REVIEW ARTICLE

Identifying High-Risk Individuals for Suicide During Covid-19 Pandemic: Prevention and Intervention

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ABSTRACT

Background. The mental health outcomes of the coronavirus pandemic (COVID-19) might be hazardous and may evoke a tsunami of mental illness. Multiple lines of evidence indicate that the COVID-19 pandemic has profound psychological and social effects. It has been expected that the mental illnesses and suicide rates may rise not only due to the suffering of the pandemic itself but also to prolonged combat strategies, including lockdown and quarantine over a longer period. It is henceforth important to identify potential risk factors for developing risk prevention strategies with urgent consideration.

Materials and Methods. A systematic review approach was employed to collect information regarding the high-risk individuals for suicide during a pandemic and subsequently present the prevention and intervention-focused strategies for managing the condition. The article published just after the pandemic outbreak including the time period: 2019 to 2020 available at PubMed, PsycINFO, and LISTA, was considered for the present study.

Results. The findings suggest that the COVID-19 pandemic is associated with solitude, agony, anxiety, fear of infection, depression, insomnia, and economic complications. These conditions may subsequently lead to complex psychiatric complaints in vulnerable populations, including individuals with pre-existing psychiatric disorders, those having a history of suicide attempts, and those taking treatment for suicide risk.

Conclusion. To decrease the risk of suicides during COVID-19, reducing people's stress, anxiety, and loneliness is important. Specialized training in the workforce on crisis management would have additional benefits. Governments shall devote adequate funding and resources to control the mental health consequences of the pandemic.

Keywords: *COVID-19, Intervention, Mental Health, Prevention, Suicide.*

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Introduction

The Coronavirus disease 2019 (COVID-19), a global pandemic, has infected millions of individuals worldwide.[1] The psychological sequelae of the pandemic will probably persist for months and years to come. It has now been established that COVID-19 instills higher proportions of mental health issues, morbidity, and deaths.[2] Community quarantines and social distancing are part of the new norms due to this pandemic. Since extensive and prolonged lockdowns are relatively novel experiences for the present time generations, including children, youth, and older populations, not much is known about the psychological health of individuals in such extreme situations. It is, however, assumed that people with mental health problems may be at elevated risk for suicide. This is because of the high-stress levels, hopelessness, and despair. Earlier, such a scenario was faced by humankind in 1919 known as the Spanish flu. There would be very few survivors living

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today who experienced the Spanish flu pandemic at their conscious age.

Some recent studies showed that social distancing induces anxiety among various individuals. However, the most vulnerable population consists of people with existing mental health risks due to their poor physical health conditions or old age psychological issues such as isolation and loneliness.[3,4] The psychosocial distress related to the COVID-19 pandemic has spread all around the world.[5,6] Staying in quarantine disturbs regular social routine and therefore becomes an additional source of psychological fear. The affected person feels trapped for an unspecified time, and the uncertainty of getting recovered without a reliable and valid treatment further increases the fear of death. All over the world, cases are being reported where individuals have a fear of getting COVID-19 as positive and therefore associating it with social stigmatization, loneliness, and various socio-economic difficulties along with an insecure future become a major source of depression and anxiety, and this distorted knowledge provides space for the foundation of suicide.[7] Further, a presumption has been confirmed in various research that the suicide rate would increase among physicians.[8]

A substantial increase in psychological distress and substance use is observed and reported in various studies as a consequence of listening to COVID-19-related news.[9] The mental health problems are exacerbated, and complications are increased with the constant exposure to the news related to extraordinary gloomy events. Subsequently, this situation makes an individual vulnerable to self-harm or suicide. Past studies on the Influenza/Spanish Flu pandemic (1918-19) showed that suicide-related deaths increased in the USA.[10] Likewise, during the severe acute respiratory syndrome (SARS) epidemic in Hong Kong, suicides increased among older individuals.[11] Following the earlier patterns, in the context of the recent situation, heightened suicide risk is expected.[9] Hence, there is a need for the development of effective suicide prevention methodologies based on either universally indicated or selective intervention.[12,13] The reports of increased domestic violence, alcohol consumption, and social isolation are considered augmenting factors for suicide, and the chances of suicide even increase further if a person is facing bereavement issues.[13] All these factors may contribute to increasing the likelihood of suicide attempts all over the world.[14] Few studies have shown that some patients with severe obsessions, comorbid depression, bipolar disorder, impulse control disorders, substance use disorders, personality disorders, and eating disorders, may be at increased risk.[15] Additional COVID-related factors found anecdotally to increase suicidal risk potentially include a recent increase in OCD severity, experiencing a family member found positive for COVID-19, or finding the effects of quarantine or isolation distressing. The mental health problems among individuals using the substance have increased. For instance, in Kerala, India, during the lockdown and other restrictions, few cases of suicide deaths have been reported due to severe alcohol withdrawal symptoms.[16]

