Frequency and Determinants of Risk Factors of Health-Related Events in Pakistan: COVID-19

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INTRODUCTION

There is evidence for substantial psychological and mental morbidity including complaints deeply human of obsessive-compulsive disorder (OCD) and aggression in the patients who suffered from COVID-19 infection [1-2]. The new coronavirus outbreak was characterized as a pandemic by the World Health Organization in March 2020. Robust public health containment measures have been widely implemented to prevent transmission of the virus among the global population. The impact of the COVID-19 crisis on population mental health remains unclear, and it is important that the mental health burden of this pandemic on the population is evaluated3. Although the frequency of mental disorders is expected to increase during pandemics, the peculiarities of the COVID-19 pandemic can directly impact the clinical course of obsessive compulsive-disorder (OCD), a condition that affects approximately 3% of the general population [3,4]. OCD is characterized by the presence of obsessions (which are unwanted and unpleasant thoughts, images, or urges) and/or compulsions (repetitive behaviors or mental rituals aimed at reducing the distress provoked by obsessions) [3]. Cleanliness, contamination, and fear of contracting a disease, which are topics of concern for patients with OCD, have now become a central theme of news and social media. Thus, we would like to elaborate on some possible implications of the COVID-19 pandemic for both diagnosis and clinical decision making about OCD [5]. According to the current biopsychosocial model of psychiatric disorders, socio-cultural, biological, and psychological factors interact synergistically to determine the onset of different disorders. These factors include the patient's beliefs and behaviors, which may be influenced by historical and environmental changes [6,7]. Frequent handwashing,

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which was previously considered excessive and one of the most common symptoms of OCD, have now been normalized8. Currently, considering time-consuming cleaning rituals as a single symptom seems insufficient to diagnose OCD. In such cases, clinical reasoning should counterbalance the degree of protection these rituals produce with their level of interference in functioning. Such reasoning is required to confirm an OCD diagnosis or consider treatment changes for those already on medication or in cognitive-behavioral therapy [8,9]. Patients may experience a worsening of OCD symptoms in different dimensions, including, but not limited to, contamination/cleaning, aggression, and hoarding dimensions. Patients who had never presented such symptoms may experience their onset in the context of this major environmental change. Higher levels of avoidant behavior are also expected. Moreover, OCD patients can experience a worsening of depression and anxiety symptoms during major life events, among which the current pandemic should be included [10]. Exposure and ritual prevention, a key behavioral technique in OCD treatment, should be carefully tailored during this period. Recommending unrestricted exposure to feared stimuli may prove imprudent. Psychological strategies for treating OCD should consider the well-being and safety of patients. Pharmacological strategies should be guided by the best evidence-based recommendations [11]. Protection recommendations (e.g., hand washing) can reinforce the irrational patients with OCD and poor insight. Therefore, engagement in exposure and ritual prevention activities may be lower, which could impact the long-term prognosis for OCD [12]. We assumed that patients and their relatives would show similar increased levels of anxiety, and that anxiety levels would be higher than depressive levels. This hypothesis is based upon the unpredictable nature of the COVID-19 and the accompanying uncertainty regarding the course of the illness and its infectious potential, which are key factors for anxiety [13]. Among relatives, we hypothesized that children would show decreased anxiety and depression levels, compared to adult relatives. This hypothesis is based on the notion that although children have to deal with the same negative feeling of anxiety as adults, they do not share the same objective burdens as adults, such as caring for family functions at this difficult time [14]. This paper aims specifically to investigate the mental status of those patients who have recovered from COVID-19 pandemic.

METHODOLOGY

Study Design

Our Study is cross sectional study. Study Settings: Study is carried out among those patients which were isolated for COVID19.

Study Duration

The study has been conducted in 6 months from March 2021 to August 2021.

Study Population

A total of 320 patient completed this study through the online Google forms.

Sampling Technique

Non - probability convenient sampling.

Sample Size

Sample size n = 320 Where n = sample size z = z value corresponding to a given confidence level = 1.96 p = % frequency of the outcome factor = 58 % c = standard error/ effect size n = 320.

Inclusion Criteria

1) Those patients which are positive for COVID 19.
2) Isolate for COVID 19.
3) Should gone through the symptoms of anxiety and OCD.

Exclusion Criteria

1) Those patients which were admitted in hospital.
2) Any previous history of psychiatry disorders.

3) Those which are not isolated for COVID19.

