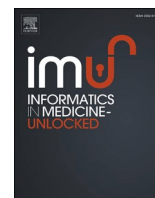




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Tele-mental health support community during the COVID-19 pandemic in Iran: Action of State Welfare Organization

ARTICLE INFO

Keywords

COVID-19
Coronavirus
Tele-mental health
Outbreak
Iran

ABSTRACT

The rapid outbreak of Coronavirus disease 2019 (COVID-19) has forced most countries to take severe public health measures, including the closure of most mental health outpatient services and some inpatient units. This has led to a major transformation in the way mental health interventions are provided and has suddenly created the need to adapt and expand Tele-Mental Health (TMH) care around the world. Iranian health officials have chosen various strategies to manage COVID-19, and the State Welfare Organization (SWO) has turned to TMH services. Shortly after the outbreak of the pandemic, the SWO set up an intelligent electronic system for psychological self-assessment of people in the community. Therefore, the purposes of the present study are to introduce the action of SWO regarding TMH, and also to highlight the benefits and challenges of its implementation. There is ample evidence that the most effective measure is the rapid implementation of TMH, which can be considered by health policymakers because its use can help reduce patient and clinician infection risk, decrease mortality, and alleviate the burden on health care providers and the health system during the COVID-19 pandemic.

1. Introduction

The outbreak of the novel Coronavirus 2019 (COVID-19) in Wuhan and the subsequent declaration of a pandemic by the World Health Organization (WHO), caused various countries to take immediate action to address the crisis [1]. The rapidly spreading and deadly virus has caused global changes, and the world is looking for strategies to reduce virus transmission before complete vaccination. The speed and extent of coronavirus transmission through person-to-person and touching contaminated surfaces is high, and therefore it is necessary to observe social distancing, restrict community movement, avoid unnecessary admission, and impose additional costs on individuals. Dealing with the illness of self, family, or loved ones while controlling hospital- or home-based isolation may be stressful, and due to the anticipated crisis in the coming days, mental health situations are expected to deteriorate over time. Infected people suffer from high levels of stress due to fear, uncertainty, financial stress, and limited personal interactions [2]. And because of the quarantine in confined spaces in single-patient rooms with limited mobility, people are more likely to experience anger, confusion, frustration, as well as anxiety symptoms, and depression [3]. Similarly, asymptomatic individuals who are potentially exposed are generally imposed on home quarantine and are more likely to report distress, frustration, and fear as a result of prolonged quarantine, perceived danger, and insufficient information [4].

People with pre-existing mental health situations are disproportionately affected because they are more prone to stress than the general population, and the unique sensory processing pattern of depressed individuals has been reported as critical factors in determining adverse outcomes. As Gianluca Serafini et al. has shown, sensory processing patterns and traumatic childhood experiences may specifically identify individuals with major emotional disorders and play a role in predicting

their quality of life [5]. Therefore, it can be concluded that sensory perception involvement that will play an important role in the emotional processes of depressed patients (with and without COVID-19). Not only is the treatment of people with mental health problems more challenging, but also with the Covid-19 outbreak, general practitioners are under daily both physical and psychological stress [6]. GP work on the front lines with patients suspected of having Covid-19 infection and are often exposed to the virus, and if they cannot be protected by appropriate Personal Protective Equipment (PPE), they can become both a source of community spread and a psychological disorder [6]. Therefore, in order to address these issues quickly, the urgent need for ongoing patient care at the community level, adequate personal protective equipment for GP, and clear guidance from public health institutions is evident in a recent study published by Andrea Amerio. et al. [6]. Despite the above aforementioned mentioned adverse consequences, contact precautions and public health recommendations should be implemented. Accordingly, alternative methods of providing mental health care are essential to fill the significant health gap, and TMH has the unique potential to address the psychological side effects of social distance. TMH can significantly reduce communication between patients and health care providers and potentially increase adherence to treatment and the effectiveness of mental health services. Hence, it can protect patients and healthcare providers during the COVID-19 pandemic. In addition, tele-mental technologies, as a popular information and communication system for providing and supporting distant healthcare services, play a very important role in the rapid decision making of health care providers. Due to this issue, many diagnostic and therapeutic measures should be performed through cyberspace and web-based interactions [7,8]. Therefore, given the importance of TMH during the current epidemic, the aims of the study are to describe the action of SWO regarding TMH by reviewing the SWO information site, as

