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Literature Review

Obsessive Compulsive Disorder (OCD) During the COVID-19 Pandemic

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Abstract

Introduction: The COVID-19 pandemic, present in Indonesia for 17 months, has significantly impacted mental health, especially in individuals with obsessive-compulsive disorder (OCD). Studies in Europe reported a 17.9% to 60.3% increase in OCD symptom severity. Notably, no research in Indonesia has explored the pandemic's effects on OCD patients. Lockdown measures in Indonesia may exacerbate symptoms, but some OCD patients benefit, finding relief from societal stigmatization and the opportunity to advise others on infection prevention. This review aims to examine the impact of the COVID-19 pandemic on OCD patients in Indonesia and discuss potential management strategies. **Methods:** We conducted a comprehensive literature search, identifying studies, articles, and reports relevant to the effects of the COVID-19 pandemic on OCD patients in Indonesia. These sources were critically evaluated to provide a comprehensive overview. **Results:** This review reveals that the pandemic poses unique challenges to OCD patients in Indonesia. Lockdown measures may worsen symptoms, although some patients find relief from societal stigmatization. OCD patients can play a valuable role in advising others on infection prevention. Telemedicine, especially CBT, and medication adherence tools are crucial for effective management. **Conclusion:** The COVID-19 pandemic affects OCD patients in Indonesia in various ways. It is essential to recognize how lockdown measures impact symptom severity and the opportunities for patients to contribute positively to society. Telemedicine and medication adherence tools are valuable for managing OCD during the pandemic. Addressing the needs of OCD patients and implementing effective strategies for their care during COVID-19 is essential in Indonesia.

Keywords: Obsessive Compulsive Disorder, COVID-19, Pandemic, Mental Health

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Introductions

COVID-19 has been going on for 17 months in Indonesia starting from March 2020 [1]. This case is often associated with anxiety and depression that can arise due to prolonged social activity restrictions, as well as increased morbidity and mortality rates. Both can cause mental health disorders with various manifestations in each individual, from adults to children.

As a newly emerging disease, COVID-19 is still filled with uncertainty, which might increase the anxiety within the community [2]. The consequences of the COVID-19 pandemic on mental health have been proven by a PDSKJI survey on May 20, 2021, with 2,354 respondents from 34 provinces in Indonesia, with 68% experiencing anxiety and 67% experiencing depression due to the COVID-19 pandemic. Individuals with a history of psychological disorders will certainly have a higher risk of vulnerability [3].

The purpose of this study is to describe the OCD phenomenon in the COVID-19 pandemic. The keywords used in this literature review are obsessive-compulsive disorder, pandemic, and COVID-19. 32 pieces of literature are considered relevant.

Methods

We conducted a comprehensive literature search, identifying studies, articles, and reports relevant to the effects of the COVID-19 pandemic on OCD patients in Indonesia. These sources were critically evaluated to provide a comprehensive overview.

Discussions

Obsessive Complusive Disorder (OCD) Definition

Obsessive-compulsive disorder (OCD) is a mental disorder that is described as repetitive, intrusive thoughts and/or repeated mental acts or behaviors [4]. Obsessive and compulsive have to exist at the same time. Usually, OCD patients have trouble executing daily life activities and wasting their time on things that would not be a problem to normal people.

Obsessions are defined as two things. First, repeating and persistent notions, desires, or images that are experienced are unwanted and interrupting activities, and most individuals are suffering and have marked anxiety. Second, the individual attempts to ignore or suppress such thoughts, urges, or images, or to neutralize them with some thought or action, for example, by performing a compulsion [5].

Compulsion is a response to an obsession that an individual feels and is done through repetitive actions or mental acts. For example, washing their hands repeatedly, checking, ordering, repeating words silently, and many more. Additionally, it is defined as actions or mental acts aimed at averting anxiety, distress, or some dreadful situation [5]. However, their approach to neutralizing is not connected in a realistic way or is clearly excessive compared to what normal people do.