COVID-19 and Pakistan

The literature highlighted the gruesome impact of the pandemic in developing countries like Pakistan taking into account the wide-ranging troubles from financial upsets to health deterioration. The input is largely available compared to better living states like the USA, China, and Russia. It was reported that the health facilities for mental health struggles were far even the testing facilities, quarantine services, and number. of hospitals were not sufficient.[17] Further, anxiety, psychological distress, suicidal ideation, and attempts were seen at the worst stage for the psychologically diagnosed ones.[18] Also, emotionally challenging conditions were reported to be the cause of extreme behaviors like suicide and domestic violence.[19]

A group of researchers found that out of 97 attempted or completed suicide reports published in ten scientific papers, 16.4% were from Pakistan.[20] Further, gender-based findings reflected that more men than women were involved in such behaviors. From February 2020 to May 2022, the rate of suicide in terms of each day reflected 0.85 cases/day in India, 0.4 cases/day in Pakistan, and 0.29 cases on a single day for Bangladesh. Further, just two studies out of a total of ten papers had clinically evaluated the suicide cases, whereas the rest were the findings

from the media reports and associated sources to gather details.

Moreover, researchers declared it the government's responsibility to provide an effective intervention with a clear assertion that mental health issues are not being taken seriously in Pakistan as per the track record. However, some basic initiatives from the local government along with international non-governmental organizations were reportedly a sign of concern. To extend such attempts of psychosocial support for other main cities and also specifically targeting sensitive issues like pressure, suicide, and other strong psychological conditions would be more promising in general but a need of the hour in particular.[21]

The research/study aims to seek the attention of policymakers and health professionals about the risk of suicide during COVID-19. This study will help understand and spot the high-risk population. Evidence-based interventions should be delivered in diverse possible ways according to the context and socio-demographics of the people as the pandemic has global effects, irrespective of gender, race, and culture. So, no single intervention can be suggested, rather interventions can be customized and modified according to the socio-demographic needs of individuals. In the current situation, almost every individual is affected in one way or another. However, some groups or segments of society are highly affected and more vulnerable than others. These include front-line medical forces, individuals with a history of suicide or mental illnesses and/or serious medical complications, isolated and bereaved individuals, people having serious financial complications, and unemployment.[22] Moreover, individuals with substance use disorder and the victims of domestic violence are also at an increased risk of suicide. Extra vigilance and care are also needed for people who are having suicidal thoughts as well as those with a recent history of suicide attempts. Other people may experience an exacerbation of existing or emerging mental health problems.

Probability of Suicide During COVID - 19 Pandemic

Researchers declare that the magnitude of this massive COVID-19 disaster cannot be compared with any of our life experiences. The Spanish Flu pandemic, caused by H1N1 viruses having avian origin genes, would be the last comparable crisis that not only infected almost one-third of the world's population but also a huge number of individuals; at least 50 million people were killed during the disaster.[23] Further, an increase in the death rate due to suicide was reportedly found to be triggered by the Spanish Flu epidemic was proposed due to a decline in social integration and interaction along with the fearful circumstances associated with suicide during the crisis. Thus, it is markedly crucial to understand that a similar strategy of social isolation and disease-related fears are the common concerns of the hour, the prevalent COVID-19 pandemic.[24]

Also, it was reported during the outbreak of severe acute respiratory syndrome (SARS) in Hong Kong, back in 2003 that a significant increase in the suicide rate was observed among older adults aged 65 and more.[25] Studies identified that such a rise in suicidal deaths could be associated with the fears of contracting the disease, the tension of burdening the family or relatives, anxiousness, social isolation, and the feelings of distress caused by the whole situation damaging the well-being of the individuals.[26]

Research shows that one can respond in multiple ways while experiencing difficulties or being upset. A repetitive and passive pattern of thinking causes rumination, stress, anxiety, and related psychiatric disturbances, which are believed to be involved in developing and maintaining different kinds of psychopathologies associated with suicidal ideation and experience.[27] Whether a person is suicidal or not, it can be identified from the direct or indirect indicator words. A person with suicidal thoughts or intentions might talk or write words, such as “Killing self/suicide”, “no reason to live,” “feeling trapped,” “unbearable pain,” “being a burden on others,” etc. Similarly, the same can be seen in his/her behavior. For instance, increased use of alcohol or drugs, searching for ways to end life, withdrawal from usual activities, isolation from family or friends, and marked worrisome changes in behavior are common behaviors. Moreover, loss of interest, irritability, agitation/anger, humiliation, and guilt can be visible in his/her mood.