<https://doi.org/10.1016/j.imu.2021.100615>

Received 9 May 2021; Received in revised form 20 May 2021; Accepted 21 May 2021

Available online 27 May 2021

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well as to highlight important considerations regarding the benefits and challenges of TMH.

2. TMH in the COVID-19 pandemic

TMH has been implemented quickly and successfully in several metropolitan and rural areas, in a wide range of mental health situations, and the available evidence suggests that this is an effective way of providing services [9]. COVID-19 injuries should not prevent people from receiving mental health care. Thus, turning to technology has expanded as a way to connect with others in order to minimize the impact of social isolation activities related to the COVID pandemic [10]. Iran has a population of about 85 million, most of whom use the Internet to obtain mental health information. In the past, the Iranian health care system with proper planning has had successful practical experiences in implementing TMH services [11]. Also, in order to manage COVID-19, the potential of 60 million Iranians to connect to the Internet in the provision of public and personal services has provided a unique opportunity that should be considered.

3. TMH care during the COVID-19 outbreak by SWO

Managing stress, anxiety and depression (SAD) is very important in daily life and can play a significant role in such crises [12]. In this regard, launching an intelligent electronic system for psychological self-assessment of people in the community according to manage SAD by the SWO of Iran, as the most effective measure that was implemented shortly after the outbreak of COVID-19. The purpose of launching this system is to provide appropriate content related to the mental health of individuals, accurate and evidence-based screening, specialized and scientific psychological counselling and possible prevention of social-psychological trauma arising from the outbreak of COVID-19.

All citizens can refer to the Internet address "<http://corona.behzisti.ir/>" to use this system. So that every citizen can fill in a series of basic information such as national code, telephone number, province, city, age, gender, occupation group, level of education, underlying diseases, high-risk group in the family and three short questions of this system use (i.e. How do you think recovery from COVID-19 is possible? How long is

it possible that you or someone around you suffer from this disease? How long do you think the coronavirus will last?) On the first page, the screening process begins with 21 questions on a four-point Likert scale, as shown in Table 1.

The system then gives people feedback and, if a detailed psychological examination is needed, a supplementary questionnaire is provided. This supplementary questionnaire also includes 21 more detailed questions with a four-point Likert scale, similar to the previous questions (Table 2).

At the end, after the self-assessments, the SAD level of each person is determined in three levels: weak, moderate and severe, and recommendations are provided for each level based on the individual's condition. Also, each person can receive and save the recommendations related to their conditions as a zip file.

4. Addressing advantages and challenges (focusing on the psychological self-assessment system of the SWO regarding TMH)

From the provider's point of view, concern about establishing a relationship, recognizing nonverbal cues, and observing appearances and general relationships may be a hindrance. This electronic system is self-assessed as frozen pages (without a psychologist) and can delay responses due to bandwidth problems, thus making self-assessment difficult. Without the necessary emotional support and opportunities for counseling and supervision by the provider, evaluations become more difficult. There is also a digital access gap among Iranians, as access is less possible in low-income individuals or families with low levels of education or different cultures. Restrictions on access and dissemination of large-scale telemedicine solutions, failure to integrate with electronic health records, lack of specific instructions, penalize the implementation of an effective telemedicine system. In addition, concerns about technical infrastructure, ethics and privacy issues, and the speed and cost of the Internet in some disadvantaged areas of the country also hinder the use of remote services.

Among the many proven benefits, the most appropriate application for the current condition is to expand access to care for the inaccessible and sedentary population due to mental, medical or geographical challenges. An intelligent electronic system contributes to the unmet

Table 1
21-item online questionnaire (primary question).

