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Abstract

Background: Although the concept of telehealth is of great interest globally, its potential has not yet been realized in Pakistan. It is therefore essential to explore the perspectives of stakeholders on the technology, particularly for mental health, to be able to increase and improve its use.

Aim: To assess the perceptions and experiences of patients receiving tele-mental health services, including telepsychiatry and tele-psychotherapy, in Pakistan.

Methods: For this qualitative exploratory study, we conducted in-depth interviews with 49 individuals at a tertiary care hospital in Karachi, Pakistan. Using the Cresswell framework for content analysis, we identified 3 major themes that focused on the positive and negative aspects of tele-mental health services and made suggestions for enhancing them.

Results: Twenty-six of the participants received telepsychiatry, while the remaining 23 received tele-psychotherapy services. Technical literacy, cost of consultation, privacy, and therapeutic alliance were the major challenges identified by the patients, while convenience and the absence of stigma were highlighted as key facilitators for tele-mental health. Tele-consultations reduced travel and waiting time, thus improving access to healthcare. Participants suggested that the processes for booking appointments and making payments should be streamlined and the cost of tele-consultation reduced.

Conclusion: This study provides insightful findings on tele-mental health services from the

perspectives of patients living in an Asian culture. The major benefits highlighted were destigmatization of mental health and elimination of commuting costs and travel time. There were concerns about privacy, therapeutic alliance and availability and affordability of the technology.

Key words: tele-mental health, telepsychiatry, tele-psychotherapy, patients' experiences, COVID-19, Pakistan

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Background

Originating in Wuhan, China, the SARS-CoV-2 virus rapidly engulfed the globe. COVID-19 was officially declared a pandemic by the World Health Organization on 11 March 2020 (1). As of 19 January 2022, there were 332 617 707 confirmed cases globally, with 5 551 314 deaths (2). Pakistan reported its first case of COVID-19 in February 2020, and as of 19 January 2022, a total of 1 333 521 confirmed cases and 29 029 deaths were reported (2). To minimize the spread of the infection, healthcare systems rapidly adopted alternative models for health care delivery, including telehealth services.

Pakistan, a developing South Asian country with a population of over 220 million, is the world's fifth-most populous country (3). Karachi is the largest city in Pakistan and a primary commercial centre. It is situated at the southern tip of the country, along the Arabian Sea coast. The city has an official population of 20.3 million, with an annual growth rate of 4.1% (3). The population has

a diverse linguistic, ethnic, religious, cultural and socio-economic background. In the city, and indeed across the entire country, the healthcare system is overburdened and inefficient due to unequal access, poor governance, poverty and lack of accountability (4). Numerous barriers limit access to quality mental health care: these include population density, shortage of mental health professionals, considerable distances between health care centres, underfunding, and the stigma associated with mental illness (5). Concurrently, the COVID-19 pandemic posed a serious threat to mental health by elevating anxiety, depression, post-traumatic stress disorder and negative societal behaviours (6,7). The uncertainty, helplessness and fear resulting from this outbreak have traumatized much of the population.

Against the background of these challenges, tele-mental health has emerged as the most efficient and most accessible means of providing mental health care for the broader population.

Aga Khan University is a private, tertiary care teaching hospital located in Karachi; it provides multi-specialty services in a single location. During the COVID-19 pandemic, psychiatry and psychotherapy outpatient services at the hospital were transitioned to virtual modes to reduce the risk of COVID-19 transmission and to meet the increasing mental health demands (5). The use of technology in the health sector in Pakistan, as in other developing countries, is in its early phase. The wide acceptance and subsequent success of any new technology depends primarily on factors like users' understanding of the new concept, the skills required for its successful implementation, and a working environment conducive to the adoption of new technology (8). Thus, for tele-mental health services to be successfully integrated into the Pakistani health care sector, it is essential to explore the experiences of stakeholders with the technology.

Some studies from developed countries have explored patients' and providers' experiences of virtual mental health services (9–13). Technology-based health services are in the emergent phase in Pakistan, hence, our study aimed to explore perceptions and experiences of patients receiving virtual services, including telepsychiatry and tele-psychotherapy, during the COVID-19 pandemic in Karachi.

Methods

This study was conducted in accordance with the guidance provided in the Standards for Reporting Qualitative Research (14). None of the investigators had any relationship with any of the participants prior to the study. We used a qualitative exploratory design with semi-structured interviews.

