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Review of the literature

Suicidal behavior sociocultural factors in developing countries during COVID-19

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A B S T R A C T

Objectives. – Sociocultural factors in the aftermath of any pandemic can play a role in increasing suicidal behavior like suicidal ideation, suicidal attempts, or suicide. The authors discuss the risk and predisposing factors for suicidal ideation among mental health patients in four developing countries (Bangladesh, Colombia, India and Pakistan), this aims to grasp the heterogeneity of these motivators and to elaborate specific interventions regarding suicide in the COVID-19 pandemic.
Methods. – We searched PubMed, Medline, and Google Scholar through March, 2021 for articles using a combination of the keywords and generic terms for suicide, suicide ideation, COVID-19, developing countries, low-middle-income countries, Sociocultural factors, Suicidal behavior, predisposing factors and predictive factors, for articles in English language only, and without publication time restriction.
Results. – This narrative review summarizes the sociocultural risk and predisposing factors for suicidal behavior in developing countries during the COVID-19 pandemic. The findings reveal those factors such as fear of being infected, growing economic pressure, lack of resources due to lockdown are mostly responsible in the four countries for the current increase in suicides. There are a few cultural differences that are specified in the narrative.
Conclusion. – The COVID-19 pandemic is a public health challenge, in which prevention and intervention of suicidal behavior have been suboptimal, especially in low-middle-income countries. Based on literature results, we provide practical suggestions (e.g., reducing infodemic, specialized helplines, improving mental health services availability) in order to tackle main challenges of suicide prevention, such as lack of adequate manpower, fragile health system and poverty.

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1. Introduction

COVID-19 is an emerging public health problem, which started in China at the end of 2019 and gradually affected the majority of the countries including developing countries like Pakistan, Bangladesh, and India [1]. Latin America was one of the latest regions of the world to be affected, but with its notorious economic and political underdevelopment was one of the most heavily affected by the economic crisis that followed after the quarantine. Limited and doubtful information regarding the novel virus along with no availability of a consensus on an effective treatment has presented some ubiquitous challenges to mental health systems around the globe [2]. This pandemic has become a fertile ground for many mental health issues, and it can be inferred that more people are vulnerable and also are affected more severely by mental health issues during and after the pandemic than by the pandemic phenomena itself [3]. Preventive quarantine and other essential measures taken

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during such pandemics like social distancing, isolation along with the resultant social and economic breakdowns can result in the emergence and precipitation of many psychological issues such as anxiety, depression, post-traumatic stress disorder, etc. [4]. These issues are relatively common in the aftermath of any pandemic and sometimes can lead to increased suicidal behavior like suicidal ideation, suicidal attempts, or suicide [5,6]. As learned from previous pandemics, such as SARS and N1H1, the context around the pandemic fears and executed measures increase the risk of suicidal behavior [7]. Furthermore, stigma related to COVID-19 may also increase the risk of suicide [8].

Several studies have been identified that address sociocultural factors and suicidal behavior in low-middle-income countries (LMIC) [9,10]. However, there is a substantial lack of studies that address sociocultural factors and suicidal behavior in developing countries during the COVID-19 pandemic in an exhaustive manner. Due to the lack of coherent data and sufficient evidence on the subject in the literature, it was not possible to carry out a systematic review or any type of qualitative or quantitative analysis on the topic. Therefore, all currently available data sources were put together and discussed in this narrative review before proposing potential preventive measures to reduce suicidal behavior.

2. Materials and methods

We searched PubMed, Medline, and Google Scholar through March, 2021 for articles using a combination of the keywords and generic terms for suicide, suicide ideation, COVID-19, developing countries, low-middle-income countries, Sociocultural factors, Suicidal behavior, predisposing factors and predictive factors, for articles in English language only, and without publication time restriction. Only eligible publications on peer-reviewed journals have been included and cited in this review. Data from the included articles were summarized and reported by sections.

Due to the lack of coherent data and sufficient evidence on the subject in the literature, it was not possible to carry out a systematic review or any type of qualitative or quantitative analysis on the sociocultural factors for suicidal behavior in developing countries during the COVID-19 pandemic. Therefore, all currently available data sources were put together and discussed in this narrative review before proposing specific recommendations for lowering the risk of completed suicide amidst COVID-19 pandemic.

