to experience anxiety disorders according to large community-based, epidemiological studies [20]. Therefore, in future studies, the researchers need to confirm that COVID-19 makes women more susceptible to anxiety or the gender difference in anxiety disorder. There are other demographic factors such as income, region, and medical history. There is no general supporting evidence for these factors but they may play an important role in specific regions.

4. Conclusion

In summary, during the COVID-19 outbreak, most countries conduct surveys to assess participants' mental health. The findings show that depression and anxiety are positively related to COVID-19 and that people experience negative emotions during the quarantine period. Although little research provided precise data on the extent to which participants were depressed, data show that increased psychological symptoms occurred during this period. Data showed that participants are highly associated with anxiety. Furthermore, it discovers that demographic situations and vulnerable groups are two significant factors that influence participants' mental health, such as income, region, medical history, and so on. However, no relative evidence has been found to support this assumption. However,

those studies did not use the same standard of testing and sample, which may reduce the accuracy and reliability. Furthermore, because each country's quarantine policy is unique, this review can only provide a broad conclusion. At last, appropriate government measures, social support, and self-help methods can help people cope with negative emotions, which should be considered when revising current public mental health policy.

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