The study was conducted at the Psychiatry Department of a private tertiary care teaching hospital in Karachi, Pakistan, and the study population included all those patients who received tele-mental health services, including telepsychiatry and tele-psychotherapy, during the period April 2020 to August 2020. The inclusion criteria were: adult patients, both male and female, receiving virtual mental health services during the study period; having valid contact details in their records; willing to participate and reflect on their experiences in Urdu or English; and providing informed consent. Participants who did not receive tele-mental health services during the study period or who refused to participate were excluded.

A list of patients accessing the telepsychiatry and tele-psychotherapy mental health services was obtained from the Psychiatry Department database of the hospital. We selected every alternate patient from the list (n = 248). Contact details were extracted from the database and eligible participants were given an introductory phone call to explain the study and to assess their willingness to participate. Only 6 participants refused to be interviewed. Those who gave consent were given an appointment for interview. We interviewed patients until data saturation was achieved.

In-depth interviews were conducted using a semi-structured interview guide developed by the authors after an extensive review of current literature (9,15). The interview guide was reviewed by a team of experts, including psychologists and psychiatrists, and was pretested on 5 participants to assess language and clarity; data from the pretest group were not included in the analysis. Following this process, questions were refined and further improved for the final version of the guide (Table 1).

Due to the lockdowns and the rapid spread of the infection, interviews were conducted via telephone by a trained co-investigator during September and November 2020. The interviews were conducted from an office in the Psychiatry Department, ensuring privacy. Before the interview, participants were asked whether they had any queries. Study participants were assured that their information would be kept confidential and that none of their identifying features would be used. Participants provided verbal consent along with permission to record the audio. Interviews lasted approximately 25–30 minutes, and were all conducted in Urdu according to the participants' preferences. The recorded interviews were saved on a password-protected computer with a code to ensure security and privacy. Data collection was stopped on reaching saturation, signifying the point at which patients' narratives no longer generated new themes or information.

The data were analysed using Creswell's content analysis framework (16). This framework comprises 5 steps as detailed in Figure 1 .

For the first step, the recorded interviews were transcribed in Urdu and then translated into English by a co-investigator who is fluent in both languages. The translated data were double-checked by reading the transcripts and listening to the recorded interviews. A code number was allocated to each transcript to maintain anonymity of the participants. The transcripts were read by the researchers several times to thoroughly examine the data and the results. The third step involved describing, classifying and interpreting data into codes and themes. During this phase, researchers extracted meaning units from the transcripts. The coding of data was carried out by 2 investigators independently using a colour-coding method to highlight codes having a similar meaning. All codes that seemed consistent in meaning and which had the same colour were aggregated to form categories. Each category was compared by the researchers independently and then assessed together. From the authors' consensus on categories, multiple themes emerged. The findings of the study were then compared with previously reported research to verify and identify new findings. The last step comprised representing and visualizing the data in the form of a table that illustrated the comprehensive findings.

Permission to carry out the study and ethical approval were obtained from the Aga Khan University ethics review committee. Verbal informed consent was given by the study participants before being interviewed. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees.

Results

In-depth interviews were conducted with 49 participants: 53% (n = 26) received telepsychiatry and 47% (n = 23) received tele-psychotherapy during the study period (Table 2).

From the data analysis, 3 major themes emerged (Table 3):

1. Challenging factors of tele-mental health consultation during the pandemic
2. Facilitating factors of tele-mental health consultation during the pandemic
3. Suggestions to improve tele-mental health services

These themes were constructed from the categories: "technology"', "cost of consultation", "privacy" and "therapeutic alliance". Some of the specific difficulties for each category are as follows:

Technology

The major challenges reported by most of the participants were technological issues such as frequent disconnection, gadget availability, poor internet quality, signals issues, audio/visual lag, and no electricity.

"The internet connection issue made things difficult; the doctor did not understand what I was saying and I did not understand what the doctor was saying. It was annoying."

"Physical presence is very important for me – to talk to a person. I don't talk to my friend on the phone for more than 5 minutes, so 40 minutes consultation on the phone was not comfortable for me at all."

Access to devices was another challenging factor for a few participants.

"My laptop is for family use. Me and my brother take online classes also, so availability of laptop and consultation timings are important."

There were times when the participants could not access the online link provided by the hospital.

Several participants described being disappointed as their consultant was not technology savvy and had little experience with virtual equipment or was not interested.

"Medical files were not present for the session, so we had to use chat box. The doctor was not aware of technology; he had to call his assistant to see the shared screen."

"Teleclinic was for a short duration as compared to face-to-face clinic."

"Appointment was given for 2pm and doctor got online at 3pm."

