

The impact of E-Health on clinical psychology practices and the future of E-health / Telepsychology/Telehealth in Pakistan

Zainab Muhammad Ullah, Muddasar Hussain, Salwa, Asfa Hanif, Faryal Fazal

Abstract—The present study was conducted to investigate the impact of E-Health on clinical psychology practice. The future of E-health / Telepsychology/Telehealth in Pakistan for this purpose different articles were reviewed. The articles had been taken from different journals and google scholar and main points were extracted. The findings suggests that in Pakistan the use of E-Health and Telepsychology is in infancy phase which need to improve most importantly in times of crises such as in COVID-19 the use of Telehealth increased two-fold. So, this matter must be considered, and possible solution and policies must be taken as the researcher suggested in the present study.

Index Terms— Telehealth, Telepsychology, COVID-19, Telecommunication, Clinical Psychology, Pakistan.

INTRODUCTION

Telemedicine, Telemedicine and E-Health is the term used interchangeably and as a substitute for the innovation of healthcare guidance by some telecoms such as smart phones, telephones or wi-fi mobiles, with or without video calls. Telemedicine (TM) can benefit by providing compassionate treatment for chronically ill patients, while reducing their proximity to other severely ill patients. After all, a computer virus is the only illness you can capture by using TM. About every insurance benefit and big company offers provision of TM programs in order to promote the TM solution (Hind & Sarah, 2021). Presently the disease outbreak for coronavirus disease 2019 (COVID-19) is expanding globally at a fast pace with a simple breeding rate of between 2 and 2.5, with an extreme acute respiratory syndrome of coronavirus 2 (SARS-COV-2). The first case of COVID-19, caused by this novel coronavirus, Reported at the end of 2019 in Wuhan City China. The WHO Emergency Committee declared a global health emergency throughout the world due to the rapid spread and increased rate infection (Christian G & Thirumalaisamy P, 2020)

Although several efforts are being made to limit the spread of the virus, but all in vain it produces a lot of emotional reactions Anxiety, panic, fear and depression in different populations. This shed light on the fact that with the physical effort to deal with the disease, mental management, psychosocial and psychological well-being is equally important to deal with.

Hearing about the COVID-19 outbreak and spread from various sources such as television, social media, newspapers, family, and friends will cause a great deal of anxiety, fear, panic, depression, and anxiety among the public. It is important to remember that all these emotions are natural responses to this situation unusual circumstance, but the problem starts when the response become irrational. In Pakistan, where the healthcare system is in disarray due to a lack of funding and abysmal socioeconomic circumstances, the future of telemedicine will be bright if supported by appropriate policies and a networking infrastructure. That would allow for the delivery of services on schedule, which would otherwise be unlikely. A lot of research and awareness programs

can be useful for this reason.

1. COVID-19 IMPACT ON MENTAL HEALTH WORLDWIDE

When a novel corona virus (COVID-19) epidemic declared a global pandemic on 11 March 2020 by the World Health Organization (WHO) (Domenico & Maurizio, 2020) after that the whole situation dramatically changed human life within a few weeks. A new, uncertain, and fast changing scenario is taking place in the world. People need to remain confined at home, family relations have shifted markedly, travel is limited, and recreation and social life are being reduced. It has also affected the working situation. Many people have lost their jobs temporarily or permanently, many are working from home, sometimes inadequately prepared to do so, and many are forced to work in sectors. Feel the workload, rising stress levels and the increased risk of viruses. Due to which a number of psychological issues arises due to this overwhelming situation that is worsen day by day. the need for psychological services also become essential for every population range from children to old age adolescence. Hospitalization is also discouraged during epidemic, even if a patient thinks they have COVID-19. Patients, whether or not they have COVID-19, are recommended to remain at home until a hospital appointment is completely unavoidable. For several patients in Pakistan this practice challenges conventional healthcare. After outpatient departments (OPDs) were closed and other routine operations in most areas of the region increased as corona virus infections and tensions intensified in government hospitals, doctors were urged to keep using online applications. (Khalid & Shahid, 2020).

2. PSYCHOLOGICAL IMPACT OF COVID-19 IN PAKISTAN

The Covid-19 spread rapidly to 209 countries in the United States, Europe, Asia and Australia, along with Pakistan and then around the world. According to (Abdul, Khan, Ali, Ali, & Baset, 2020) In the first case of Covid 19 was confirmed in Karachi province of Sindh by Pakistan, Minister of Health and Government of Pakistan on 26 February 2020. During this epidemic,

people may experience fear of death, of being affected by themselves or their family, fear, anxiety, anger, symptoms of depression and other mental health concerns. In this unpredictable situation those who are not tested positive may also developed some psychological issues due to the fear of being infected this is called secondary mental health problems because people are not directly exposed to the virus. To address secondary mental wellbeing issues concerns taking part in the COVID-19 epidemic, Internet Psychological Technology should immediately develop a Psychiatric Crisis Intervention Model (PCIM). The PCIM brings together teams of doctors, therapists, counsellors / mental health providers, and social workers to support patients, relatives, and hospital personnel with earlier treatment strategy. (Rana, Mukhtar, & Mukhtar, 2020).

