

Telepsychiatry: Current Outcomes and Future Directions

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Abstract: Telepsychiatry is an evolving field in the treatment of mental illness. Although it is used since 1950, its application is widely expanded in the past one decade. Telepsychiatry is defined as the use of technology to communicate with the people and provide psychiatry services from a distance. It requires a collaborative and supportive team consisting of patients, psychiatrists, referring physicians, nurses, families, and health care facilities. Telepsychiatry is very feasible and is applicable to a wide range of patient population having diverse cultural backgrounds. It can also be used in different clinical settings and is proven to be effective in reducing disease severity in several disorders like anxiety, attention deficit hyperactive disorder (ADHD), bipolar disorder, depression, post-traumatic stress disorder (PTSD), schizophrenia, and psychosis. Telepsychiatry is effective both clinically and academically. Clinically, it is used for diagnosing and managing the patient, conducting neuropsychological testing, and providing psychotherapy. Academically telepsychiatry can be used for education, training, and research purposes. Although it is very effective in many ways, few challenges in this field include training and recruiting physicians who can provide care using such services, access to patients, and continuously update health care facilities with the recent advancements in the information and communication technology. Telepsychiatry is mainly helpful to decrease the gap in delivering psychiatric care to people in rural and/or underserved areas. So, more insight should be provided to patients and physicians about the advantages of using telepsychiatry services. In this review, we discussed the challenges, different treatment outcomes, effectiveness, and future directions of telepsychiatry.

Keywords: Telepsychiatry, videoconferencing, Geriatric, Forensic, Ethnicity.

INTRODUCTION

Telepsychiatry is an affordable, convenient, economical, and efficient mode of delivering mental health services [1]. The use of telepsychiatry is being dramatically increased all over the world recently, as there is a shortage of psychiatrists. Telepsychiatry consists of providing psychiatric care through different types of telecommunications available, of which videoconferencing is the most commonly used one. Many health care facilities have initiated to provide telepsychiatry services for their patients as it has become more difficult to obtain an appointment with psychiatrists in both rural and urban settings [2]. Telepsychiatry consultations can be performed remotely at several sites, which can include hospitals, community health care centers, patients' home, physicians' office, rehabilitation facilities and/or any other facility equipped for telepsychiatry. Regardless of the site, a successful telepsychiatry encounter will help us to ensure timely management of the patients and eventually the best possible outcome in an expedient way [3].

DIFFERENT MODELS OF TELEPSYCHIATRY – TREATMENT OUTCOMES

Two main types of communication technologies used for delivering telepsychiatry services are

synchronous and asynchronous types. Synchronous method involves live one to one interaction between the patient and the provider. It can be done through videoconferencing, live chats, and telephone. Videoconferencing is the most common type used. Asynchronous or store and forward type is done by recording a patient interview which is viewed by the psychiatrist later. Patient information is shared to the provider through a secured email or video links [4].

There are also different types of consultation and liaison models used that based on the clinical setting and type of care provided. They are mainly categorized into consultative model, traditional model, and collaborative care model. The consultative model is an outpatient or inpatient model in which a primary care provider briefly describes his or her patient to a consulting psychiatrist followed by an interview, subsequent discussion, and recommendations [5]. This method had a high patient and provider acceptance [6]. Traditional referral is an outpatient model in which patient is referred to a psychiatrist who can conduct telepsychiatry services at different settings like clinics, offices, and/or at patient's homes. Collaborative care model is an outpatient model. In this model a primary care provider and a psychiatrist provide care together [7]. Store and forward or asynchronous telepsychiatry can be used both in inpatient or outpatient [8].

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Regardless of the type of technology, telepsychiatry services are used for diagnosis, management,

education, follow-up, and psychotherapy [9]. So far, treatment outcomes are significant for patients with ADHD, anxiety, depression, PTSD, and schizophrenia [10]. The treatment outcomes for people of different age groups and ethnicities in various settings is discussed below.

VARIOUS SETTINGS AND SCENARIOS OF TELEPSYCHIATRY

Child and Adolescent Telepsychiatry

The proportion of people suffering from psychiatric illness in children and in adolescent age group is found to be higher than other age groups. A research study conducted on 223 children suffering from hyperactive and mixed type of ADHD has reported a drastic improvement in kids by using telepsychiatric services. There is an evidence that kids and adolescents in underserved areas suffering from ADHD, anxiety, depression, eating disorders, and social phobia were benefited to a significant extent [11]. Families and physician also expressed benefit by using telepsychiatric services in children [12]. Telepsychiatry is also used as an alternative to increasing access to pharmacotherapy in children and adults. However, the efficacy of these services is not completely known and further research is needed to improve the quality of care and treatment outcomes in this age [13].