Cost of consultation

Most of the participants reported that they saw technology as a major advantage that saved the hospital resources. They also felt that if hospital resources are not used, there should be reduced costs for virtual consultation.

"I think there should be a lot of cost-cutting in online consultation."

"Staff do not check weight, height and blood pressure and they are less involved so there should be difference in consultation charges."

Some participants said there should be some concession in virtual consultation charges for more frequent consultations.

"I live in Quetta and always do teleclinic. My appointment is every month so I think there should be reduced charges for repeated appointments."

However, a few participants believed that the cost should be the same.

"Cost should be the same because the doctor doctor is providing the same amount of time, care and involvement in tele-therapy."

Privacy

Another important obstacle highlighted by the participants was the problem of privacy. Participants felt uncomfortable if their family members were around during the online consultation.

"There are a few things which we can share with only the doctor. My wife becomes suspicious when I tell her to go out of the room. Practitioner should ask patients' family to leave room during online consultation."

"During therapy, most of my discussion is about my home issues so I prefer it should be outside the home."

Some participants stated that they were afraid of eavesdropping.

"During in-person appointments, I feel assured and secure as no family member is with me. At home there is always fear of other people hearing my conversation."

"I was sitting in my room, but the family was trying to hear the conversation."

Due to the COVID-19 lockdown, people were home-bound and working from home. Securing a private space at home for a virtual consultation was a huge challenge for some of the participants. Against the setting of a collectivistic culture in Pakistan, where the majority of families live in extended family settings and notions of personal space and privacy are considered "western" concepts, having a private conversation while at home was not easy.

"During the lockdown, I was working from home, had telepsychiatry at home, had repeated phone calls from the office, and kids sometimes would come inside the room and these caused distractions and privacy issues."

"It was difficult to get space at home for online consultation and if space was available there was a connectivity issue."

Therapeutic alliance

Participants thought that a possible disadvantage of virtual consultation could be the lack of therapeutic alliance, which is considered an important factor in achieving positive outcome.

"The doctor–patient relationship is not built during the online clinic."

"The physician got calls during an appointment and people were entering his room. No feelings of doctor–patient interaction."

Participants felt that physicians could not understand their problems the same way as they would when meeting them face-to-face.

"Energy and body language that could be conveyed physically is lost. It can relate with the metaphor that "meaning is lost in translation"; it happens during online consultations."

"I feel I can express myself better if the doctor is in front of me."

"Body language is better read during in-person consultation."

This theme was constructed from the categories "convenience" and "de-stigmatizing mental health".

Convenience

The greatest benefit participants experienced was that they did not have to travel an entire day to meet the physician. Participants described virtual consultation as a financial gain as opposed to expensive travelling.

"Telepsychiatry reduces the cost and travel time."

"Teleclinics are a very good initiative and feasible for those who are very busy and are unable to visit hospital because it saves time."

Some participants said they wanted to have the opportunity for video consultation in the future so that they would not have to wait in the clinic for many hours.

"Teleclinic is flexible; a lot of hassle is removed like it cuts transport time and waiting time in clinic."

"I was getting my psychotherapy session almost every week. I am comfortable having it online because I don't have to wait in clinic for 45 minutes. During the waiting time in clinic, I become anxious and sometimes think that the doctor has missed me. I can't even go to the rest room because I always think that I may miss my turn."

Participants were aware of the fact that virtual consultation provides opportunities to gain access to relevant expertise, without the burden of having to travel long distances.

"I live in Quetta which is far from Karachi, therefore, telepsychiatry is more convenient for me."

De-stigmatizing mental health

The stigma attached to mental illness is huge in the Pakistani context. Several participants said telepsychiatry and tele-psychotherapy are effective in countering the stigma associated with mental health problems.

"Mental illness attracts stigma and shame. People experience stigma for seeking psychotherapy and don't want to visit the clinic physically."

"Culturally, virtual consultation is better as it removes taboos and no need to tell other people about your mental issues."

This theme was constructed from the categories "streamlining the processes for making appointments and payment" and "subsidizing cost of virtual consultation".

Streamlining the processes for making appointments and payment

Participants suggested streamlining the appointment system and the payment process to improve tele-consultation. They said it would be easier if they could make payments at facilities near their residence, e.g. bank branches in their neighbourhood.

"Bank payment should be streamlined to speed up the process."

"The payment process was an issue. It should be streamlined, especially for regular appointments."

Some of the participants had a hard time getting an appointment and they highlighted improving the system for making appointments.

"Appointment should be physical, but in a crisis, it should be through email. The appointment process should be streamlined."

"It was very tough to get an appointment due to difficult booking methods."