Question	It is not true about me at all	It is sometimes or to some extent true about me	It is often or significantly true about me	It is almost always true, or very true about me
It is difficult for me to calm down				
I notice that my mouth is dry.				
I don't think I can experience any good feelings.				
It is difficult for me to breathe.				
It is difficult for me to start doing my duties.				
I react to my status excessively.				
I feel a tremor in my body (for example, in my arms and legs)				
I feel like I'm consuming a lot of mental energy.				
I'm worried that in some status I may be scared or do stupid things.				
I feel like I have nothing to expect.				
I feel anxious and confused				
It is difficult for me to calm down and relax				
I feel heartbroken and disgusted				
I do not tolerate anything that hinders me from working (I have no patience and tolerance)				
I feel like that I might be scared at any moment				
I can't be interested in many things				
I feel like I'm not worth much as a person				
I think I'm very irritable and sensitive				
Without doing any physical activity, I have noticed that my heart is working abnormally (for example, a tachycardia or failure for a few moments)				
I feel scared for no good reason				
I feel that life is meaningless				

Table 2
21-item online questionnaire (extent question).

Question	It is not true about me at all	It is sometimes or to some extent true about me	It is often or significantly true about me	It is almost always true, or very true about me
I don't enjoy any of the tasks I do				
I feel frustrated and upset				
I can't show my interest and desire for anything				
I feel very worthless				
There is nothing in my life that I can hope for in the future				
I feel that life is meaningless to me				
It is difficult for me to start doing anything				
I swallow foods with difficulty				
My heart beats irregularly (increased heart rate or low heart rate)				
I feel like I've reached the limits of horror				
I am afraid that doing worthless and strange things will cause me trouble				
I feel scared				
I'm sad that I might get phobia and become a by-word				
My hands are shaking				
It is difficult to get rid of fatigue (I still feel tired after resting)				
I am very irritable and sensitive				
I can hardly calm down after being angry and upset				
I can't stand to see my work has been interrupted or disrupted				
I feel tense and nervous				
I can't stand anything that impedes me from doing my job				
I feel restless				

demand for mental health services with a shortage of providers, and is a factor in improving outcomes and optimizing access to care. TMH ensures the medical safety of clients and physicians. In addition, people with underlying diseases need to be careful about physical distance precautions because their health puts them at greater risk for severe COVID infection. TMH offers a wide range of psychological services in both rural and urban environments. Approximately 20 million Iranians live in rural areas, and remote health services can reduce the obstacle of accessibility to resources, thus decreasing the health inequalities that often exist for people in rural areas. Overall, increasing TMH integration provides opportunities to provide fairer services with a wider scope.

5. Conclusion

TMH reduces or eliminates the need for travel for both patients and physicians, while providing quality telecommunications services at an affordable cost. Given the many social, economic and political implications of COVID-19 for individuals, the design and implementation of TMH to assess a person's mental state is essential and can have a positive impact on daily life and crisis management. Setting up such intelligent systems can make people aware of their situation and solve their potential problems by providing advice. Also, the possibility of providing such telecommunication systems nationally can prevent unnecessary referrals, admission and hospitalization of people in medical, counseling and rehabilitation centers. It plays a vital role in preventing disease because it adheres to social distance and also avoids interruptions in care and maximizes public health outcomes. Finally, the evidence presented in this study can provide health system policymakers with a platform to exploit TMH tools in reducing patient and clinician infection risk, decreasing mortality, and alleviating the burden on health care providers and the health system during the COVID-19 pandemic.

Ethics approval and consent to participate

Not applicable.

Contributors

A-J and M-AB conceptualised and designed the study. M-AB drafted the manuscript. A-J and M-AB substantially contributed to revision and editing. All of the authors approved the final version to be published and agreed to be accountable for all aspects of the work.

Funding

This research has not received any grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgments

Not applicable.

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