Data Collection

Data is collected through a carefully structured Google form for post isolated COVID-19 patients. Patient who volunteered were asked to fill the questionnaire and demographic performa after informed consent was obtained from each one of them. The participants could choose multiple reasons as applicable to themselves. Data was collected regarding symptoms and severity of anxiety and obsession compulsive disorders (OCD) in COVID 19 patient after isolation. For data collection procedure regarding anxiety, we used Hamilton Anxiety Rating Scale (HAM-A) and for obsession compulsive disorders (OCD) we used Yale - Brown scale. Hamilton Anxiety Rating Scale (HAM-A). The HAM-A was one of the first rating scales developed to measure the severity of anxiety symptoms and is still widely used today in both clinical and research settings. The scale consists of 14 items, each defined by a series of symptoms, and measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety The scale consists of 14 items, each defined by a series of symptoms, and measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety). Although the HAM-A remain widely used as an outcome measure in clinical trials, it has been criticized for its sometimes-poor ability to discriminate between anxiolytic and antidepressant effects, and somatic anxiety versus somatic side effects. Each item is scored on a scale of 0(not present) to 4(severe), with a total score range of 0-56, where greater than 17 indicates mild severity,18-24 mild to moderate severity and 25-30 moderate to severe.

The Yale-Brown Obsessive-Compulsive Scale is a standardized rating scale with both clinician administered and self-report versions available, measuring 10 items pertaining to obsessions and compulsions on a five-point Likert scale. Scores range from 0(no symptoms) to 4(severe symptoms), and a total score is calculated by summing items 1 to 10 and can range from 0 to 40. Ethical consideration: Was also taken in account throughout the process of the study. Data collection process was started after approval from the Ethical Review Committee of Karachi Institute of Medical sciences (KIMS). Data Analysis: The data were entered and analyzed on SPSS V26.0. Frequency and percentages tables were presented.

RESULTS

Demographic Characteristics

The study collected data from 320 patients. Analysis of data collected about patients is N = 320 patients involved in the survey, Females N = 113 (35.4%) whereas N = 207 (64.6%) were males. Patient's qualifications, results demonstrated that (3.7%) patients had a primary education, (1.8%) patients had a middle education, (3.7%) patients had a matric level education, (8.6%) had an intermediate level education, (55.2%) had undergraduate educational qualification, (25.5%) patients had a post graduate qualification. Further age, (75.2%) had age between 20-30 years, (10.1%) had age between 30-40 years, (5.2%) had age between 40-50 years, (7.7%) had age between 50-60 years. Data on current employment status revealed that there were (62.3%) patients with current employment and (35.9%) patients were without employment. Patients' marital status, (70.9%) patients were single, (25.8%) patients were married, (6%) patients were divorced. Regarding monthly household income, (40.5%) had below 50,000, 79 (24.2%) had above 50,000, 109 (33.4%) had above 1,00,000. Family structure, (52.5%) had nuclear, (39.9%) had joint, (5.8%) had extended family structure.

Data on methods used for screening COVID-19, (89.0%) were through PCR and (9.2%) were through serology. Data on isolation, (96.0%) were isolated at home and (4%) were isolated at hospital. Further analysis shown in Table 2.1 of the survey data obtained in this project specifically for OCD and anxiety in post COVID patients shows that gender has no effect on anxiety levels with almost equal

ratios for males and females i.e., there are (64.6%) were males and females accounted for (35.4%).

DISCUSSION

Distress related to intrusive thoughts about COVID-19 was significantly higher than typical OC-related intrusive thoughts for those with a higher OCD severity. Frequency, distress, and difficulty dismissing COVID-19-related intrusive thoughts were all significantly associated with one's OCI-R severity (excluding distress for the low severity group), indicating that the severity of one's OCD symptoms was related to the severity of COVID-19 intrusive thoughts. Also, the severity of COVID-19-related intrusive thoughts was maintained over time in both the high and low OC severity groups. The previous findings indicate that individuals with a higher OC severity were more impacted by the presence of COVID-19 intrusive thoughts. Specifically, their COVID-19 intrusive thoughts were significantly more distressing than their typical OC intrusive thoughts. For the entire sample, the higher severity of OC intrusive thoughts, the higher the severity of COVID-19 related intrusive thoughts. From a cognitive-behavioral perspective, maladaptive beliefs regarding risk and one's ability to cope influence interpretations of physical symptoms, intrusive thoughts, or social interactions, thereby contributing to elevated anxiety. Anxiety occurs when we perceive threat, and individuals with anxiety disorder diagnoses tend to perceive threats as more likely or costly than is objectively the case. However, the same processes would be involved in the case of a real threat. Specifically, substantial distress can also occur from focusing on the aspects of a real threat that one perceives as unchangeable. Indeed, finding a healthy balance between addressing a threat versus suppressing thoughts about it can be difficult. In some cases, the decreases in anxiety from avoidance can tip the balance too far, strengthening beliefs regarding danger and the need to avoid. While previous studies have recently been published on OCD in clinical populations during the pandemic [1], the presence of intrusive thoughts, or