"I had to wait for 10 minutes to get an appointment."

In addition to streamlining the appointment process, a few participants said there should be flexibility in rescheduling the appointment.

"Patients should be allowed to reschedule calls and have appointment flexibility."

Subsidizing cost of virtual consultation

Most of the participants suggested reducing the cost of virtual consultation.

"Reduce the cost of online consultation to improve the teleclinic."

Most of the participants stated that hospital resources were not used during the online consultation, suggesting that the cost of virtual consultations should be subsidized.

"Since hospital resources are not used, costs should be reduced."

Some participants suggested that, while the cost of the initial consultation should remain the same, there ought to be a reduced fee for follow-up consultations.

"The cost should be reduced, especially for follow-ups, to improve services."

Discussion

This study identified several challenges and facilitators experienced by patients while receiving virtual consultations for mental health during the COVID-19 pandemic. One of the major hurdles was technical difficulties relating to access to technology, acceptance and technical literacy: on the whole, digital literacy was a major challenge for patients. Our participants reported concerns consistent with previously documented evidence relating to technical issues, such as poor bandwidth, connectivity issues and audio lag (17,18). The most commonly reported issues in our study were frequent breakdowns in connectivity, power outages and voice distortions. The

availability of devices such as a smartphone or laptop for individual sessions was sometimes a challenge as it was common for one laptop to be shared by the whole family. Participants said the consultants lacked competence in using technology, and this aligned with similar findings reported by Imlach et al. in New Zealand, which indicated that physicians often lacked knowledge to operate online tools during virtual consultations (19). Other research has shown that experienced physicians lack training in telemedicine (20), an indication of the pressing need among patients and clinicians to overcome technological barriers for telehealth to be successful.

From the patient's viewpoint, it seemed that the therapeutic alliance was compromised, primarily due to the absence of physical presence. For nearly all our patients this was the first time to use a virtual approach to discuss their personal lives, leaving them with an uncomfortable feeling. Previous research had indicated a relationship between therapeutic alliance and e-therapy outcomes (21). In a typical therapy room, body language and facial expressions are important aspects of the therapeutic alliance, which is not experienced in the same way when communicating via a computer screen. In Asian culture, where interpersonal connectedness is intricately woven into the social fabric, communicating through a screen does not give the same experience.

Privacy was a concern of most participants, which is indicative of the family systems in Pakistan as the majority live in the same households with their extended family. As a result of this lack of space, there is an increased risk of other family members overhearing confidential therapy sessions.

Along with reporting these challenges, participants highlighted the positive factors of tele-mental health services. Virtual consultation reduced waiting time, enhanced access to care, and reduced travel time, as indicated in other studies conducted in Pakistan and elsewhere (19,22). Similar to the findings of Imlach et al. (19), our participants reported that the teleclinic was cost–effective as it helped avoid travelling expenses and reduced the risk of cross infection during the pandemic. A recent systematic review on mental health care in Pakistan reported that time and distance constraints are among the barriers to seeking mental health services (23). Indeed, most mental health facilities are only available in urban areas, making it difficult for individuals living in rural areas to travel to urban centres, manage their time, cover transportation costs, and take leave from their employers. Hence, tele-mental health provides a platform for mental health care delivery to remote and rural areas as well as metropolitan areas, thus improving access to care.

Another advantage of virtual consultation reported by our participants was that they did not feel stigmatized for seeking mental health services. Globally, it has been estimated that 792 million

people have a mental disorder (24). Effective treatments are available, yet nearly two-thirds of those with a known mental disorder never seek help from a health professional because of stigma and discrimination (25). The stigma associated with mental health disorders remains a significant challenge in Pakistan. Negative societal attitudes and misconceptions contribute to social exclusion, discrimination and reluctance to seek mental health services. In fostering the de-stigmatization of mental health in Pakistan, tele-mental health services have emerged as a pivotal approach, improving access and addressing mental health needs.

Participants suggested ways of improving the tele-mental health services. These include streamlining the processes for making appointments and payments to improve teleconsultation. Previous research has shown that, although teleconsultation provides a variety of opportunities, payment systems can become a significant obstacle to the optimal use of tele-services (26). It is important to offer user-friendly virtual services to improve access and acceptability (27). Continuous audits and quality assurance measures could be implemented to improve the processes.

Our participants suggested that the cost of tele-consultation should be reduced because less facility resources are used during virtual consultations, e.g. no initial health assessment is made by paramedical staff and no cost is incurred on the physical facility or utilities. It is vital that cost-effective, convenient, safe and acceptable virtual services are offered to all stakeholders and that patients feel they have benefited from the consultation (27).