3. USE OF E-HEALTH / TELEPSYCHOLOGY/TELEHEALTH DURING COVID-19

Telehealth is not a new concept. Telehealth has been in operation since 1959, when the University of Nebraska Medical School and the State Mental Hospital conducted a two-way video conference using microwaves. The rapid expansion of computing and information technology in the 1990s resurrected telehealth. The advancement of emerging technologies allows telehealth to evolve into a more sophisticated and feature-rich application (Jose A. , Matthew A., Ashley, Jon R, & Michael , 2020). Telehealth is the use of digital media to link people to health information, services, and activities from a distance. It enables access to health care anytime, anywhere. We can do medical checkup from the comfort of our home this is called telemedicine a category of telehealth. With telemedicine a patient can be diagnosed and treated using remote communications. Apart from that Telehealth services can include online prescriptions, blood pressure monitoring, and professional counselling. With the help of telehealth people in the remote areas can now speak with medical experts with whom they may not have access before. Persons with any physical disability and elderly can do their treatment remotely. People who are busy and cannot go for medical treatment and a housewife who is busy in her home and cannot leave her home, but her daughter needs to go for checkup because she got sick and similarly if someone lives in village and need a good doctor but cannot travel. Now with help of telehealth they are just needed to set Infront of computer or laptop and contact with a doctor for consultation. Now adays due to COVID-19 people are advised to stay at home to prevent the spread of the novel virus.

COVID-19 epidemic transforms Telepsychology, according to the American Psychological Association (APA), is unlike any other event in human society in terms of mental health treatment distribution, with the use of one or more telecommunications technologies to provide mental health services (APA, 2013). Similarly, E-Health is commonly referred to as the use of Internet and computer to healthcare and broadly refers to the use of information technology. A study was conducted by (Naseem, Rashid, & Kureshi) Through accurate monitoring, e-health technologies will play a vital role in controlling many epidemic diseases. E-health adoption would result in increased productivity, improved public access to the health-care system, and disease elimination in Pakistan. Before COVID-19 epidemic, mental health practitioner

worked with 7.07% Telepsychology rose by a factor of 12 to 85.53% during epidemics., and 67.32% of psychologist performing all their clinical work through telepsychology. Psychologists predict that they will perform 34.96% of their clinical work through telephone science after the epidemic. Psychologists have reported a 26-fold increase in the use of telepsychology in epidemic. Telehealth is rapidly evolving and has the potential to modernize the delivery of health services to the majority of the population. Despite the fact that relatively few people have seen its historic/ancient use and impact. Fewer than 1-3 people are aware of its open worth. The ultimate goal of telehealth is to improve patients' access to health care. This accessibility is made possible by the advancement of broadband and portable medical technology. In technologically advanced countries, treatment for acute conditions such as stroke and pneumonia are moving from the emergency department to the doorstep or bedroom by video conference in the ambulance or at home.

4. FUTURE OF E-HEALTH / TELEPSYCHOLOGY/TELEHEALTH IN PAKISTAN

Pakistan is a heavily populated developed world that faces many healthcare problems. Access to healthcare is a major issue, especially because of geographical, cultural, and social barriers the COVID-19 epidemic is more than just a health crisis; it is also an economic and social crisis that has revealed health inequalities. (Khan, 2020). When faced with an extraordinary public health emergency, people face a variety of psychological and mental disorders. From the other side, COVID-19 quarantine raises the likelihood of emotional and physiological illnesses. The main reason for this is that quarantine which slowly moving people apart from one another. Depression and anxiety are more prone to arise in the absence of contact. but at the other side, decreases the accessibility of urgent mental health services. interventions, and mental and emotional guidance is common in the current situation. There is an urgent need for a new type of psychological and mental distress strategy that is possible and accessible to address mental and emotional problems (Xiao, 2020). The public needs to be made aware of common measures such as sleep hygiene, activity schedules, exercise, social networking, avoiding social media forwards, and relaxation techniques. Also, they need to be informed about the sources of help and the authentic website (Banerjee, 2020). The government should regulate the E-health, because "future" challenges such as COVID-19 which demand a more efficient and parallel healthcare system across the country it is necessary to have alternative health and mental health delivering platform. We can look at a hub and scope plan for distant healthcare. A legislation should put together.