obsessions, in the general population has not been studied to our knowledge at this point. The previous study only included students enrolled in undergraduate or graduate studies at a state university with a limited sample size. However, young adults have been identified as an at-risk population for mental health issues specifically during this pandemic [2]. The previous study investigates psychopathology in a sample of COVID-19 survivors at one month follow-up after hospital treatment [3]. They reported high rates of PTSD, depression, anxiety, insomnia, and OC symptomatology. The findings of the psychiatric morbidities ranged from 10% to 35% in the post-illness stage [4] With regard to the risk factor related to psychopathology, consistently with previous epidemiological studies have found that females, and patients with positive previous psychiatric diagnoses, suffered more in all psychopathological dimensions [5]. Moreover, outpatients showed increased anxiety and sleep disturbances, while the duration of hospitalization inversely correlated with PTSD, depression, anxiety, and OC symptomatology. Also considering the worse severity of COVID-19 in hospitalized patients, this observation suggests that less healthcare support could have increased the social isolation and loneliness typical of COVID-19 pandemics, thus inducing more psychopathology after remission [6]. Finally, younger patients showed higher levels of depression and sleep disturbances, in agreement with previous studies describing a worse psychological impact of COVID-19 pandemic in younger people [7].

Neither oxygen saturation level at follows up nor baseline inflammatory markers associated with depression, anxiety, PTSD nor insomnia, suggesting that psychiatric symptomatology was not a manifestation of physical symptoms, with the exception of baseline SII that positively associated with measures of anxiety and depression at follow-up. The SII is an objective marker of the balance between host systemic inflammation and immune response status considering together neutrophil, platelet, and lymphocyte all of them involved in different

pathway of immune/inflammatory response [8]. Higher levels have been associated with worse prognosis in several medical diseases, in the field of oncology. In a single study, higher SII levels were associated with major depressive disorder (MDD) [9], suggesting that it could be a marker of the low-grade inflammation observed in mood disorders [10]. Recent evidence, in agreement with our observation, suggests an impact of COVID-19 on OCD related. In the light of the above, interest to deepen research on biomarkers of inflammation is warranted, to investigate the possible association between possible persistent low-grade inflammation as observed in mood disorders [11], and psychopathological symptoms at follow-up in COVID-19 survivors. This approach could also allow to identify possible new specific targets for the treatment of inflammation-related neuropsychiatric conditions. According to our study conducted in post-isolated COVID-19 patients, it is reported that there are high rates of PTSD, depression, anxiety, insomnia, and OC symptomatology. Our findings from Hamilton scale A, Alpha value is 0.919 % and from the previous studies Alpha value was = 0.75 %. Where mean Male (25.23), and female (28.34) which shows there is difference in level of anxiety in both genders. Psychiatric consequences to SARS-CoV-2 infection can be caused both, by the immune response to the virus itself, or by psychological stressors such as social isolation, psychological impact of a novel severe and potentially fatal illness, concerns about infecting others, and stigma. The immune response to coronaviruses induces local and systemic production of cytokines, chemokines, and other inflammatory mediators [12]. COVID-19 patients, such as SARS and MERS patients, show high levels of Interleukin (IL)-1β, IL-6, Interferon (IFN)-γ, CXCL10, and CCL2 suggesting an activation of T-helper-1 cell function. Moreover, in COVID-19, unlike in SARS and MERS, elevated levels of T-helper-2 cell-secreted cytokines (such as IL-4 and IL-10) were found [13]. Higher concentrations of these cytokines seem to suggest a more severe clinical course [14]. Cytokines dysregulation (especially IL-1β, IL-6, IL-10, IFN-γ, TNF-α, and transforming growth factor-β (TGF-β)) are known to involve factors that others and we associated with psychiatric disorders [15-42].

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