Epidemiology

The current COVID-19 pandemic may correlate with newfound OCD cases. In Germany, there has been a rising trend of OCD symptoms (OCS) in comparison to the general prevalence before the pandemic. OCS persists for at least 4 months in 17.9% of respondents since the beginning of the pandemic, is presented in a delayed manner in 9.94% of respondents, and 5.88% of respondents have presented OCS in the early pandemic but recovered in the next 4 months (n=1207) [6]. In Wuhan, after quarantine had been lifted, 17.93% of respondents were consistent with OCS according to the Y-BOCS (Yale-Brown Obsessive Compulsive Scale). Approximately 15.4% out of that number met the criterion of combined obsessive and compulsive behavior, and the rest were either matched with obsession or compulsion [7]. It is crucial to note that Wuhan was the first epicenter of COVID-19 and has been battling with the destruction

of the virus much earlier than the rest of the world. Canada reported a higher rate of OCS in the pandemic, with 60.3% of respondents showing obsessive behavior related to contamination and 53.8% showing compulsive behavior, especially in hand-washing activity (n=6041) [8]. A marked increase in OCS could be seen in multiple parts of the world, suggesting a burgeoning prevalence of OCD in the coming years globally.

Etiology

a. Habitual Factors

Obsession is a conditioned stimulus that causes anxiety and can change stimuli that were originally neutral. While compulsions are performed by individuals to relieve anxiety from obsessional thoughts, As a result, when efficacy in reducing anxiety is good, the strategy will persist and become a compulsive habit [8]. In children, the role of overprotective parents with strict rules will shape the child's thinking that what they are doing will never be accepted by others, and bad experiences as a child are still debated in their influence on the central nervous system [9].

b.Biological Factors

One hypothesis is that the formation of obsessional and compulsive symptoms is due to the dysregulation of serotonin [10], hippocampus, and glutaminergic system [9]. Serotonergic drugs look more effective at dealing with OCD than other drugs. However, whether serotonin is involved in the cause of OCD remains unclear [10]. There is still not enough evidence about the dysfunction of the noradrenergic system that affects OCD patients. A positive association was found between streptococcal infections and OCD [9], in which patients will experience Sydenham's chorea and showed symptoms of OCD [10]. In radiological brain research, there were changes in function in the neuronal circuitry between the orbitofrontal cortex, caudatus, and thalamus [8] seen in the cortical-striato-thalamocortical circuit, and substansia alba [9]. Genetic influences are seen to have a 3-5 times higher chance in individuals who have family members with OCD than individuals with families without OCD (control) [10].

c. Psychosocial Factors

OCD is different from compulsive-obsessive personality disorder. Obsessive-compulsive personality disorder is associated with concerns about detail, perfectionism, and other similar symptoms. Psychodynamic factors can affect all aspects of OCD. First, OCD patients may take advantage of the situation by allowing OCD symptoms to benefit, such as family members who will always be present to take care of the patient. Then, interpersonal difficulties can evoke stressors, thereby increasing the anxiety and symptoms of the patient's OCD [10].

Diagnostic Criteria

Based on the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5), the diagnostic criteria for obsessive-compulsive disorder includes [5]:

A. The existence of obsessions, compulsions, or the two of them.

B. The obsessions or compulsions are time consuming, or have caused a significant distress in either social, occupational, or other areas of functioning.

C. The obsessions or compulsions are not the attribute of substance (e.g prescribed medication, drug abuse).

D. The disturbance is not explainable by other mental health disorders symptoms.

Obsessions are mentioned as (1) intrusive persistent and recurrent thoughts, images, or urges that are experienced by the individual during the disturbance and (2) they have tried to suppress or ignore the emerged thoughts, images, or urges with other thought and action.

While the compulsions are (1) mental events or repetitive behaviors that drive the affected person to perform in response to the applied rules or the obsession, and (2) behaviors aimed to prevent and reduce anxiety, stress, or a dreaded event, they are not related in a realistic way to the actual problem the affected person faced. The content

of obsessive-compulsive disorder varies between individuals, yet they have common themes and dimensions that include cleaning (cleaning compulsions, contamination obsessions), symmetry (counting, ordering compulsions, and symmetry obsessions), forbidden taboo thoughts (religious, aggressive, and sexual obsessions or compulsions), and harm (checking compulsions and fear obsessions).