3. Sociocultural factors for suicidal behavior in developing countries during and prior pandemic state

Although the suicide rates significantly differ between countries, around 75% of all worldwide suicides occur in LMIC [11]. Ever since the COVID-19 cases started escalating in developing countries, several cases of suicide have been reported [12,13]. Since the beginning of lockdown around 151 people across India have died by suicide because of various issues indirectly as a consequence of the coronavirus pandemic, such as economic loss, isolation, fear of infection, among others [14,15]. This data goes against the trend compared to high-income and upper-middle-income countries, where suicide numbers have remained largely unchanged or declined in the early months of the pandemic compared with the expected levels based on the pre-pandemic period [16]. Likewise, as reported in an article, around 29 cases of suicides and attempted suicides have been observed in Pakistan since the start of lockdown [12]. There is evidence that suggests that suicidal behavior can arise when the person is in isolation, under quarantine, or under suspicion of coursing with a COVID-19 infection, and in that manner, it can be inferred that suicide risk could have been minimized via proper dissemination of information regarding COVID-19 [17]. It is also important to mention that the shortage of alcohol due to their unavailability during preventive lockdown has been found to be linked with suicidal behavior [18]. Research on suicidal behavior in such non-Western, under developing countries, suggests that interpersonal relationship issues play a crucial part in such behavior [19]. However, the most common predictors for suicide in India include factors like family problems, unemployment, and poverty, etc., which leads to psychological stressors such as anxiety, depression, and other mental health problems leading to suicide [20,21]. As for Pakistan, which is an Islamic state composed of 97% of the Muslim population, it is generally thought that the main reason for lower rates of suicides in Pakistan is because it is not allowed in the Islamic religion [22]. Some of the most important predicting factors found in a scoping review include unemployment, financial constraints, domestic violence, and psychiatric morbidity as major determinants of suicidal behavior [19]. One recent systematic review from Bangladesh also revealed that marital conflicts and family conflicts are prominent risk factors in Bangladesh [23].

In Latin America, and specifically in Colombia, suicidal behavior prior to the COVID-19 pandemic affected people living in rural areas more severely, this associated to farmers and indirectly to low economic income; it also affected males fourfold when compared to females, they also used more lethal methods; an interesting cultural phenomenon is seen when reviewing the motivations for suicide in Colombia, as it is closely linked to the perception of success in the work environment, this in the context of the social expectations of males to be successful in business affairs, as well as to behave in a manner that restricts their emotions and to sustain an attitude of empowerment and overachievement [24]. Regarding the female population, the most prominent risk factor is single child-rearing, which is paradoxical, since family rearing is frequently considered a protective factor against suicide [25]. In older adults, there is a pattern of highly lethal suicidal behavior among people with alcoholism and a diagnosis of a first depressive episode after 40 years of age, and in this population, there is a high rate of perception of solitude, emotional isolation, retirement, death of family members, economical losses and chronic illness as motivators of suicidal behavior, this risk factors and the social stigma related to suicide (regardless of a prior diagnosis of mental illness) has made the consent to treatment a very complex clinical and legal issue [26].

In Colombia the most frequent methods of suicide prior to the COVID-19 pandemic was hanging, poisoning, and the use of firearms, while females use significantly less-lethal methods [27]; there is an important proportion of suicide attempts in people that live alone (regardless of their social network), and also, is frequent that suicide attempts are made in the patient's house, at times when there are no other cohabitants or neighbors, and preferably on Sundays, this is because in Colombia is considered a holiday and work-related activities are scarce [28].

4. Sociocultural factors for suicidal behavior amidst the COVID-19 pandemic

The level of apprehension and fear of COVID-19 among the Indian and Pakistani population, as well as in the rest of the world, is increasing as the cases are escalating rapidly with time [29,30]. With approximately 3,249,433 confirmed cases in Colombia, 26,948,874 confirmed cases in India, 905,852 in Pakistan, and 790,521 in Bangladesh up to May 2021, it is no surprise to witness public fear in the aforementioned countries [1,31]. Although the risk of suicide in the 2020 coronavirus pandemic has not been systemically studied, as perk recent reports of suicide, it is anticipated to be a contributory factor in suicide [32]. Fear and anxiety about getting infected with COVID-19 and the perception of loneliness due to isolation and preventive quarantine measures can

be overwhelming and cause strong emotional reactions in predisposed persons [33]. People who respond more strongly to a crisis include patients of all age groups, those with substance abuse disorders, health care providers, and patients with previous mental health issues [34]. Nevertheless, suicide related to COVID-19 may be preventable and further research on suicide risk with COVID-19 is in dire need to gain more insight and to prevent such tragedies.

In Colombia, after March 11, 2020 (declaration of COVID-19 as a pandemic), overall suicide risk factors were influenced by the following events: the recent Venezuelan migrant emergency changed the demographic by including the Venezuelan population in major cities in Colombia, this is relevant since the migrant population in Colombia is usually a low-income population, there are many illegal immigrants and in such status, mental healthcare access is severely limited, they also have faced extremely traumatic situations in their home country (as violence, famine and poor access to education and health services) [35]. Also, there were more events of anxiety and depression among people with chronic, non-transmissible diseases, this, given their vulnerability to worse outcomes if infected with COVID-19. Perception of isolation was severe among the elder population, more so in those who had families, even when there was access to video or phone calls.