(Imam, 2020) stated the Telehealth system was implemented faced strong resistance from patients and doctors. He further addressed that awareness should be given to people by putting on free virtual camps consultation to promote the benefits of such a system and to encourage people to put it to the test. He said the extension in Pakistan's telehealth system would only be feasible if it is integrated progressively. However, the country's health sector will undergo a massive redesign over the next five to ten years, including various implementations in telehealth, including Telepsychology.

Pakistan remains an obstacle to access to telehealth because it has digital obstacles such as a shortage of Internet penetration, misconduct on digital media and lack of literacy. But nevertheless, the integration of such a structure is being progressively accelerated with COVID-19 speeding-up, as international organizations emphasize Pakistan's need for telehealth. Marham-like companies, Among the health stories, the outbreak of COVID-19 leads to the creation of virtual health services and promotes use of multimedia technologies to improve medical treatment. There is sound room.

A study conducted by (Perrin, et al, 2020) COVID-19 concluded that Telepsychology is essential for the provision of psychological services during an epidemic, because this is not possible to alter as long as therapists and clients appreciate it. A more focused approach to the training and implementation of telepsychology that takes into account the needs and concerns of the target psychology group can benefit organizations promoting its use. The new increase in telemedicine in Pakistan was caused by the worry of developing COVID-19 and the burden of social distancing. The need for time here is to ask the right questions and come up with a detailed answer.

- **Future Trajectory of Telemedicine in Pakistan:** Whenever people discuss telehealth as a possible way to solve, the fragile healthcare system and flawed service delivery, do they truly grasp the nature of the issue? There have been few studies analyzing access to medical care in Pakistan, and they have primarily focused on economic impediments. Therefore, we need to dwell on following issues so to reach a tangle solution where the awareness of telehealth in masses should be accompanied by its uses as in all developed countries. Let us reach each problem individually.
- **How to bring long term changes:** Unless an effort is made to identify expected results that will lead to a decrease in healthcare delivery inequality rather than widening the gap for persons with restricted access to healthcare services, the short-term rise in telemedicine use during the COVID-19 epidemic may not endure to become a long-term solution.
- **The doctor-patient / counselor-client/ service provider- services user relationship:** What about such a connection, should be another key question? What a powerful thing it would be if the two could develop empathy for one another. In today's Pakistan, it's critical to envision a "cyber" interaction among physicians and patients based on cultural awareness. It is necessary to address the expectations of both physicians and patients in order for such a partnership to be accepted in the future.
- **Obstacles for providers and users:** Access to technology, acceptability of technology, relationship with the practitioner, and degree of E-health literacy are all issues that patients face. Healthcare is complex, and diagnosis can be hard to understand for patients.
- **Why masses should be educated about telemedicine:** At the same time as dose adjustments and prescription drafting, patients are educated about pharmaceutical side effects and compliance. This efficacy may be compromised during a telemedicine appointment. Due to a complete lack of a thorough physical examina-

tion, critical discoveries such as diminished feelings or a significant heart problem may go unnoticed. To maintain a high level of patient satisfaction, ensuring patient privacy and responding to patient complaints will continued to be difficult. Likewise, physicians/counselors/clinicians in Pakistan confront a variety of issues, ranging from "No-Touch" medicine to managing time, teamwork, and digital literacy for physicians, particularly those who were educated several years previously. More significantly, doctors may face additional stress as they master these new abilities while retaining and keeping up with rapidly rising medical information. The healthcare system faces a multitude of barriers. This would be the moment for Pakistan to tackle the use of technology in healthcare and to enlist the help of physicians, public health officials, and information technology specialists to uncover the numerous problems that arise. The formulation of policies and the establishment of a mechanism for compliance and evaluation will become the most difficult tasks. Major adjustments to the present system may be required for medical certification and licensing, as well as the establishment of dependable reimbursement mechanisms and the definition of responsibility. In addition, to achieve long-term effectiveness in telehealth, a cyber security network, hardware, and trained employees will be required.

- **Decisions regarding Policy making** Pakistan, in general, needs a strong improving health policy at all levels. E-health, which makes use of computer technology, might provide the impetus for a governmental and hospital-level reform of healthcare policy. It's crucial to figure out who will create the policies, how much money will be spent on equipment and personnel, and also how programs will be evaluated. The communities of Health will play a key role in guaranteeing that these policies are adherent, monitored and accountable. Telehealth may be the much-needed excellent way to boost health in Pakistan by answering queries and detecting difficulties.

CONCLUSION

From all the study the researcher concluded that there exists a considerable lack in implementation and awareness regarding the use of E-health and Telepsychology in Pakistan. Telepsychology has the potential to help connect psychologists with people in need of mental health services who are struggling to attend individual therapy or abandon traditional practices because of COVID-19 restrictions. The future of E-health and Telepsychology is bright if the government make some legislations and act upon it, provide proper equipment, an internet with high speed to avoid barriers between mental health professional and client during assessment. The government should also make some free websites to which people could access in time of crises such as COVID-19. The privacy concern of client regarding their data should also be addressed with them so client will seek online psychological intervention without any hesitation.