The major strength of our study is that this was the first qualitative study in Pakistan to explore tele-mental health services from the patients' perspectives during the COVID-19 pandemic. The study examined the combined experiences of a sufficiently large group of patients using telepsychiatry and tele-psychotherapy and provided valuable data on the issue. Our findings have important implications for strengthening tele-mental health services in low- and middle-income countries.

The study had a few limitations. Of major concern is the use of telephone interviews. These captured the participants' experiences through verbal content alone: any accompanying nonverbal or emotional expressions were left unrecorded. Telephone interviews were challenging, primarily due to technical issues like distortions, poor connectivity and busy transmission lines, frequently resulting in multiple attempts to reach the participant. A further limitation resulted from the household arrangements of some patients. Although the interviewer ensured the comfort of the participants during the interview, in many cases the presence of family members in the room hindered patients from expressing themselves openly. To ensure privacy and address technical issues, interviews were occasionally longer than usual to achieve

the desired depth of information from our participants. The fact that the study was conducted in a single tertiary care teaching hospital in Karachi may also be considered a limitation.

These constraints limit the generalisability of the study findings, however, the findings provide valuable insights into patients' experiences of virtual mental health consultations.

Conclusion

This qualitative study provides insights on the perceptions and experiences regarding tele-mental health consultations from the perspective of patients living in an Asian culture. The key findings of the study indicate several benefits of virtual consultations, including destigmatizing mental health, convenience and cost–effectiveness due to the elimination of commuting costs and travel time. However, certain challenges were identified, including concerns relating to privacy and the therapeutic alliance as well as technology issues such as access to communications devices and proficiency in using virtual tools by both patients and physicians. It is imperative that healthcare acquire the skills needed to operate tele-health technology and work with their institutions to develop policies relating to confidentiality, privacy and cyber safety. The COVID-19 pandemic has provided an opportunity to revamp health curricula: medical education programmes should now include modules on professional and ethical standards for virtual consultations.

Another opportunity emerging from the pandemic is the stabilization and enhancement of tele-consultation services. Future qualitative exploration of tele-health could include face-to-face interviews to improve generalizability and understanding of patients' perspectives vis-à-vis improvements to the service.

Our findings have important implications for strengthening tele-mental health services in Pakistan and integrating digital health-based model for improving access among the general population, especially in remote areas.

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Expériences des patients avec les services de télésanté mentale pendant la COVID-19 au Pakistan

Résumé

Contexte : Bien que le concept de la télésanté présente un grand intérêt à l'échelle mondiale, son potentiel n'a pas encore été pleinement exploré au Pakistan. Il est donc essentiel d'explorer les perspectives des parties prenantes concernant la technologie, en particulier pour la santé mentale, afin de pouvoir augmenter et améliorer son utilisation.

Objectif : Évaluer les perceptions et les expériences des patients recevant des services de télésanté mentale, y compris la télépsychiatrie et la télépsychothérapie, au Pakistan.

Méthodes : Pour cette étude qualitative exploratoire, nous avons mené des entretiens approfondis avec 49 personnes dans un hôpital de soins tertiaires à Karachi (Pakistan). En utilisant le cadre de Cresswell pour l'analyse de contenu, nous avons identifié trois thèmes principaux qui se concentrent sur les aspects positifs et négatifs des services de télésanté mentale et nous avons proposé des suggestions pour les améliorer.

Résultats : Vingt-six des participants ont bénéficié de services de télépsychiatrie, tandis que les 23 autres ont reçu des services de télépsychothérapie. La littératie technique, le coût de la consultation, le respect de la vie privée et l'alliance thérapeutique étaient les principaux défis identifiés par les patients, alors que la commodité et l'absence de stigmatisation étaient soulignées comme des éléments clés qui facilitaient la pratique de télésanté mentale. Les téléconsultations ont permis de réduire les déplacements et les temps d'attente, améliorant ainsi l'accès aux soins de santé. Les participants ont suggéré de rationaliser les procédures de prise de rendez-vous et de paiement et de réduire le coût de la téléconsultation.

Conclusion : La présente étude fournit des résultats pertinents sur les services de télésanté mentale du point de vue des patients qui vivent dans une culture asiatique. Les principaux avantages mis en évidence étaient la déstigmatisation de la santé mentale et l'élimination des

coûts et du temps de déplacement. Des inquiétudes ont été exprimées concernant le respect de la vie privée, l'alliance thérapeutique, la disponibilité et l'accessibilité financière de la technologie.

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