Associations Between Psychological Distress and COVID-19 Disease Course: A Retrospective Cohort Study of 3084 Cases in Belgium

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Abstract : Previous research showed that psychological distress has a negative impact on the disease course of viral infections. For COVID-19, the same association was observed in small samples of specific segments of the population (e.g. health care workers). The present study presents a more refined analysis of this association, measuring a broader spectrum of psychological distress in a large sample (n=3084) of the general Flemish population. Several types of psychological distress (state, trait and health anxiety, depression, intra-, and interpersonal stress) are registered throughout three periods: one year before the contamination, one week before the contamination, and during the contamination. In doing so, validated scales such as DASS-21, IIP-32, and FCV-19S are used. Furthermore, the course of COVID-19 is registered in several ways: number of symptoms, number of days sick leave due to COVID-19, and number of days the symptoms have lasted. Also, different control variables such as vaccination status, medical and psychological history are taken into account. Statistical analysis shows that all types of psychological distress are positively correlated with the severity of the COVID-19 disease course. Anxiety during the contamination shows the strongest correlation, but psychological distress one year before the onset of COVID-19 was still significantly associated with the worsening of the disease course. As the assessment of the latter type of distress happened before the onset of the COVID-19 disease course, retrospective bias resulting in artificial associations between self-reported stress and COVID-19 severity is unlikely to have impacted the observations. In view of possible future pandemics, it is important to focus on general stress and anxiety reduction in the general population as soon as possible. It is also advisable to minimize the use of stress-inducing messages to encourage the population to adhere to the measures issued during a pandemic.

Keywords : anxiety, COVID-19, depression, psychoneuroimmunology, psychological distress, stress
Conference Title : ICHPS 2023 : International Conference on Health Psychology and Stress
Conference Location : Istanbul, Türkiye
Conference Dates : November 13-14, 2023