Geriatric Telepsychiatry

Geriatric population is increasing exponentially. The most common conditions that are found in this age group of population are dementia, depression, and cognitive impairment [14]. A study conducted with 294 patients in geriatric age group revealed that they all benefited from using telepsychiatry and they reported to continue using the services in future as well [15]. Geriatric telepsychiatry has also benefited patients who are living in geographically isolated rural communities and for patients living in long-term care facilities [16].

Telepsychiatry is also used for neurocognitive testing. A study conducted in rural Latino population found that it is as effective as direct in person testing done in the office [17]. Also, it is not clear if telepsychiatry services are beneficial for people with sensory impairments in the geriatric population [14]. Treating them remains a challenge mainly because of alteration in cognition, hearing, sight, and perception [14]. Larger systemic studies might be needed to find out the acceptance in this population.

Forensic Telepsychiatry

Forensic telepsychiatry has rising demand in different countries with advancements in communication technology. It has proven to be very useful in people who are victims of domestic and sexual abuse, and prisoners [18]. Victims of domestic abuse, particularly, in underserved areas are found to be isolated due to fear [19]. Hence, providing telepsychiatry services for such population would be very helpful. It is also effective in exchanging information with courts by providing psychiatric evaluations, and also to testify in civil and criminal courts [20]. Telepsychiatry interviews conducted on 23 patients in a large urban jail has shown that patient satisfaction is high and no significant difference is noted when compared to in person interaction [21]. Apart from that, using telepsychiatry services for civil commitment in hospital setting is very beneficial as it minimizes the costs and travel time for the psychiatrists and health care professionals involved in the patient care. Patients might also feel more comfortable when they have to attend court in the same hospital where they are being treated. This also helps in preserving the dignity of the patient [22].

However, there are few challenges associated with telepsychiatry in forensic patients. Lack of privacy is reported by few patients. The main reason behind this is that patients who need care in correctional facilities are always accompanied by another person during the session as they are dangerous to themselves or the others [23]. Another challenge is as it is done from a distance, mental health care providers and other health professionals might find uncomfortable to testify the case from the distance [24].

Telepsychiatry in Emergency Room

Videoconferencing is considered to be a good tool in conducting assessments in the emergency room (ER), especially in the rural or underserved areas. A study conducted on patients before and after the telepsychiatry sessions in the ER revealed that it is the most effective means to provide timely intervention. It is also found to be effective for outpatient follow-ups, reducing inpatient hospitalizations, and further improving the quality of care. Physicians also expressed higher satisfaction by using telepsychiatry services in the ER. Therefore, considering the advantages, all the psychiatrists should be trained to assess and treat people in the ER using telepsychiatry [25].

However, there are a few limitations to the use of these services in the ER. Finding psychiatrists who are willing to work in underserved areas and have expertise in dealing with patients in the ER might be a challenge [26]. Another concern is that the costs and outcomes of care delivered through telepsychiatry services in ER is still unknown. So, further research might be needed to improve telepsychiatry services delivered through ER.

Role of Ethnicity in Telepsychiatry

Telepsychiatry also plays a great role in treating people of different ethnicities. Retrospective study was done on 61 patients who were refugees speaking nine different languages. Results reported that, there is higher patient satisfaction and willingness to use telepsychiatry services again in future [27]. Patients also reported more comfort if the provider belongs to same cultural background and speaks the same language than with the use of interpreter [27].

Although telepsychiatry is used mainly for underserved people, it is another challenge to treat people with different cultural backgrounds. Cultural disparities can result from dealing with patients from different geographic locations and cultural backgrounds. Creating cultural awareness for telepsychiatrists is necessary for helping patients with diverse cultural backgrounds [28]. The cultural disparities can be bridged by the concerned psychiatrist visiting the locality, learning about the patients' culture before talking to them, having a strong association with the local staff at the rural facility and finding out the comfort levels of the patient in using a specific technology. Dealing with patients of different cultures can also help the clinicians to become more well-rounded and familiarized with diverse communities [28].