The first case of suicide attempt in Colombia reported by mainstream local news as directly related to the COVID-19 pandemic happened in the city if Santa Marta, in the northern part of the country; this person, a man of 50 years of age, had breached the mandatory curfew at least three times in order to sustain himself and his family given that he was a street vendor. After he was fined by the judicial system, he committed suicide [36].

Gaitán, in a survey including 160 participants made in July 2020, found that 37,5% of mental health workers had developed depressed mood and suicidal ideation only because of the restructuring of their work environment, this also was accompanied by the onset of a problematic abuse of tobacco, alcohol and other potentially addictive substances, also, there is the fact that 37% of them experienced marital problems and family conflicts since the beginning of the pandemic. While there are no specific reports on suicide among mental health personnel since the beginning of the pandemic in Colombia, the aforementioned data corresponds with previously known risk factors of suicide [37], it should be noted that, at the moment when we write, the results of this survey were presented in a world event and currently the author has not submitted them for publication.

5. Prevention of COVID-19 pandemic related suicide

According to a recently conducted study by Thakur and Jain (2020), the most prevailing causes found for suicide during the COVID-19 lockdown included: social isolation, economic recession, anxiety and stress in medical healthcare professionals, fear of being infected, social boycott and stigmatization brought on by being infected [38]. For this particular reason, it is imperative that patients who are suspected to have COVID-19 infection, people who have been quarantined and health care providers need more care. Therefore, it is important to intervene at the right time so that the physical and mental health of such groups is maintained, and suicidal behavior is prevented. Early detection of suicidal risk and treatment can alleviate the suffering of patients and reduce the number of completed suicides. Joseph and Bhandari give some general recommendations specifically regarding the management of preventive measures towards suicide reduction, which align with the WPA official recommendations and which encompass limitation of suicidal methods, regulation of access to alcohol-based beverages, and careful management of public information regarding suicide in the context of the pandemic [39]. We would like to suggest the following recommendations to the general public, health care providers, and patients with mental health issues in our population.

6. Preventive measures to reduce suicidal behavior

On the basis of what has been observed in the literature, it emerges that the main interventions for the reduction of suicidal risk in LMIC should be focused on person's vulnerability to suicidal behavior linked to health system and society issues, including difficulties in accessing health care and in receiving the mental and physical care needed, easy availability of the means for suicide, inappropriate media reporting that sensationalizes suicide and increases the risk of "copycat" suicides or COVID-19 infodemic, sense of isolation and stigma against people who seek help for suicidal behaviors, or for mental health and substance abuse problems.

Therefore, we provide the following practical suggestions in order to face up the issue.

6.1. Clear communication from authority to the general population

Avoid rumors and misinformation about COVID-19 to prevent fear and panic in the general public regarding COVID-19. Special vigilance should be kept on social media, newspapers, and multimedia to prevent the spread of misinformation among the general masses. There should be cautious and careful use of social media and other telecommunication services. This is observed to be a leading factor in increasing the amount of fear that people have towards COVID-19 [40].

6.2. Rapid screening and identification of suicidal ideation

All patients with COVID-19 presenting with any mental health issues should be evaluated. Rapid identification of people with suicidal warning signs like hopelessness, helplessness, worthlessness, or fear or thoughts of death should be done [41]. Quick suicidal risk assessment scales need to be used to evaluate the risk of suicide, provision of treatment via mobile teams or inpatient care (depending on severity), and monitoring the people (e.g., suspected or diagnosed COVID-19, quarantined people) for any psychological distress. The authors suggest integrating a suicidal risk screening assessment in the protocol for COVID-19 testing. There is also a need to enhance access to mental healthcare for people who are experiencing psychological distress related to COVID-19. There is a need to create more mental health resources in developing countries both online and offline such as coping tips and self-help skills.

6.3. Specialized helpline

We recommend the institution of 24/7 crisis helplines (national and local). Crisis helplines should be publicized and have fast response times in order to identify and facilitate prompt mental healthcare to people at-risk [35].

6.4. Availability of online mental health services

Telemental health interventions should be promoted for catering to people who have mental health issues. Suicidal risk assessment scales via online mental health helpline can be useful to prevent this tragedy. Further, there is a paramount need for nationwide suicide prevention programs and campaigns on mental health that will emphasize the consequences of the COVID-19 pandemic on the mental health and quality of life of a person. Therefore, it is imperative that mental health policies in developing countries include active suicide prevention and psychoeducation strategies,

these strategies should take into account the facilitation of social contact in the context of social distancing and should not only include the general population but healthcare providers as well [42].