Covid-19 Pandemic

Epidemiology

The spread of COVID-19 that arose at the Huana Fish Market in Wuhan, China, in December 2019 has reported an increase in case numbers since it was first reported. Based on the World Health Organization's (WHO) report on March 15, 2020, it was globally stated that there were 153.517 confirmed active COVID cases and the death toll had reached 5.735. Data reported that the cumulative numbers of COVID-19 cases on August 5, 2020, reached more than 200 million worldwide. The data also showed that this number reached within six months with an initial of 100 million cases. Countries that contributed to the largest number of cases include the United States (America) with 14% and the Western Pacific Region with 19%, leading to 1.3 million and over 375.000 new cases. The number of infected cases is relatively 10 times higher than the death toll that this virus has caused. This is because many people might not show any symptoms or mild infections [11].

WHO has been working with the Indonesian government to monitor the spread of COVID-19 as well as implement measures to prevent its spread. Until August 21, 2021, there were 3.967.048 positive confirmed cases reported, along with 125.342 deaths and 3.522.048 patients recovered from this virus [12].

Effects of Covid-19 Pandemic on Mental Health

Demographic observation of social disparities (age, gender, race, caste, and religion), financial status (income, wealth, unemployment), and culture (education and social support) can be used to assess mental health from the threats of the pandemic [13]. Apart from the few adversaries, the results of participants from 12 countries and other countries in Barring a few outliers, participants across the 12 attributed countries and other countries clustered in the five WHO regions exceeded the mildness of general mental disorders, post-traumatic stress disorder, and depression, which were determined by the standardized risk threshold scale. In addition, an alarming percentage (16.2%) of participants said they had some level of suicidal thoughts [14]. The recent study in several middle-income countries in Asia describes the risk factors for adverse mental health during the COVID-19 pandemic, including age below 30 years, marriage status, either single or separate, high level of education, discrimination from other countries, contact with patients, and anxiety about COVID-19. Mental health protection factors include man, living with children or more than five people, occupation, trust in a doctor's diagnosis of COVID-19, high perception of the COVID-19 survival rate, spending less time on medical information, hand hygiene practice, and using a mask [15].

Obsessive Complusive Disorder (OCD) and Covid-19

Changes in OCD due to the Pandemic

Excessive cleaning behaviors caused by fear of contamination are the most common symptoms of OCD. Some examples of OCD behaviors are a compulsion to wash hands, avoid touching objects they think are contaminated, cleansing habits, and avoidance of high-risk contamination situations such as using public transportation or sitting on a public park chair [16].

Irritability, anxiety, and sadness are examples of dysphoric symptoms that patients can feel when they are in contact with objects they think are contaminated. In people without mental disorders, these symp-

toms can also be observed, which were previously limited to OCD patients and are now considered a "new normal" [16].

During this COVID-19 pandemic, WHO's recommendations about the risk of contamination created a need for self-surveillance and hygiene habits. On the other hand, fake media news has promoted extreme hygienic measures. In patients with OCD, the drastic implications for them are cognitive distortions and compensatory strategies such as compulsive cleansing habits becoming legitimate and socially accepted, and they are no longer irrational or unreasonable [16]. While these habits are appropriate during a pandemic, these cleaning behaviors often lead to the extent that they become maladaptive, causing high levels of distress and interfering with daily activities in individuals with OCD [17].

Individuals with OCD are inclined to increase dysfunctional cleaning beliefs during this pandemic because their concerns are frequently centered on fear of germs and contracting illnesses. The fear may have been exaggerated given the high transmissibility of the SARS-CoV2 virus [18] especially during the early stages of the COVID-19 pandemic, where rapidly increasing cases and death rates, a high degree of uncertainty about how the virus is spread, no known cure or vaccines, and strong appeal from the media about the danger of the virus [17]. Future corrective experiences may be hindered by the biased processing of information that tends to overestimate the risk related to COVID-19. A study has reported a phenomenon in which significantly lower levels of emotional control were found in patients with OCD compared to healthy subjects when they faced an epidemic prediction task [16].