Social isolation, anxiousness, fear of infection,

uncertain situations, chronic stress, and financial difficulties are the leading causes of developing stress, anxiety-related disorders, and suicidal behaviors among vulnerable groups like those who are already suffering from psychiatric disorders, people having low resilience, individuals living in high-risk areas or the places where there is an increasing prevalence rate of COVID-19 and those who have loved one(s) being died of COVID-19.[28] People with pre-existing psychiatric conditions not only include those who are treated by professionals but also include all those who are suffering from mental complications but do not seek any such treatment.[26]

Social isolation is recognized as a significant contributing factor in developing psychiatric disorders and suicidal activities.[29] Durkheim et al. write in their renowned book on suicide that social interaction contributes to human beings' strong emotional health and social stability.[30] A few research pieces of evidence, like the findings of a longitudinal study conducted in Ireland on aging present that loneliness and isolation are strongly associated with major depressive disorder and generalized anxiety.[29,31] Also, it is elaborated that the objective experience of living alone and subjective feelings of being isolated are both critically associated with suicidal ideation, suicide, and self-harming behaviors.[32] Specifically, these findings are consistent across diverse populations and cultures. For instance, Quebec Health Survey presented related results where self-isolation and lack of friends were found as the causes of suicidal ideation and attempts.[33] Similarly, an increase in the suicide rate during SARS 2003 was attributed to social disengagement.[25] Therefore, as per the suicide prevention models, social isolation, the widely accepted public health policy for COVID-19, is the most troublesome aspect to be cautiously practiced across the globe.

Likewise, the probability of suicide risk seems to be higher among COVID-19 survivors, particularly those who have suffered from the severe conditions of the illness. Stressful encounters like the diagnosis of COVID-19, the experience of painful symptoms, the duration of being hospitalized or admittance to an intensive care unit, and fear of inflicting or infecting loved ones/others, all with financial complications may give rise to psychiatric disorders like anxiety, depression, and post-traumatic stress disorders.[34] COVID-19 is recognized to be associated with neurological difficulties, for instance, dizziness, headache, acute ischemic stroke, and seizures. Recently, a review of the impact of COVID-19 on the brain reflected that 25% of the patients who suffered from the pandemic experienced the associated neurological conditions.[35] Most of the recovered patients have reported the existence of physical symptoms like pain for a longer period. But the important point is that neurological conditions like headaches, ischemic stroke, and seizures are found to be associated with suicidal activities, and physical symptoms, including pain, also contribute to the growing suicidal risk.[36]

The most vulnerable population to COVID-19 is the medical staff. It is imperative to develop specialized support systems considering the logistic and humanitarian needs of those who have adverse exposure to traumatic situations. Especially those who are serving as front-line fighters and who witness many critical conditions and deaths. It has been observed that the psychological problems of medical staff have increased. Furthermore, urgent online screening and assessment are required for individuals having a suicidal history and individuals with mental health conditions. For instance, enormous literature showed that patients with bipolar mood disorders, trauma-related disorders, alcohol and substance use disorders, depressive disorders, psychotic disorders, and those with a problem controlling their negative, aggressive, disinhibited behaviors are at high risk of suicide.[37] They shall be provided with evidence-based online interventions. This can be done with crisis helplines or with careful face-to-face interactions.

It has been observed that instances of domestic violence have increased after this pandemic. Customized online counseling services and support networks would help mitigate intra-familial conflicts. Counseling services that promote communication among spouses are beneficial. The use of alcohol or other drugs may be the cause or effect of violence, and hence such behaviors require careful attention.[38] Furthermore, specialized services are recommended

for individuals who abuse drugs. They may participate in online self-help groups. Furthermore, careful monitoring is needed for individuals who are isolated, living alone, and in the phase of bereavement. Community support for bereaved people living alone is deemed vital by various researchers.[12,13] Psychosocial interventions can be planned through online crisis response services.[39,9] Telephonic hotline counseling services can be initiated for these individuals. General interventions may be allowing vulnerable people to speak up about suicidal thoughts and feelings of despair. Help them recognize signs of suicide and guide them to seek support from others such as friends and family.

Governments have a major role in the provision of resources for interventions. It may provide support in remote assessment, accessibility to digital resources, and provide resources to generate and/or expand the workforce. Besides, the government's provision of financial safety nets, emergency loans, and unemployment support would make people free from daily life stressors and strains that trigger self-harm thoughts. Non-government organizations with their indigenous networks may contribute effectively. These organizations shall come forward to generate resources and develop online networks, particularly for marginalized populations.