7. Challenges of suicide prevention in developing countries during the pandemic

7.1. Lack of adequate manpower

Globally, psychiatrists remain a scarce human resource as the global median number of psychiatrists remains at approximately only one psychiatrist for every 100,000 population. High-income countries have approximately 120 times more psychiatrists than in low-income countries. There is undeniably a shortfall in the quantity and quality of mental health services and its distribution in developing countries. The at-risk population included preexisting mental health issues, COVID-19 survivors, frontline medical personnel, young people, handicapped people, women, workers in the informal sector, and the elderly. There is a real need is to build community-based strategies to handle local issues long after the acute phase of the epidemic. Access to mental health services must be increased in developing countries. A report from the World Health Organization mentions the government's total expenditure on mental health as % of total government health expenditure in India is 1.30% and the country has only 0.29 psychiatrists per 100,000 people [11,43]. There is undeniably a shortfall in the quantity and quality of mental health services and its distribution in the country. Another publication estimates the number of psychiatrists in India currently as about 9000 and the number of psychiatry graduates per year as about 700. Based on these estimates India has 0.75 psychiatrists per 100,000 population, as against the desirable number of anything above 3 psychiatrists per 100,000. Taking three psychiatrists per 100,000 population as the desired number, the study mentions that the number of psychiatrists required to reach the desired ratio in India as 36,000 and the country is currently short of 27,000 psychiatrists based on the current population [44].

7.2. Poor media control

There is inadequate media control on the quality of media in developing countries, which further accentuates suicide especially during the time of the pandemic [21]. There are no strict ethical media guidelines for suicides in developing countries. Training health reporters and designing ethical media guidelines is a huge challenge in developing countries [32].

7.3. Poor mental health literacy

Mental health literacy is defined as knowledge and concepts about mental health, which helps in timely diagnosis and management of psychiatric disorders. There is a huge gap of knowledge of mental health literacy among the masses in developing countries. Poor mental health literacy along with Infodemic can prove a huge toll on people and act as a barrier to treatment and diagnosis of mental disorders in developing countries, where mental health services are already limited [45,46].

7.4. Fragile Health System

There is a scarcity of mental health resources and disparity in their distribution in low and middle-income countries. The investment in mental health budgets is less than 1% in many countries. The majority of people do not have access to the mental health system, which leads to increased distress and chronicity of illness and also increases the cost of care. Further, there is a lack of community mental health team, health insurance, and out pocket expense on mental health which further burdens an already fragile health system in developing countries [47].

7.5. Poverty

Suicide is a public health problem associated with a plethora of associated conditions, poverty particularly in the form of low socioeconomic status is associated with increased rates of suicide. There is a huge challenge in developing countries in the form of economic poverty, which hampers mental health access and policies [48].

7.6. Impersonal contact

Telemental health strategies as helpful as they are, challenge patients expectations built on an entire history of face to face contact between a doctor (or in this case, mental health worker) and the patient, naturally, given the mandatory social distancing measures enforced during the current pandemic, therapeutic contact has been reserved mostly for emergency or mandatory treatment, and so, mental health interventions, while susceptible to be benefitted by internet-based technologies, have lost the personal quality of traditional therapeutic interventions; in this way, management of urgent situations (like violence, severe behavioral disruption, and suicidal ideation or conduct) has become challenging, forcing mental health workers to implement other strategies, such as simultaneous phone contact with peers or family members; alternative routes of access to emergency services, or permanent phone availability; this last option has become difficult to implement inn mental health workers that were previously used to a fixed schedule [49,50].

8. Conclusions

The current COVID-19 pandemic is closely linked to mental health issues in the general population, and it becomes relevant when the social changes related to it, also increase risk factors for suicide. Indeed, the sudden nature of the pandemic, its derived lockdown, and social distancing measures overloaded the rudimentary capacity of mental health services around the world and especially in developing countries, and demonstrated as well how insufficient mental health policies were before crisis. Therefore, in order to satisfy current mental health needs around the world in the context of the COVID-19 pandemic, universal screening for mental disease and specifically a suicide risk screening in people at-risk for severe complications of COVID-19 infection, those already infected and diagnosed, and health workers are a necessity. Community-based interventions taking advantage of telepresence and information technologies is also a possibility, and future work shall focus on the exploration of possibilities for prevention, diagnosis, and treatment of COVID-19 related mental illnesses using internet-based technologies.

Disclosure of interest

The authors declare that they have no competing interest.

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