We can predict that individuals who present remission of OCD symptoms will be more probable to have a relapse and can also be classified as having this disorder due to the reinforcement of their habits, emotions, and thoughts. Lastly, there is an increased risk of developing other serious psychiatric disorders, like mood and anxiety disorders. Increased obsessions, despair, depressive symptoms, and anxiety are associated with high rates of suicide in people with OCD [16].

Factors for Changes

The COVID-19 pandemic situation might change a person's mentality and behavior, which is closely related to the symptoms seen in OCD. Several factors can influence the appearance of symptoms related to OCD in people who previously did not have a mental disorder, as well as the worsening or relapse of symptoms in people with OCD during the pandemic [19].

WHO and the government recommend implementing clean and healthy living behaviors, also known as health protocols, such as using masks, washing hands with soap, maintaining distance, staying away from crowds, and limiting mobilization during the COVID-19 pandemic [20, 21]. The general fear of being infected with COVID-19, the importance of implementing health protocols as a self-protective effort, and the availability of cleaning products on the market can increase the risk of developing OCD symptoms in a person [19, 22]. In addition, the restrictions on mobility due to the lockdown regulations applied to the community also limit the availability of health facilities, which can have an impact on the severity of symptoms [19].

Kids and teenagers with helpless pattern knowledge may have an expanded vulnerability to a possible threat and consequently be more inclined to respond with more concern and dread. Helpless understanding may, in this manner, characterize a weaker group of kids and young people that might keep being in danger of creating recharged OCD manifestations in circumstances where they are encountering injury or mental pressing factors. This would be in accordance with past ideas that helpless understanding may impact the capacity of the

patient to alter silly convictions. The seriousness of OCD corresponded with the expanded insight of uneasiness, burdensome indications, and aversion conduct. Subsequently, both the immediate danger of contamination and the results of social separating, social segregation, and the steady spotlight on cleanliness might influence youngsters and youths by and large, and perhaps more on the off chance that they have a mental weakness [23].

Opportunities

During this COVID-19 pandemic, people around the world are encouraged to perform safety protocols to prevent the spread of infection. The situation is found to be unique among people with OCD, especially for contamination-related (C-OCD) and washing compulsions (also known as 'washers'). Their ritual of social distancing and frequent washing behaviors, which were considered to increase shame, have become a standard protocol and are recommended on many official websites, like WHO [20].

This situation can somehow become an opportunity for OCD patients with washing compulsion, as they might feel relieved due to the reduced stigmatisation by other people. A study by Moritz et al. also highlighted that patients might feel a sense of competence in consequence of their functional beliefs [24]. Throughout the course of the illness, perceived competence that is connected to self-worth [25] might change. In certain areas of life, it can even grow.
People with C-OCD are familiar with and experienced with topics related to infection prevention. Their formerly known 'problem' of having OCD might turn into a 'goodness' as people with C-OCD may give other people advice on how to wash their hands properly, how to avoid contamination, or even how to go grocery shopping safely [25].

Other than that, during the lockdown in the COVID-19 era, cognitive behavioural therapy (CBT) as recommended therapy for OCD may be offered by telemedicine via video call. Telemedicine for CBT can make patients use their phones to move to the spot where their OCD appears and help doctors make decisions or plans for the patient [26].

Suggested Management of OCD during the Pandemic

In the face of the COVID-19 pandemic, the use of telemedicine as a way to consult and administer treatment has been widely used. With the development of telemedicine, it is hoped that patients with OCD will still receive adequate care and consultation, reducing the possibility of transmitting COVID-19. The American Telemedicine Association defines telemedicine as the delivery of health services using telecommunications such as the internet, satellite, and telephone. In recent years, the development of telemedicine has been quite rapid, which is due to its potential to improve quality, equity, and affordability it has [27].

OCD is one of the earliest psychiatric disorders using telemedicine in performing CBT [28]. A study stated that the existence of a form of self-help technology such as telemedicine increases a person's awareness and willingness to seek help [29]. However, it should be noted that telemedicine should be used for patients with mild to moderate complaints, especially those who do not have access to or are unable to get treatment [30]. Therefore, the use of telemedicine as an alternative to consulting and receiving treatment for OCD patients in the current COVID-19 pandemic can be considered.