Suicide Preventive Interventions for COVID-19

As highlighted by the researchers[21], the need of the hour is to provide some effective intervention plan and strategies, particularly targeting the need of psychological sufferers on the verge of suicidal attempts and commitment. In this paper, we have devised common efforts to meet the challenges Pakistan is facing. As comprehendible, all these sectioned strategies are feasible and generalized to be implemented for the betterment of the masses. Also, other than evidence-based practicality, the efforts are rationalized to be processed and practiced with awareness and understanding.[19]

Based on the prevention efforts to curtail psychiatric conditions addressed in the literature, suicide prevention – during this pandemic (COVID-19) – is categorized into three different patterns concerning specific groups; recognized as having a greater risk of experiencing suicidal ideation or suicidal behavior. As per the conventional preventive strategies, primary, secondary, and tertiary prevention, these patterns are specified under a universal preventive approach, selective preventive approach, and identified preventive measures/interventions respectively.[26]

Firstly, the universal prevention intervention would address the mental complications of the general population irrespective of their risk for suicidal behavior. The possible way to reduce the rate of suicidal ideation or behavior during the COVID-19 is associated with a decrease in the existence of other mental conditions like stress, anxiety-related disorders, fears of illness, and a sense of being alone (loneliness) due to a lack of social interaction among masses. Whereas the scientific evidence presents that social support promotes mental well-being during COVID–19 outbreaks.[40] Further, media could play a role in mental health promotion and reduction of distress with effectual campaigning and awareness-generating information propagation. It can educate the general public and bring confidence among them with the spread of clarity about observance to (health) preventive measures which would reduce their distress.[41]

Also, there is a need to be careful in regulating daily activities, which are being widely disturbed due to the pandemic conditions, as research advocates that a healthy diet, proper sleep patterns, and sound social interaction are the resources to build greater resilience for fighting the traumatic conditions.[42] Maintaining relationships, reducing social differences with technological tools like telephones or video calls, providing community support for those living alone, and encouraging relatives to check in would all have quite promising outcomes for the individuals. Screening for mental issues like depression and suicidal ideation, identification of high-risk individuals for suicide, and direction for proper treatment by the community and organizational gatekeepers like clergy, pharmacists, and geriatric caregivers et cetera, and availability of suicide prevention helplines are some other essential measures to be taken.[26]

Secondly, a selective preventive intervention would be destined for the group recognized as highly vulnerable to suicide, like those who have a history of

psychiatric complications, individuals suffering from intense emotional challenges, those who are recovered from COVID-19, frontline healthcare providers, and older adults.[43] Active outreach to mental health services for all such individuals in general, advising them to stay in touch with their mental health practitioners, and following continual treatment courses by the psychiatric patients, are directed as the necessities of the hour. Further, these groups must be suggested to avoid excessive exposure to news and related items by taking a break from media coverage creating unprecedented hype in this difficult pandemic conditions.[19]

Lastly, an indicated preventive intervention is required for those who have high-risk conditions and factors for indulging in suicidal behavior, for instance, having a history of suicide attempts. Such individuals require special attention because they might not seek assistance due to different reasons or fears like the dangers of contracting COVID-19 while visiting healthcare practitioners. Thus, follow-up is the optimal requirement for such cases, and also clinicians are advised to have well-defined guidelines for dealing with suicidal individuals.[26] Besides, for patients with OCD, but particularly in such cases, consider actively evaluating the suicide ideation and risk through specific questions and instruments and hospitalize the patient if needed.[44]

Limitations

The present review contains some limitations. At first, the symptoms of psychiatric issues associated with suicide identified and highlighted in the reviewed papers had limited sample size, observations, and case studies. Also, some of the studies did not reflect the classical psychiatric manifestations, where the role of overall analysis might be influenced by the COVID-19 scenario. Further, the work cited above might not have yet been published, this point may have some influence on the findings as well. Likewise, recognition and implementation of the suicide preventive measure during the current unprecedented times might be a complex mechanism. Lastly, the potential mechanism underlying suicide-related psychiatric disorders/experiences in COVID-19 will get updated along with new evidence over some time.

Conclusion

Apart from cardiopulmonary infections, the lasting challenges of COVID–19 not only have a critical impact on clinically diagnosed psychiatric patients but have also troubled the mental health of the common public in great manners. It specifically raised the suicide rate among the masses. To decrease the risk of suicides during COVID-19, decreasing people's stress, anxiety, and loneliness is important. Specialized training in the workforce on crisis management would have additional benefits. Governments shall devote adequate funding and resources to control the mental health consequences of the pandemic.

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