SATISFACTION WITH TELEPSYCHIATRY

Although Telepsychiatry is an emerging field, the major concern is to understand if it is as effective as normal face-to-face interaction with patients. Comprehensive review of multiple studies is done from January 1, 1965 to July 31, 2003 to find out the satisfaction of patients and providers after using it [9]. A difference of opinion in these study results are noted. The components that are mainly taken into consideration are cultural competence, patient-doctor interaction, quality, and feasibility of the technology [29]. The majority of the studies reported better

outcomes and patient satisfaction after using videoconferencing [12]. Patients living in rural areas expressed greater benefit by using telepsychiatry compared to people living in suburban regions. Telepsychotherapy has also shown a significant reduction in depression in patients who received it [30]. On the other hand, systemic review was done on published literature evidenced that there is no significant difference in patient satisfaction in those receiving telepsychiatry compared to direct patient communication [31].

Clinicians mainly primary and emergency care physicians reported more provider satisfaction on using telepsychiatry services. Psychiatrists expressed their interest in telepsychiatry upon consistent use of video calls with the patients, especially with children [12]. E-mail communication is the other form of communication which both patients and physicians found to be useful [32]. Though there is limited evidence of physician satisfaction, in general patients expressed more benefit from using telepsychiatric services.

RELIABILITY

Telepsychiatry is found to have higher inter-rater reliability. Cross sectional studies conducted on different aspects like risk factor evaluation and diagnostic assessments have reported that videoconferencing is as effective as face to face interview with the patients [14]. Videoconferencing is also found to be reliable in different settings including forensic, correctional settings, ER and in different patient populations like child and adolescent, geriatric, and also patients belonging to different ethnicities. However, there are factors that affect the reliability of using telepsychiatry. Bandwidth and resolution of the video are the two most important factors. Patients expressed low satisfaction rate with low bandwidth when compared to high bandwidth [33].

CHALLENGES OF TELEPSYCHIATRY

Although telepsychiatry is effective as face to face interaction with patient, there are many challenges associated with it. One concern is training physicians to deliver telepsychiatry. Studies proved that psychiatrists reported satisfaction with telepsychiatry after continuous use. Ensuring adequate training to the physicians and residents during their training might increase the positive impact on the use of telepsychiatry and the quality of health care system [34]. Other important concern is liability and

reimbursement. It was found that most of the insurance companies' do not cover the physicians for delivering care through telepsychiatry. Hence, clinicians should make sure that the patients' insurance covers and reimbursement is provided for treating the patients. In order to use telepsychiatry, physicians should also be licensed in the areas where they see the patients [35, 36]. Cost effectiveness is another concern because setting up the infrastructure based on the technology in institutions and patients' site might be expensive [37]. Maintaining confidentiality is another challenge as the providers communicate with the patients from a distance in telepsychiatry. To overcome this problem, strict and regulatory guidelines about obtaining informed consent, appropriate use of technology to communicate with the patients, use of secure access to the device that is used, secured software to document patient information might be helpful [38].

FUTURE DIRECTIONS OF TELEPSYCHIATRY

Using telepsychiatry will help physicians to develop different options for treating the patients innovatively. Therefore, all the physicians should be encouraged to learn about this emerging field. There are many training programs and organizations to assist the physicians helping them to get more insight about telepsychiatry. Few resources include Telehealth Resource Centers (TRC's), The American Telemedicine Association (ATA), and American Psychiatric Association (APA). APA is guiding psychiatrists to explore more about Telepsychiatry. There is also a Tool Kit which is a resource for the physicians to understand the clinical implications, challenges, different policies, and training involved in telepsychiatry.

CONCLUSION

Telepsychiatry has robust evidence in diagnostic accuracy, treatment outcomes, and in patient satisfaction. In order to use telepsychiatry, it must be easily acceptable and available for the provider and patient, safe to use, cost effective, physicians should have licensure and insurance to treat the patients. It is found that it is as effective as in-person encounters and it can also be used as an alternative to it. It also helps in bridging the gap between the patients and the clinicians. It is also very competent not only for the rural population but also for people in different geographic locations, home-bound people or patients with disabilities, and patients with avoidant personality.

However, despite the increasing use of telepsychiatry, there might be few patients and

physicians who are reluctant to use it. More insight should be provided to the physicians regarding how to use the technology, and whom to approach if there is any issue in the session.

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Received on 19-07-2017

Accepted on 18-08-2017

Published on 23-08-2017

DOI: <https://doi.org/10.12970/2310-8231.2017.05.07>

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