36(6), 1405–1407. doi:10.12669/pjms.36.6.3112

Naseem, A., Rashid, A., & Kureshi, N. I. (n.d.). E-health: effect on health system efficiency of Pakistan. *Annals od saudi Medicine*, 34(1), 59–64. doi:10.5144/0256-4947.2014.59

Perrin, P., Rybarczyk, B., S Pierce, B., A Jones, H., Shaffer, C., & Islam, L. (2020, Junaray). *Rapid telepsychology deployment during the COVID-19 pandemic: A special issue commentary and lessons from primary care psychology training*. 76(6), 1173-1185. doi:10.1002/jclp.22969

Rana, W., Mukhtar, S., & Mukhtar, S. (2020, Apirl 07). *Mental health of medical workers in Pakistan during the pandemic COVID-19 outbreak*. *Asian Journal of Psychiatry*, 510. doi:10.1016/j.ajp.2020.102080

Xiao, C. (2020, Feburary 25). *A Novel Approach of Consultation on 2019 Novel Coronavirus (COVID-19)-Related Psychological and Mental Problems: Structured Letter Therapy*. *Piachatry Investigation*, 17(2), 175–176. doi:10.30773/pi.2020.0047

2.4 Copyright Form

REFERENCES

Abdul, W., Khan, A. U., Ali, M., Ali, A., & Baset, A. (2020, May). *COVID-19 outbreak: current scenario of Pakistan*. *New Microbes and New Infections*, 350(20), S2052-2975. doi:Waris, A.; Atta, U.K.; Ali, M.; Asmat, A.; Baset, A. (2020). *COVID-19 outbreak: current scenari*10.1016/j.nmni.2020.100681

APA. (2013). *American Psychological Association*. Retrieved from <https://www.apa.org/practice/guidelines/telepsychology>

Banerjee, D. (2020, March 20). *The COVID-19 outbreak: Crucial role the psychiatrists can play*. *Asian journal of psychiatry*, 50, 102014. doi:10.1016/j.ajp.2020.102014

Christian G, M., & Thirumalaisamy P., V. (2020, March). *The COVID-19 epidemic*. *Tropical Medicine and International Health*, 25(3), 278–280. doi:10.1111/tmi.13383

Domenico, C., & Maurizio, V. (2020, March 19). *WHO Declares COVID-19 a Pandemic*. *Acta Bio Medica: Atenei Parmensis*, 91(1), 157-160. doi:10.23750/abm.v91i1.9397

Hind, B., & Sarah, A. (2021, April 19). *The role of eHealth, telehealth, and telemedicine for chronic disease patients during COVID-19 pandemic: A rapid systematic review*. *DIGITAL HEALTH*. doi:10.1177/20552076211009396

Imam, E. (2020, July 20). *Marham: Find, Book & Consult Doctors*. Retrieved from *MIT Technology Review Pakistan*: <http://www.technologyreview.pk/is-telehealth-the-future-of-medicine-in-pakistan/>

Jose A., B., Matthew A., R., Ashley, Z., Jon R., B., & Michael, M. (2020, October 01). *The Impact of COVID-19 on Telemedicine Utilization Across Multiple Service Lines in the United States*. In *Health Care*, 8(4), 380. doi:10.3390/healthcare8040380

Khalid, A., & Shahid, K. K. (2020, July 20). *Is telehealth the future of medicine in Pakistan?* Retrieved from *MIT Technology Review*: <http://www.technologyreview.pk/is-telehealth-the-future-of-medicine-in-pakistan/>

Khan, U. Z. (2020, Sep-Oct). *Telemedicine in the COVID-19 Era: A chance to make a better tomorrow*. *Pakistan journal of medical sciences*,

- Zainab Muhammad Ullah is currently pursuing Mphil degree program in Applied Psychology in Quaid-i-Azam University Islamabad, Pakistan, E-mail: zainab.f20@nip.edu.pk
- Mudassar Hussain is currently pursuing Mphil degree program in Applied Psychology in Quaid-i-Azam University Islamabad, Pakistan, E-mail: mudassar.f20@nip.edu.pk
- Salwa is currently pursuing Mphil degree program in Applied Psychology in Quaid-i-Azam University Islamabad, Pakistan, E-mail: salwa.f20@nip.edu.pk
- Asfa Hanif is currently pursuing Mphil degree program in Applied Psychology in Quaid-i-Azam University Islamabad, Pakistan, E-mail: asfa.f20@nip.edu.pk
- Faryal Fazal is currently pursuing Mphil degree program in Applied Psychology in Quaid-i-Azam University Islamabad, Pakistan, E-mail: Faryal.f20@nip.edu.pk