Staying positive about our hygiene could help manage the OCD symptoms that might bother our everyday schedule. Reduce anxiety and stress; try to do relaxing activities like meditation, hobbies, or board or card games that can make you forget about the obsession and impulsion. Do more writing, reading, or painting, or maybe watching television with family or friends. Pharmacology therapy includes tricyclic antidepressants and selective serotonin reuptake inhibitors (SSRI) such as clomipramine and fluoxetine,

which can be consumed 2–3 times per day with 25 mg and 20 mg, respectively [31].

In OCD, two evidence-based treatments, CBT and pharmacotherapy, are the most efficacious first-line modality. Pharmacotherapy should be the first option for adults and children with OCD with contamination, washing, or cleaning symptoms during the COVID-19 pandemic. Adverse effects should be checked for any concerns related to "activation" or increased suicidal ideation, which in young people can be mitigated by starting treatment at a low dose and titrating more gradually. And about the dosage, if the patient is on a suboptimal dose, consider increasing it, paying attention to any contraindications [32]. For cases with SSRI resistance, consider a low dose of adjunctive antipsychotics (aripiprazole, risperidone, quetiapine, and olanzapine), especially if a tic is present.

Ensure that patients are able to obtain a sufficient supply and take the treatment regularly. In cases where there is a problem with adherence, especially with poor insight or executive dysfunctions, additional support from family or clinical stuff is inevitable. Using apps such as Medisafe (a free application that sends reports to psychiatrists and reminds patients to take medications) and dosette boxes can be helpful to monitor adherence. When a sleep disturbance is present, it should be managed specifically, as it might interfere with the immune system and affect the management of anxiety [29].

Conclusions

The current COVID-19 pandemic in Indonesia has lasted for 17 months, starting in March 2020. Until August 21, 2021, there were 3,967,048 positive confirmed cases reported, along with 125,342 deaths and 3,522,048 patients recovered from this virus. As a newly emerging disease, COVID-19 is still filled with uncertainty, and when facing uncertain things, it might increase the anxiety within the community. This, of course, affects OCD patients. Individuals with OCD are inclined to increase dysfunctional cleaning beliefs during this pandemic because of the risk of contracting COVID-19, so it is predicted that individuals who present remission of OCD symptoms would be more probable to have a relapse and also could be classified as having this disorder due to the reinforcement of their habits, emotions, and thoughts. Therefore, the use of telemedicine as a way to treat OCD patients has been widely used. With the development of telemedicine, it is hoped that patients with OCD will still receive adequate care and consultation, reducing the possibility of transmitting COVID-19. However, it should be noted that telemedicine should be used for patients with mild to moderate complaints and patients who do not have access to or are unable to get treatment. Patients with OCD and the community as a whole must maintain a health protocol such as washing hands correctly and properly for 20 seconds with soap while in public or after going outside and touching public things. People are also advised to avoid close contact with others, keep a distance of about 6 feet, stay at home for the better condition, and try to rest mentally with actual time and get relaxation or maybe physical activity to keep mind and body busy, such as trying some new workouts, learning yoga moves, dancing to their favourite music, and scheduling walks at home or outside near home while still following health protocols. In OCD patients, the most important thing is to continue to carry out CBT and take medication, so it must be ensured that patients are able to obtain a sufficient supply and take the treatment regularly. Using apps such as Medisafe and dosage boxes can be helpful to monitor adherence.

But on the other hand, during this COVID-19 pandemic, people around the world are encouraged to perform safety protocols to prevent the spreading of infection, including washing hands. This situation can somehow become an opportunity for OCD patients with washing compulsion, as they

might feel relieved due to the reduced stigmatisation by other people. People with contamination-related OCD (C-OCD) are familiar with and experienced with topics related to infection prevention, so they may give other people advice on how to wash their hands properly, how to avoid contamination, or even how to go grocery shopping safely.

Conflict of interest

The authors has no conflict of interest.

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